

MEMORANDUM FOR THE RECORD

Subject: Final minutes for the 25 June 2014 FPOM BON Ops Task Group meeting.

The meeting was held in the Celilo Room at CRITFC. In attendance:

Last	First	Agency	Office/Mobile	Email
Baus	Doug	NWP-RCC		douglas.a.baus@usace.army.mil
Bettin	Scott	BPA		swbettin@bpa.gov
Conder	Trevor	NOAA		Trevor.conder@noaa.gov
Fredricks	Gary	NOAA	503-231-6855	Gary.fredricks@noaa.gov
Hausmann	Ben	NWP-BON	541-374-4598	Ben.j.hausmann@usace.army.mil
Klatte	Bern	USACE-NWP	503-808-4318	Bernard.a.klatte@usace.army.mil
Lorz	Tom	CRITFC		lor@critfc.org
Lut	Agnes	BPA		axlut@bpa.gov
Mackey	Tammy	NWP	503-961-5733	Tammy.m.mackey@usace.army.mil
Morrill	Charles	WDFW		
Wills	David	USFWS		David_wills@fws.gov
Wright	Lisa	NWD-RCC		Lisa.s.wright@usace.army.mil

Hausmann, Klatte, Wills called in.

HAPPY BIRTHDAY!

1. Decisions made at this meeting.

- 1.1. Lorz will provide verbiage for the MOC as soon as possible so Mackey can get the MOC to everyone for review prior to taking it to FPOM for larger Regional consideration.
2. Fredricks has a new FPP change form to slightly modify the FPP Bonneville Dam section 5.2. He has concerns about the survival of fish moving through the PH1 tailrace when the powerhouse is operating at less than full capacity. We might consider easing the upper 1% restriction on PH2 in order to put fewer fish through PH1 once river flows begin to drop in late June and July.
 - 2.1. The species of concern for PH2 upper 1% operation had been sockeye. He found the latest 95% passage in the last 10 years to be about 21 June. He proposes not starting a new operation until after 21 June. He suggested starting the operation once PH1 has dropped to five units. He acknowledged this was an arbitrary number. Bettin asked if the concern is units or flow. Lorz asked if we have looked at predation and if we can suggest a threshold for predation for deciding operations at PH1.
 - 2.2. What about looking at descaling at PH2? Once ~95% sockeye are out of the system, we could look at sub-yearlings as an indicator for moving to the upper end of 1% at PH2 and moving away from directing flow through PH1.
 - 2.3. Fredricks noted that the current FPP is written in such a way as to restrict operation of PH2 units at the upper end of 1%. The desire is to build in more flexibility in the language once the river flows begin to decrease in early summer.
 - 2.4. The concern is centered around the passage conditions through the tailrace for fish passing PH1 ITS and turbines. Conder suggested using PNNL to get survival

information on low vs. high PH1 flow. Lorz expressed concern about the time it will take to get that info, but suggested we could get this settled by next year.

- 2.5.** Due to the high adult sockeye numbers, BON has met the FPP split flows criteria so limiting flow at PH1 would be in conflict with the current FPP requirements. Fredricks agreed that this is appropriate, however, this condition will not last long and we will find ourselves balancing PH1 and PH2 operations in July. Fredricks said if there is no effect from predation in the tailrace then this isn't an issue. Lorz asked for more specifics about a potential study... after noting a haphazard study will evoke the ridicule of the region. Fredricks suggested looking at the smolt condition in the JMF. Baus decided to throw monkey wrenches by noting that many do not agree with the data available.
- 2.6.** Wills expressed some concern about Spring Creek releases and the overlap with any testing. Lorz suggested this issue would go to FPAC for further discussion to include consideration of upcoming releases and find a good time for testing. FPAC would submit a SOR requesting the test operation for a time when releases wouldn't be impacted. Baus expressed concern with the SOR process and the policy issues associated with it. Lorz said he doesn't need to do a SOR.
- 2.7.** FPAC will look at run timing data and come back with a recommendation. BPA is willing to consider the test operation since it is a shifting of flow rather a change in flow volume. Mackey suggested the request come in the form of an MOC. There was more discussion about whether this should be in FPOM or SRWG with the decision being FPOM would be most effective since Rerecich is currently out of the office. Lorz will send Mackey the verbiage. She will draft the MOC and have it ready for FPOM.
- 2.8.** Based on previous research at PH2, river-run summer subyearling Chinook were not as affected by operating the PH2 units at the upper end of 1%, however, there is still likely an impact that will need to be balanced with expected benefits of limiting subyearling passage at PH1. A limited upper 1% test will help with this decision.
- 2.9.** Lorz asked if there is a spill volume threshold for when adding the 15K from the PH2 units to the spillway is insignificant for fallback. If we are spilling 160K, will the 15K have a significant increase in the risk for fallback? Is the descaling of juveniles worth the potential risk to adult fallback? Lorz is going to take a more detailed look at these questions and see if he can get closer to an answer. Wright clarified that the 15K was due to the availability of only 5 units. If more units are available, it could be a larger volume.
- 2.10.** Everyone seemed relatively comfortable with the implementation of the operation this spring. Wright asked about the level of comfort with the language that restricts the PH2 unit operation at the lower end of 1% as well. Fredricks said that there is a Corps funded trip to ERDC at the end of August to examine the issue of turbine operating ranges of the PH2 units. We should have all the information in hand before making a decision on future unit operations like this.

June 25, 2014

DRAFT FILE MEMORANDUM

FROM: Gary Fredricks, NOAA Fisheries

SUBJECT: Bonneville Dam Summer Operations Change Form

I suggest we take a second look at the Bonneville Dam unit operating range change form that was adopted by the FPOM in May of this year. Most of our efforts were centered on how the project would operate as flows increased in the spring and I am not recommending any changes to those sections. However, we did not spend much time thinking about how the project operates as the flows drop in early summer. I am concerned that the final FPP language might not be best for juvenile passage.

Purpose of proposed change: To reduce tailrace predation during warmer, lower flow periods of the juvenile outmigration.

Background Information: Partial use of the powerhouse creates poor egress (good predation) conditions in the tailrace for all juvenile passage routes at this powerhouse.

Predator feeding activity rises with increasing temperatures, particularly in the 60 to 70 degree range.

Descaling is still an issue with summer migrating subyearling Chinook as a result of operating the PH2 units at the upper 1% limit, however, it is not as pronounced as for spring migrating (Spring Cr) subyearlings and sockeye.

The latest sockeye 95% passage date at Bonneville Dam between 2004 and 2013 was June 21 (Dart 10 year historical data query).

Since river flows may still be high after June 21 (e.g. this year), it may be prudent to include another limitation in the proposed language that limits lifting the mid-range restriction on PH2 until after the PH1 operating units drop to half or less. While more complex, this improves the application of the operation for fish passage.

The proposed changes are in track changes as follows:

5.2. Turbine Unit Operating Range.

5.2.1. Turbine unit operations within $\pm 1\%$ of peak turbine efficiency (1% range) are specified in the *BPA Load Shaping Guidelines (Appendix C)* for implementation during the period of April 1 through October 31. Through regional coordination with FPOM and TMT, the 1% range guidelines during this period have been modified as defined below in **5.2.1.1** to minimize PH2

gatewell turbulence for bypassed juvenile salmonids until structural and/or other solutions are implemented. Turbine unit operating range limits are defined in **Tables BON-15 (PH1)** and **BON-16 (PH2)**.

5.2.1.1. From April 1 through ~~October 31~~June 21, turbine units will operate sequentially in the following order of operating ranges to pass increasing levels of flow:

5.2.1.1.a. PH2 units within 1% mid-range;

5.2.1.1.b. Then, PH1 units up to 1% upper limit;

5.2.1.1.c. Then, PH1 units up to BOP;

5.2.1.1.d. Then, additional flow in excess of what can be passed in the steps above will be passed in one of the three following ways, or as otherwise determined by Project Fisheries based on observed conditions:

d.1. April 1–April 9: PH2 units up to 1% upper limit.

d.2. April 10–June ~~15~~21 (Spring Spill) w/ Juvenile Trigger: When juvenile spring Chinook collection counts at BON JMF are greater than adult spring Chinook (excluding jacks) total passage counts for three consecutive days (juvenile trigger), Project Fisheries will notify the control room to maintain PH2 units within 1% midrange as a hard constraint and pass additional flow as spill.

d.3. April 10–June ~~15~~21 (Spring Spill) w/ Adult Trigger: When adult spring Chinook total passage counts (excluding jacks) are greater than juvenile spring Chinook collection counts at BON JMF for two consecutive days (adult trigger), Project Fisheries will notify the control room to operate PH2 up to 1% upper limit in priority order from north to south: 18, 17, 16, 15, 14, 13, 12, 11.

d.4 5.2.1.2. June ~~16~~22–October 31: PH2 units may operate up to 1% upper limit. Maintain PH2 priority. PH2 units should continue to operate at mid-range when possible, however, these units may be operated at the upper 1% limit as necessary to minimize use of PH1 units.

Alternative 5.2.1.2. June ~~16~~22–October 31: PH2 units may operate up to 1% upper limit once flows limit PH1 to five or fewer units. PH2 units should continue to operate at mid-range when possible, however, these units may be operated at the upper 1% limit as necessary to minimize use of PH1 units.