



# FISH PASSAGE CENTER

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## MEMORANDUM

To: Fish Passage Advisory Committee (FPAC)

From: FPC Staff

Date: June 6, 2018

Subject: Action Notes from May 25, 2018, Special FPAC meeting

On May 25, 2018, FPAC met for a special conference call to discuss two agenda items. The following people participated in the meeting:

Paul Wagner (FPAC Co-Chair NOAA)  
Tom Lorz (FPAC Co-Chair CRITFC)  
Jerry McCann (FPC)  
Brandon Chockley (FPC)  
Charlie Morrill (WDFW)  
Dave Swank (USFWS)

Bobby Hsu (FPC)  
Erin Cooper (FPC)  
Dave Benner (FPC)  
Russ Kiefer (IDFG)  
Dave Statler (Nez Perce Tribe)

## AGENDA ITEMS

### ***Adult Delay Tools - LGS (00:35 – 07:35)***

- Paul Wagner (NOAA) started out by asking is anybody sees a need to change operations at LGS for adult passage.
- Russ Kiefer (IDFG) noted that it looks like things are starting to get back on track. Noted that we may have list a few fish in last day or so. Also noted that may be worth asking for operations data to see if anything can explain the recent changes in counts at LGS.
- Paul asked whether we should consider a contingency plan. Flows are forecasted to increase. If flows increase, spill will also increase (possibly 45-50%). Suggested a contingency plan, if spill increases to ~50%, of reducing spill to 40% for some time

during the day, ponding, and increasing spill to get back to MOP by the next day. Russ Kiefer (IDFG) suggested that we let things go unless we see a problem setting up or have confidence that conditions will be that adults won't pass. At this point, we don't know what conditions will be for adults. Right now, seems like catching up and passing relatively well. Charlie Morrill (WDFW) agrees with this assessment. Dave Swank (USFWS) noted that we should make decision based on actual adult numbers and not forecasted spill levels.

- Tom Lorz (CRITFC) asked whether there will be a fishery below LGS. Yes, there will be a fishery on Sunday (5/27) and Monday (5/28). If fishery is occurring, may need to remember how this might affect analyses based on counts.
- FPAC will check in next Tuesday. If things suggest a need for a change then, change would be made Tuesday evening without having to wait for TMT.

### ***Turbine Operations Outside 1% - JDA (07:35 – 50:00)***

- Paul Wagner (NOAA) noted that he had Blane Bellerud (NOAA) do some calculations on what spill passage efficiency might be if reduced spill at JDA as a result of modified operation. At Tom Lorz's suggestion, did not use COMPASS SPE curves, as they are not appropriate at these high of flows. Estimated reduction in survival (direct) of 0.06% for Chinook. Tom Lorz (CRITFC) noted that should not use bypass survival from 2011, as point estimate was 101% for steelhead. Asked if Blane did any type of sensitivity analysis to look at outfall. No sensitivity analysis was used but NOAA assumed 99% survival in bypass system. Tom noted that Spill Ops group also looked at delayed mortality. Paul will send analysis for distribution to FPAC.
- Paul Wagner (NOAA) summarized literature on effects of high spill and GBT:
  - Weitkamp (2008) – review of work done. Weitkamp conclusion was that spill up to 125%, with depth compensation, is reasonable.
  - Beeman (2006) – Average depth changes by time of day. Steelhead higher on surface during day, spring Chinook deeper during day (+2m). At night, steelhead deeper, spring Chinook higher (<2m). Referenced 1974 study with gill nets and observed same patterns of distribution in water column. Spring Chinook was 15% in 1' depth, 15% in 2' depth, 15% in 2-3' depth. Not completely compensated. Concluded, when spill gets above 125% TDG, things appear to deteriorate rather quickly. Things are fine under current 115%/120% standard.
  - Paul will circulate three studies summarized for distribution to FPAC.
- Paul Wagner (NOAA) noted that 2017 was a high flow year, with high spill, and had lower survival in the lower river. Jerry McCann (FPC) noted that FPC did not get see low survivals in lower river for 2017 (summarized in February 22, 2018 memo). FPC analysis noted that NOAA survival estimates rely on fish bypassed at MCN to estimate survival in MCN-BON reach and bypassed and/or tagged at LGR for the LGR-MCN reach. This reduces sample sizes and limits to fish that were bypassed. FPC analysis used combined hatchery and wild fish released above LGR to increase sample size. Example, for Chinook NOAA methodology resulted in LGR-BON estimate of ~0.5 while FPC methodology resulted in ~0.61 for Chinook. NOAA estimate for ST was ~0.43 while FPC method was ~0.65.

- Paul Wagner (NOAA) noted that his preference would be to allow operation is meant that may result in avoidance of TDG levels of >130%. Tom Lorz (CRITFC) noted that this may not be necessary, as it appears flows in the lower river are going to decrease and TDG below JDA is currently at 130%.
- Russ Kiefer (IDFG) noted that flows at JDA are forecasted to decrease slightly. IDFG is ok with making move at JDA if TDG is above 130% in tailrace (12-hour average).
- Brandon Chockley (FPC) suggested that, if allow operation at JDA, should request everyday sampling at JDA for duration of operation. Also reminded FPAC that FPC would like hourly turbine operational data for month of May, after the fact. Requested that FPAC make that part of the agreement for operations. Russ Kiefer (IDFG) noted that he would also like the hourly operational data for LGS to see if we can detect that may have changed there too. FPAC agrees that hourly operational data would be useful for these types of analyses and should not require FOIA.
- Dave Swank (USFWS) noted that he is still torn on decision. Although he supports the idea of decreased TDG below 130% but not excited about increasing PH passage. Would be good to get data to evaluate operation. Ok with agreeing for a block of time (1 week) but wants to evaluate it.
- Tom Lorz (CRITFC) noted that he will not support the request but will not object. Not a free lunch, trading off impacts from TDG for impacts at the dam.
- Paul Wagner (NOAA) noted observations from ERDC model. At higher flows (did not model flows this high), PH passage is in downstream direction. Under lower flows, fish get stalled out and swept over to the skeleton bay dead zone. Tom agreed but reminded that turbine survival not great at JDA, running turbines at upper end of 1% is usually worse for fish. Will get an impact but difficult to quantify impact versus TDG impact. No idea what extra 22 miles of exposure to this TDG will do, compared to impact at the JDA powerhouse.
- Charlie Morrill (WDFW) agreed with Tom and noted that he will not support the request but will not object.
- Dave Statler (Nez Perce Tribe) noted that NPT will not object but are concerned about impacts and would like daily monitoring in place. Questions on depth compensation.
- Charlie Morrill (WDFW) asked if we got an answer about GCL operations. Paul Wagner (NOAA) noted that answer is unclear. Expectation is that flows will be about the same.
- Paul attempted to summarize FPAC discussion: desire is to keep TDG below 130% but if going to be below 130% TDG than no reason to implement. Russ Kiefer (IDFG) noted that Action Agencies are not going to want FPAC to specify a TDG range. Going to want permission for a block of time. Suggested that FPAC ask them if, based on flow projections, do they expect that TDG would stay above 130% under current operations or would flow reduction cause TDG to drop below 130%. If Action Agencies say that projections suggest TDG will remain above 130%, then FPAC supports. If looks like TDG will likely go below 130% on its own, then no reason to allow operation.

These minutes have been reviewed and approved by the Fish Passage Advisory Committee.