

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

June 2, 2017

Facilitator's Summary

Facilitator & Notes: Emily Stranz; Support: Colby Mills, DS Consulting

The following Facilitator's Summary is intended to capture basic discussion, decisions and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members. Official minutes can be found on the TMT website:

<http://www.nwd-wc.usace.army.mil/tmt/agendas/2017/>

Little Goose Operations

Paul Wagner, NMFS, explained that there is a passage issue at Little Goose Dam; over 19,000 Chinook have passed Lower Monumental Dam, however, only 12,578 have made it past Little Goose. He continued that FPAC met to discuss the situation and potential operational changes that may increase passage at Little Goose over the next couple of weeks. The group reviewed the hourly inflow, forecasted inflows, passage, and percent spill. Doug Baus, Corps, noted that spill has been around 50% for the past few days. Inflows are expected to peak on Monday and then start receding.

Paul continued with the suggested operation that was discussed at FPAC (note: this was not a consensus recommendation from FPAC, however, there were no objections):

- Provide 40% spill during the hours of 4:00am until 10:00am June 3 through June 8.
- Pass inflow during the hours 10:00am until 4:00pm.
- This operation will violate the MOP operation at the project. Thus to limit the impact on juvenile out-migrants, increase the project discharge to return to MOP during the hours 4:00pm through 4:00am.
- Maintain constant turbine operation during the hours of 4:00am until 10:00am to the extent possible.

Although there were no objections on this operation, Erick Van Dyke, OR, noted that this is a special operation implemented during unmanaged river conditions and should not be considered a long term operation. Charlie Morrill, WA, suggested a careful review after the operation to see if the region can pinpoint whether it was effective and what variables had an impact.

Additionally, Ann Setter, Corps, noted that debris has been a concern this year at Little Goose and that screen cleaning is planned to take place starting Monday at 7:00am. She agreed to request a 10:00am start time for the duration of this operation to allow for the full 6 hours of reduced spill. Screen cleaning will take two units out of service while the cleaning is underway. An additional unit is out of service until 2018.

The group discussed the duration of the operation. The Corps recommended a shortened duration with a check in on Monday, June 5th to see if the operation had impact and if so, what the next steps should be. The Corps also indicated that as a result of decreasing spill and the unit outages, this operation will cause the project to go above MOP in order to achieve 40% spill. The increase will likely be most noticeable on Monday when inflows are expected to peak.

→ **ACTION:** The AA's will implement the operation as outlined by Paul, however, the TMT will reconvene on Monday, June 5th at 11:30am to discuss whether to extend the operation past June 5th. At that point, the region will review fish passage data.

The next TMT meeting will be a call on June 5th at 11:30.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

June 2, 2017
Minutes: Pat Vivian

1. Introduction

Representatives of BPA, NOAA, COE, Idaho, Washington, Nez Perce Tribe, Oregon and others participated in this unscheduled TMT call regarding spill operations and adult passage at Little Goose Dam. The meeting was chaired by Doug Baus, COE, and facilitated by Emily Plummer, DS Consulting.

2. Little Goose Dam Operations

Paul Wagner, NOAA, explained the purpose of today's conversation – to consider an operation FPAC coordinated yesterday that would limit spill at Little Goose Dam to 40% of total river flow for six hours on the mornings of June 3-June 8 to aid adult passage. To date, 19,619 adults have passed Lower Monumental and only 12,578 at Little Goose, leaving around 7,000 fish unaccounted for. The disparity indicates that adults are being blocked from migrating upriver by high spill at Little Goose. Over the past month, spill at Goose has varied from 36% to 66% of total flow, and is currently around 50%, a rate that makes upstream passage difficult.

FPAC decided to recommend testing a 40% spill operation in the morning for 6 days, then have TMT review the effects on adult passage at its next regularly scheduled meeting June 7. Given that this proposal was assembled quickly yesterday with no objections among those present, Wagner asked the Salmon Managers on the line to speak up if they had misgivings. No one objected when they gave their views.

Highlights of the FPAC recommendation are:

- Provide 40% spill at Little Goose from 4:00 am to 10:00 am June 3 through June 8.
- Do so knowing this will require filling into the Little Goose pool above the MOP range.
- Pass inflows from 10:00 am to 4:00 pm.
- Increase project discharge in an effort to return to MOP from 4:00 pm to 4:00 am.
- To the extent possible, maintain constant turbine operations from 4:00 am to 10:00 am.

Implementing this proposal will cause Little Goose to fill above the MOP range because high inflows will exceed outflows during the hours that spill is reduced to 40% of total outflow, Wagner cautioned. Passing inflows from 10:00 am to 4:00 pm will require increased discharges from 4:00 pm to 4:00 am. An underlying part of the request is to keep all available turbines operating as steadily as possible during the morning hours of 40% spill. While FPAC recognizes that this operation has the potential to slow down juvenile migration, increasing spill at night would mean less passage through the powerhouse during those hours.

The Action Agencies are considering implementing the operation on June 3 and 4, but not on June 5 because at 7 am, project staff are scheduled to begin cleaning the fish screens. That complicates the spill operation because it will take units 1 and 2 out of service, Baus explained. The screens need cleaning now due to high flows and associated debris loads and postponement would only put the units at risk of getting clogged and going out of service at a later date. The accumulated debris also carries a risk of increased juvenile descaling and mortality. Baus suggested TMT meet on Monday, June 5, to review how the operation went.

The other Salmon Managers present today gave their views of the proposal. **Idaho's** biggest concern is conditions for wild listed Chinook salmon. **Oregon** supports a short term operation to observe the effects, but does not support this operation as a long term or ongoing solution; we need to remember that this is in response to an unmanaged flow situation. **Washington** wants a careful review of all risks involved, including an analysis of when the 40% spill operation succeeded and when it failed. The **Nez Perce Tribe** would prefer to see the results of 40% spill for more than 2 days. Jay Hesse advocated a 7 day operation assuming the initial results are positive and recommended TMT check in at its next regular meeting on June 7, after several days of 40% spill, and change course then if things aren't going well.

Baus said a longer operation would be acceptable to the COE if the Salmon Managers acknowledge that screen cleaning will proceed as planned. Ann Setter, COE Walla Walla, pointed out that units 1 and 2 typically have the biggest problems in terms of debris and juvenile descaling or mortality. They are the most in need of trash raking, and workers will probably start work there first thing Monday. Unfortunately, those same units are instrumental in promoting adult passage.

Setter was not able to estimate how long the screen cleaning will take because it depends on how much debris is found. The cleaning is scheduled to take place daily from 7 am to 5 pm on June 5, 6, and 7.

Discussion turned to the possibility of delaying the start of trash raking until 10 am Monday, rather than 7 am, which would allow 3 more hours of 40% spill in the morning. The main challenge, Setter said, is coordinating the delay, given that project staff typically work four 10 hour days and are not available Fridays.

Baus said the COE would be amenable to delaying the start of screen cleaning until 10 am on Monday if possible, as well as on successive days. The COE will operate the units as consistently as possible, backing off for debris management as needed rather than force a unit out of service. Taking units 1 and 2 off line for screen cleaning means a total of 3 units will be out of service at Goose starting June 5, given that unit 5 is down until February 2018.

Wagner said the Salmon Managers' preference is to operate 5 units consistently during the 40% spill periods. Varying the flow rate during those hours would be acceptable as long as all 5 operational units are running.

Discussion turned to the impact of 40% spill on MOP operations. Under the BiOp, the minimum operating pool (MOP) range at Little Goose is 633-634 ft elevation, or the bottom

foot of the normal operating range. During the 40% spill operation, LGS will fill above the MOP range due to high inflows exceeding outflows, Baus said. The amount of fill will be dependent on actual inflow during the operation, but may be up to 2 ft above MOP (i.e., up to 636 ft). The most significant storage will occur when units 1 and 2 are off line for screen cleaning.

Baus noted that the requirement to return to MOP will result in higher project outflows when LGS is releasing water that was stored above MOP during the 40 % spill operation. If preserving MOP isn't a priority, the Action Agencies would have more flexibility to manage LGS outflows. Scott Bettin, BPA, added that the 40% spill operation at Little Goose will probably cause MOP exceedances at Lower Monumental.

At this point Russ Kiefer proposed a modification to the 40% spill request: implement the operation for three days, June 3-5, and delay Monday's screen cleaning to begin at 10:00 am. TMT would meet that day to review the data and consider operational modifications.

The Action Agencies will plan to operate Little Goose as follows:

- On June 3, 4, and 5 from 4:00 am to 10:00 am, LGS will spill 40% of outflow.
- The COE will attempt to delay the start of screen cleaning on June 5 from 7:00 am to 10:00 am.
- TMT will meet next at 11:30 am on June 5 to assess how the operation impacted fish passage.

Ann Setter cautioned that it might be difficult to coordinate the delay of screen cleaning Monday morning, given that project staff don't know about it yet. The COE will make a best effort. Brandon Chockley, FPC, mentioned that adult count data for the weekend might not be available for the TMT call at 11:30 am Monday.

Although **Oregon** does not support 40% spill as a long-term operation, the more days of data collected during this test, the more certainty will be gained as to how 40% spill at LGS impacts fish passage, Erick Van Dyke commented.

The COE will attempt to return the Little Goose forebay to its BiOp MOP range each day from 4pm to 4am. The COE will have a better idea on Monday how long screen cleaning might take.

3. Next TMT Meeting

TMT will meet in a conference call at 11:30 am, Monday, June 5.

Name	Affiliation
Scott Bettin	BPA
Paul Wagner	NOAA
Doug Baus	COE
Tony Norris	BPA
Julie Amman	COE

Aaron Marshall	COE
Lisa Wright	COE
Russ Kiefer	Idaho
Charles Morrill	Washington
Ann Setter	COE
Dave Statler	Nez Perce
Jay Hesse	Nez Perce
Michael Bryant	CBB
Colby Mills	DSC
Erick Van Dyke	Oregon
Brandon Chockley	FPC