

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

February 22, 2017

Facilitator's Summary

Facilitator: Emily Stranz; Notes: Charles Wiggins, 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/>

Dworshak Update

Steve Hall, Corps, provided an update on Dworshak operations. He noted that the forebay is currently at 1,524.4ft compared to 1,520.4ft last week. The project is releasing around 8kcfs, with inflows at 13kcfs. The project is slowly filling. TDG has stayed between 108-109%. The Corps has been operating to stay below 110% TDG, as coordinated at TMT.

Steve reported that the current 10-day forecast is fairly wet. Therefore, he expects that the March 1st forecast will be approximately 2.6 MAF, making the April 15th flood control elevation 1,510ft. The April 15th and April 30th flood control targets are firm and the Corps cannot deviate from them regardless of the effect on TDG. The region will continue to coordinate in real-time, so if there is an early runoff and then things dry up, as suggested by Tom Lorz, Umatilla, the region can manage the flows to smooth out the transition. Steve reported that he has not yet received data from the most recent snow flight, however, will provide it when he does.

Steve presented two graphs, available on the TMT website. Both assume a 2.6 MAF water supply. The first shows the projected effect of a balanced operation, holding outflows steady around 8kcfs until early March, then increasing to 11kcfs to reach the 1,510ft April 15 value. The second shows the projected effect of typical flood risk management, which would hold close to 8kcfs until the end of March, then increase to 15kcfs for the first two weeks of April to get down to the April 15th target.

Paul Wagner, NOAA, reported that FPAC had discussed holding 8kcfs out, however, did not discuss increasing to 11kcfs. He suggested increasing to 11kcfs sooner than later to "buy space" and avoid having even higher TDG later. If the season proved drier, flow could be backed off later. He suggested this operation could begin this week.

Russ Kiefer, Idaho, updated TMT on hatchery operations, noting that the Clearwater Hatchery had planned a smolt release on March 15th, but is now planning to coordinate the release with the Dworshak federal hatchery on March 27-31st. This scenario depends on the ability to provide lower (100-110%) TDG levels favorable for fish.

Additionally, Russ noted that the Clearwater hatchery must perform intake cleaning in the forebay, which will require no spill for a half day for diver safety. At this point it looks like the best date for this operation is right after the April 15th target has been met.

Dave Swank, USFWS, noted that the hatchery degassers can work at up to 115% TDG. He was not sure if that meant that the hatchery would be comfortable with targeting 115% or would prefer to stay below 115%. He agreed to follow-up with the hatchery.

Amongst the TMT members in attendance, it was suggested that the project target 114% TDG as soon as possible.

- **ACTION** – The Corps will target 114% TDG as soon as possible, with the objective of operating with TDG levels below 115% until the hatchery weighs in on if 115% is an appropriate target. TMT will receive an update at its next meeting.

The next TMT meeting will be a conference call on March 1, 2017.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

February 22, 2017
Minutes: Pat Vivian

1. Introduction

Representatives of the USFWS, Nez Perce Tribe, BPA, BOR, COE, Montana, Warm Springs Tribe, Idaho, NOAA, CRITFC/Umatilla Tribe and others participated in today's TMT conference call. Doug Baus, COE, served as chair and Emily Stranz, DS Consulting, facilitated the conversation.

2. Dworshak Update

2a. Current Operations Data. Steve Hall, COE Walla Walla, reported on the current Dworshak operation as coordinated at TMT: manage discharges to just under 110% TDG saturation levels downstream. Total project discharge is 8 kcfs, with 4.8 kcfs of that through the powerhouse. This volume of spill is generating 108-109% TDG and meeting TMT's goal. Current forebay elevation is 1524.4 ft. Inflows are 13 kcfs and the project is slowly filling.

2b. NCRS Westwide SNOTEL Current Snow Water Equivalent. The Clearwater River basin has 94% of normal snow accumulation according to SNOTEL survey data. Conditions are wetter to the south and drier to the north across the Idaho panhandle.

2c. DWR 2.6 MAF Balanced Operation. Based on available data, the COE is confident the March water supply forecast for Dworshak will be 2.6 MAF. The RFC 10 day forecast is wet, a pattern that persists into the foreseeable future. If the March official forecast turns out to be 2.6 MAF, the April 15 flood control elevation would be around 1510 ft.

Hall showed TMT a balanced operation for a 2.6 MAF forecast, which would hold the current operation as coordinated at TMT until March. On March 1, the COE will increase project outflows to 11 kcfs as required to reach the April 15 flood control elevation, unless the Salmon Managers recommend increasing outflows to 11 kcfs sooner than March 1.

Dave Statler, Nez Perce Tribe, asked why the STP trace that the COE emailed to TMT differs from the graph being shown today. Do both reflect a 2.6 MAF inflow forecast? The graph emailed to TMT was produced before yesterday's STP data were available, Hall replied. It showed Dworshak releases increasing to 17 kcfs. The change in inflow projections amounts to the disparity between a 1517.6 ft flood control elevation and the 1510 ft elevation target shown in the earlier graph. The higher the inflow forecast, the deeper the flood control draft.

Hall said the COE recommends increasing discharges to 11 kcfs as soon as possible in light of the inflow situation. Paul Wagner, NOAA, reported that yesterday's FPAC conversation revolved around 8 kcfs releases, not 11 kcfs. He deferred to Idaho and the Nez Perce Tribe in terms of TDG management.

Statler asked whether system flood control is driving the plan to release 11 kcfs starting March 1 and whether there's any flexibility in terms of operating Dworshak to either a 1517.6 ft or 1510 ft flood control elevation by April 15, given fish and TDG sensitivities. Hall said system flood control requirements are inviolable and the COE will increase discharges to 25 kcfs if necessary to attain the required elevation.

2d. Timeline of Fish Impacts. Regarding the vulnerability of hatchery releases to high TDG levels, Jay Hesse, Nez Perce Tribe, asked TMT to revisit the smolt release schedule that was posted to the February 15 TMT agenda.

Russ Kiefer, Idaho, said IDFG hatchery staff are planning to coordinate their spring chinook release with the Dworshak National Fish Hatchery release on March 27. With a goal of consolidating fish needs in light of Dworshak operational constraints, the March 15 release of 400,000 spring chinook smolts by IDFG would move to March 27, the Dworshak National Fish Hatchery release date. Kiefer hasn't yet heard back from IDFG hatchery staff confirming they can reschedule the release. He will follow up with hatchery managers and report back to TMT. The hatchery would no doubt prefer higher TDG levels now and lower TDG as the release date approaches.

Another Idaho concern is cleaning the hatchery intakes that acquire flow from the Dworshak forebay. Divers will need half a day of no spill in late April to perform this maintenance.

Wagner proposed increasing Dworshak outflows to 11 kcfs now and asked the other Salmon Managers for feedback. Dave Swank, USFWS, asked what TDG levels 11 kcfs would generate; Hall estimated slightly above 115% saturation. As temperatures rise in March, TDG levels will rise, so they are shown in the graph as ranging from 115% to 120%.

Dave Swank, USFWS, asked how Dworshak could be expected to operate after March 1. Hall said the deepest flood control draft is usually around April 15, depending on the shape of inflows. The project normally transitions to refill in the last half of April. Dworshak can be expected to discharge 11 kcfs for the foreseeable future until it intersects with the flood control refill curve (FCRC) which is likely. Discharges during reservoir refill will probably generate close to 110% TDG.

Tom Lorz, CRITFC/Umatilla, asked whether the COE would have the flexibility to make a flood control deviation request if SWEs and inflows drop off in April. Dramatic inflow changes in April would probably mean intersecting the FCRC, Hall replied. That

could include a deviation request to transition to refill. The COE will manage Dworshak based on conditions and risks at the time.

Hall pointed out the two recent inflow peaks on February 11 and 22 were the result of low elevation snowmelt and runoff, while higher elevation SNOTEL sites have been gaining snowpack. NRCS has not yet reported data gathered during the latest snow flight. The COE will send these results to TMT when they are available.

Statler asked what Dworshak discharges are expected to be during refill. The FCRC is normally based on 2 kcfs discharge during refill, Hall replied, but modeling based on the substantial runoff expected calls for 6-8 kcfs releases during refill.

Hesse asked whether the COE can manage TDG levels to 115% and below, which is the highest known level the Dworshak National Fish Hatchery degassers can handle, and Hall said yes. TMT members present gave their views of the **Nez Perce** proposal to manage TDG levels to 115% and below.

- **Idaho** – Supports the Nez Perce proposal. The change should be made as soon as possible.
- **USFWS** – Supports increasing discharges to 11 kcfs, assuming the COE has the flexibility to drop discharges for the combined hatchery release on March 27. It was noted that the Nez Perce proposal is to manage to 115% TDG, not a prescribed flow volume.
- **BPA** – Requested that increased spill begin as soon as the hatchery is prepared for a TDG increase. Managing to 115% TDG or below will mean gradually decreasing outflows as temperatures rise.
- **Colville Tribe** – Supports the proposal to manage TDG to 115% or as close to 115% as possible.
- **Montana** – Agrees with the Colville Tribe's position.

Hall said the COE will manage to 114% TDG, allowing a cushion for reaction time to fluctuations in TDG levels throughout the day. In the interest of moving as much water as possible, Jim Litchfield, Montana, proposed making 115% TDG a target instead of a not-to-exceed limit. However, any TDG value above 115% might have adverse impacts on smolts because the degassers can handle up to 115% TDG, Swank said. He will ask hatchery managers whether a few hours of exposure to 116% TDG would be a problem.

Regarding the March 27 hatchery releases, Kiefer asked the COE to keep Dworshak discharges to 100% TDG if possible and no more than 110% TDG for approximately 2-3 days during the release. He will coordinate with the hatchery and the Action Agencies to establish firm dates and desired flow volumes.

In response to the consensus today from TMT members, the Action Agencies will manage Dworshak outflows to 114% TDG until it's clear whether the impacts of targeting 115% TDG could have adverse impacts on hatchery smolts. The COE will revisit the Dworshak operation at its next meeting March 1.

Next TMT Meeting

TMT will revisit Dworshak operations in a March 1 conference call.

<i>Name</i>	<i>Affiliation</i>
Dave Swank	USFWS
Jay Hesse	Nez Perce
Scott Bettin	BPA
Mary Mellema	BOR
Doug Baus	COE
Tony Norris	BPA
Julie Ammann	COE
Steve Hall	COE
Wayne Jousma	COE
Michael Bryant	CBB
Scott Richards	Snohomish
Steve Lyman	PGE
Laura Berg	Clearing Up
Charles Wiggins	DSC
Steve Burrell	COE
Jim Litchfield	Montana
Jen Graham	Warm Springs
Russ Kiefer	Idaho
Dave Statler	Nez Perce
Paul Wagner	NOAA
Tom Lorz	CRITFC/Umatilla