

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 26, 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 Operations

Alfredo Rodriguez, COE, summarized the week's operations at Dworshak Dam. The facility has been releasing between 11 and 11.4 kcfs in attempt to balance TDG and water temperatures downstream. TDG levels in the Dworshak tailrace ranged between 119.5% and 120%. TDG levels at the hatchery averaged 103%. Water temperature in the Lower Granite tailwater has been between 68.0 and 68.9 degrees F. Alfredo noted that models seem to be performing well, with today's model run anticipating water temperatures between 68 and 69 degrees F. The 7-day forecast for Lewiston, ID calls for air temperatures in the high 90s for a few days. Steve Hall, COE, noted that it was hard to fine tune Dworshak discharge at the levels that the project is currently trying (within 100-200 cfs) due to the "slop" in the hydraulic linkage. He noted that there may be slight variations in discharge as a result. The Corps will continue to operate as they have been, balancing TDG in the Dworshak tailrace with temperature in the Lower Granite tailrace.

Dave Swank, USFWS, shared that the hatchery is hoping for a respite from high temperatures, allowing a reduction in spill and TDG to give the fish a break from high TDG levels. If/when temperatures decrease, there will likely be a request for the Corps to model the effect that reducing spill by 2-3 kcfs might have on water temperatures at Lower Granite. Any reduction, for example even to 101-2% TDG for a week, would be helpful for fish in the hatchery.

Lower Snake River Adult Sockeye Passage

Russ Kiefer, ID, provided an update on adult Snake River Sockeye passage. Based on historic passage timing and current counts, these fish are likely at the tail end of their run. Adult ladder counts have reflected both a smaller annual run and the likely presence of mid-Columbia fish that strayed into the Snake River and were counted at Ice Harbor. Additionally, there are some differences between the PIT tag expansion estimates and window counts at Ice Harbor that IDFG is looking into in more depth. Thus far, they have detected 76 PIT-tagged Snake River sockeye at Bonneville, which equates to an expanded run estimate of 401 Snake River sockeye. Of the PIT-tagged fish, 44 have been detected at Ice Harbor, and 42 at Lower Granite.

Russ explained that the conversion rate between projects is looking good, with the exception of the reach between Bonneville and The Dalles which is currently 76% (below the 10-year average of 84%). Conversion rate for The Dalles to McNary is 81% (10-year average is 79%); McNary to Ice Harbor is 98% (10-year average is 97%); and Ice Harbor to Lower Granite is 91% (10-year average is 91%). Russ noted that the efforts to get the Snake River fish through the system seem to have been successful, despite the low returns.

Juvenile Transport

Doug Baus, COE, reported on fish transport activities. A memorandum for the record (MFR) summarizing the issue is posted on the TMT web site. A mechanical problem involving a railroad bridge suspended all navigation on the Snake River from the afternoon of July 19 through the evening of July 23. After consultation with NOAA, the Corps suspended fish collection and transport activities and changed to secondary bypass at Lower Granite, Little Goose, and Lower Monumental dams. Fish collection operations resumed the morning of July 24.

Possible Ice Harbor Operations Changes

Scott Bettin, BPA, gave TMT advance notice that Ice Harbor Dam may have to decrease spill and increase power generation in the next week or so if the current forecast of high ambient temperatures proves accurate and power demands increase in the Tri-Cities area. If so, BPA will announce a system emergency and notify TMT.

The next regular TMT meeting will be face-to-face on August 2, at 9:00.

**Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES**

July 26, 2017

Minutes: Pat Vivian

1. Introduction

Representatives of Idaho, BOR, CRITFC, Nez Perce Tribe, the Corps, NOAA, BPA, Washington, USFWS, Yakama Nation and others participated in today's TMT call chaired by Doug Baus, COE, and facilitated by Emily Stranz, DS Consulting.

2. Dworshak Operations

Alfredo Rodriguez, COE, gave TMT an update on Dworshak operations.

2a. Current Operations Data. Dworshak Dam is releasing 11-11.4 kcfs as coordinated at TMT.

2b. TDG in Dworshak Tailrace. Total dissolved gas levels below Dworshak Dam are around 119.5-120% saturation.

2c. TDG at Dworshak Hatchery. Current TDG readings in the raceways are 103.1% saturation, with recent readings as high as 103.9%

2e. Hourly Snake and Clearwater River Temperatures. Lower Granite tailwater temperature is around 68.4-68.18 degrees F, as depicted in the link attached to today's agenda.

2f. Weather Forecast for Lewiston, ID. Temperatures in Lewiston over the coming week are expected to climb to 97-98 degrees F in the afternoons, Rodriguez said.

In light of that forecast, Dave Swank, USFWS, reported FPAC's general consensus yesterday that Dworshak should continue to operate for temperature management as it has been until there is respite from the heat. Swank gave TMT a heads-up that as soon as temperatures allow, the Dworshak National Fish Hatchery managers will probably ask the COE to do a model run indicating what Lower Granite tailwater temperatures would look like if spill were reduced by 2-3 kcfs to give the fish a break from high TDG exposure.

Baus asked Swank what would be the approximate goal regarding the magnitude of the TDG reduction and duration? Swank said any reduction from the current levels of 103.6% in the raceways would help, but dropping levels to 101-102% saturation for a week or so would give the hatchery fish some much-needed relief. Steve Hall, COE asked Dave Swank, USFWS if he was aware of an operational

change that may have been made at the hatchery that would have been attributed to the reduction in TDG from 104.0 % on 7/24 down to 102.8% 7/25. Dave Swank indicated he was not aware of an operational change that may have been attributed to this reduction in TDG.

Hall explained to TMT that Dworshak operators have been working hard at stabilizing TDG levels in the river, but problems with the hydraulically operated spill gates make adjusting Dworshak discharges by small amounts (200 cfs) is very challenging. This, in turn, makes it difficult to maintain TDG levels at a consistent 120% saturation.

3. Lower Snake River Adult Sockeye Passage

Russ Kiefer, Idaho, gave an update on adult sockeye passage. IDFG researchers report that historic run-timing data indicate 90-97% of the run have probably passed Ice Harbor, and 80-93% have probably passed Lower Granite. Daily counts are dropping, which indicates the run is coming to an end. One caveat is that minor errors in adult counts can skew the data when the return is as small as the Snake River sockeye run is this year. Also, researchers believe some of the more abundant mid-Columbia sockeye run took a wrong turn and strayed into the lower Snake, confounding the fish counts at Ice Harbor, and potentially even Lower Monumental.

IDFG researchers estimate the lower Snake River adult sockeye run size as 401 total, based on the expansion calculation of 76 detected at Bonneville Dam. According to PIT tag detections at Ice Harbor, the estimated sockeye return is in the low 200 range, but window counts put that at 382 fish. Lower Granite window counts are probably more accurate than those at Ice Harbor. Conversion from Bonneville to The Dalles is the most concerning at 76%, which is below the average of 84%.

IDFG provided the following conversion estimates for Snake River adult sockeye at various reaches compared to the historical average (2008-2014).

Bonneville to The Dalles = 76% (2017) vs 84% (average).
 The Dalles to McNary = 81% (2017) vs. 79% (average).
 McNary to Ice Harbor = 98% (2017) vs. 97% (average).
 Ice Harbor to Lower Granite = 91% (2017) vs. 91% (average).

Kiefer said efforts to get adult sockeye through the lower Snake should be considered successful at 91% this year, the same as the historical average. Window counts probably get more accurate the further upstream you go. Some sockeye have been detected at PIT arrays in the Salmon River near the town of Salmon, ID, but no detections upstream of that yet.

4. Juvenile Transportation

Baus gave an update on juvenile transportation to notify TMT of a modification. On the afternoon of July 19, a Union Pacific railroad bridge on the Columbia River had a mechanical failure that blocked all navigation past river mile 323. So, on July 20, staff at Lower Granite and Lower Monumental switched from juvenile collection for transport to secondary bypass operations. At 7:00 am on July 21, staff at Little Goose switched from collection for transport to secondary bypass operations. Repairs of the railroad bridge were completed the evening of July 23, and by 8:00 am the next morning, Lower Granite, Little Goose, and Lower Monumental had returned to juvenile collection for transport.

5. Generation at Ice Harbor

Scott Bettin, BPA, gave TMT a heads-up that high temperatures in the Tri-Cities area over the next month could lead to a generation shortage. If so, BPA would have to declare a system emergency, increase generation at Ice Harbor, and decrease spill. Extremely hot weather also increases the risk that electrical equipment will fail. If problems arise, TMT will be notified and have an unscheduled meeting if necessary.

Next TMT Meeting

TMT will meet next on August 2 in person.

Name	Affiliation
Tom Lorz	CRITFC
Russ Kiefer	Idaho
Mary Mellema	BOR
Jay Hesse	Nez Perce
Doug Baus	COE
Paul Wagner	NOAA
Scott Bettin	BPA
Lisa Wright	COE
Charles Morrill	Washington
Dave Swank	USFWS
Brian Zeigler	Snohomish
Alfredo Rodriguez	COE
Tom Iverson	Yakama Nation
Michael Bryant	CBB
Alyssa Bernini	DSC
Dan Turner	COE
Eric Chow	COE
Joel Fenolio	COE
Makary Hutson	BPA
Steve Hall	COE