

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

Conference Call

May 12, 2010

FACILITATOR'S SUMMARY NOTES

Facilitator: Erin Halton

Notes: Christa Leonard

The following notes are a summary of issues that are intended to 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.

Review of Meeting Minutes for April 21, 28 & May 5, 2010

There were no changes to the 4/21 official meeting minutes or the facilitator’s summary. Jason Flory, USFWS, had an edit to the 4/28 facilitator’s notes: on page 3, it should read “7-21 days.” Dave Wills, USFWS, mentioned changes to the 4/28 official meeting minutes: on page 9 it should read “until the 260 KAF is stored.” Wills also mentioned an edit to the 5/5 official minutes: on page 5 it should read “the COE expects a total of 260 KAF.”

Action/Next Steps: DS Consulting and The COE will make the necessary changes and re-post these sets of notes to the web. All three sets will then be considered final.

Libby Spring Operations

Steve Barton, COE, asked Joel Fenolio, COE, to walk TMT through two graphs (posted in one link to the agenda) detailing modeling data that track the storage accounting based on actual volume and flows over the past week. Fenolio noted that 140 KAF had been stored thus far and inflows are 6-7 kcfs. He explained that storage is a little over half way to the 260 KAF, which is expected to be around May 19th (he noted this date is flexible and can shift). At that time, flows will ramp up to 14.5 kcfs (VarQ flow). He said the latest data indicates that that the 260 KAF will be out by June 30th and elevation will be at 2417’ at that time. Fenolio said that that the models assumed a June 1 start date for the sturgeon pulse; if the pulse begins later than June 1, which is likely, flows would be increased to 18-20 kcfs (which is above VarQ flows) to move the 260 KAF out by the end of the month. If the pulse starts earlier than June 1, which is unlikely, the COE would have more flexibility to shape flows. Jim Litchfield, MT, noted the concern for a drastic drop in pool elevation; Fenolio said the sturgeon recovery team is working on an SOR surrounding the Sturgeon Pulse that will help ensure a gradual release of the storage. Paul Wagner, NOAA, asked what triggers determine the start of fish operations; Fenolio answered that temperatures, fish movement and flow are all factors.

Action/Next Steps: Fenolio will update the storage links each week by Tuesday am, so the Salmon Managers can review the latest data at their FPAC meetings. This agenda item will be revisited weekly.

Priest Rapids Flow Objectives

Paul Wagner, NOAA, recalled for TMT that the current flow objective is 135 kcfs, per last week's TMT meeting. He said that in looking at Grand Coulee flows this week, the move to 135 kcfs at Priest Rapids may have been a bit ahead of natural flows. Wagner said that fish data indicates that fish are already gone or have yet to arrive; assuming migration is still coming, it wouldn't be prudent to have the Columbia River flows ahead of the Snake River flows. As such, the Salmon Managers discussed stepping flows down to 130 kcfs. Tony Norris, BPA, noted that if backing off is a consideration, Grand Coulee discharge can be incrementally reduced as early as this week and into next. John Roache, BOR, clarified that a decrease of 5 kcfs at Priest Rapids saves about 1 foot per week in the Grand Coulee pool. Wagner suggested that it's a matter of managing the resource available with a certain degree of uncertainty; he said that the Salmon Managers suggested a conservative route, given the conditions that currently exist. BPA and the COE stated that Grand Coulee could be managed in a manner that achieves the flow objectives at Priest Rapids. Jerry Marco, Colville Tribe, said that while the Tribe supported a decrease, they prefer flows not drop below 125 kcfs as there may be some Summer Steelhead present who need support.

Action/Next Steps: The Action Agencies will operate Grand Coulee to support a flow objective in the range of 125-135 with 130 being the target. Wagner will update TMT on these operations at the TMT meeting on 5/19.

Hanford Reach Update

Russell Langshaw, Grant County PUD, directed TMT to chart, posted as a link to the agenda; he noted that flows have been consistent since his last update. The daily delta was 30-40 kcfs, mean daily discharge was minimum 91.2 kcfs and maximum 128 kcfs, with an average of 110.5 kcfs. Flows from Priest Rapids were minimum 78.2 kcfs and maximum 107.2 kcfs, with a mean of 97.3 kcfs. Maximum discharge was 99.6-146.1 kcfs, with a mean of 122.7 kcfs. The daily delta was .5 kcfs-39.7 kcfs, with a mean of 25.5 kcfs. Langshaw said temperature units were 1100 from the end of spawning, so there will likely be 3 more weeks of protection. Weekend protection levels were at 96.6 and 94.6 for the first and second weekends. He added that the end of emergence has been reached, so the only constraints going forward are for the daily deltas.

Action/Next Steps: Langshaw will provide another update to TMT for the 5/26 meeting.

Water Management Plan Spring/ Summer Update

Steve Barton, COE, reported back to TMT that the COE had received excellent comments; they have been incorporated into a revised version. There will be a final Action Agency review this week and the final version will be submitted to the court and posted to the TMT site by C.O.B. Friday (though Barton noted per the BiOp that the true deadline is midnight this Saturday.) Barton thanked all those who submitted comments.

Treaty Fishing

Tom Lorz, CRITFC, shared with TMT that more tribal fishing has commenced per an SOR #2010-C2, posted as a link to the agenda. A 1.5' band was requested at Bonneville, John Day and The Dalles and Lorz clarified that Treaty Fishing will go from Tuesday through Friday of this week. Steve Barton, COE, asked Lorz if more SORs are

anticipated; Lorz said that the need will be evaluated week per week depending on catch counts.

Action/Next Steps: The COE will implement the SOR as written; Lorz will check in with TMT next week and will report catch counts to TMT as they are available.

Dworshak Operations

Paul Wagner, NOAA, walked TMT through SOR #2010-02, posted as a link to the agenda. The request was for increasing flows at Dworshak to full powerhouse (10kcfs) for three consecutive days during the week of May 17th. Wagner noted that since the SOR was crafted, the forecast for the Snake River run-off peak has changed; he said that for today's call, the Salmon Mangers hoped to discuss how to best meet the intent of the operational request, while recognizing the changing forecast and risks to meeting refill later in the season. He noted that the intent of the request is to provide a migration "queue" by aiding flows. Dave Statler, Nez Perce Tribe said that he understood the need to encourage downstream movement and that to the extent that flows could be augmented by Dworshak, the request is reasonable, provided the risk to refill is contained.

TMT discussed the uncertainties and risks of the proposed operation and reviewed data posted as a link to the agenda; Steve Hall, COE, referred to refill probability data based on 15 similar water years; he said that the data projected that the "cost" of running outflows at full power house (about 10kcfs) for three days is that the pool would end up 3 feet lower than without implementing the SOR. Hall said that while the forecast is uncertain, if it were to stay exactly as it is predicted today, then there would be just enough water to meet the request in the SOR and the project would still meet refill. Hall emphasized that the forecast changes rapidly, due to temperature and precipitation. He clarified that in the year 1987 (when refill was missed by 18'), the peak runoff was observed on May 1; so far this year seems to be tracing closely to 1942 and 2001.

Statler said that while the Nez Perce Tribe does want to support outmigration, he wondered if two days of elevated flows would help manage the risk of less augmentation available later in the summer. Wagner clarified that if natural flows are in the range of 100 kcfs, the SOR would be unnecessary; he added the latest forecast forecasted flows in the 75 kcfs range for next week and noted that warming in the forecast will help the increasing migration; however, if conditions change and there was a "forecast bust" over the next few days, then TMT would need to discuss updated data before making a decision. The COE cautioned that the pool elevation at Brownlee has been decreasing, which indicated that Idaho Power might be trying to capture some of the run-off volume. Barton cautioned that regulation from Idaho Power could counter the objectives in the SOR. BPA noted that a couple of days lead time would be necessary to coordinate the change specified in the request. Russ Kiefer, ID, noted that temperatures at Lower Granite have been lower than average; however, he acknowledged that the risk to having less flow augmentation during the hot summer timeframe is not taken lightly.

Action/Next Steps: This issue will be discussed at a TMT conference call on Monday 5/17 at 1:00pm. Paul Wagner will coordinate with Idaho Power and the COE will provide any relevant hydrological data to TMT (possibly via an email on Friday.) Call-in information will be posted to TMT site.

Ice Harbor Spill Levels

Russ Kiefer, ID, presented TMT with SOR 2010-03 and apologized for the short notice to TMT members, noting that identifying the needs of fish is often sudden and unplanned. Steve Barton, COE, reminded members that SOR's are expected to be emailed to all TMT members and to all persons named in the "to" section of the SOR. Kiefer said that this SOR is in response to a recent review of a draft research report regarding passage at Ice Harbor Dam and a review of this years PIT tag detection data that supports the researchers' conclusions. Kiefer said he drafted this SOR out of concern that during the 30% spill block periods of the current spill operations more fish are routed through the JBS, and passing those fish through the surface weir would be better for the fish. He shared that a 50% flat spill pattern during this latter part of spring migration should increase adult return rates and could be better for our power system by making power production more stable. Tony Norris, BPA, clarified that power production would not necessarily be more beneficial because of a flat spill pattern. Kiefer clarified that this SOR would apply only to spring operations and was intended only for this year's operation. He acknowledged there is an Ice Harbor Configuration Operations Planning group that is discussing long term spill rates. Kiefer noted that timing for this request was an issue, as the operational change would be more effective if it were implemented sooner rather than later; an initial TMT poll on their response to the SOR was conducted as follows:

- COE: cannot support or not support the SOR at this time; need more time to review internally.
- OR: also needs more time to consider the SOR, but does see some merit for discussion and hopes the Salmon Managers can discuss the request further.
- MT: not sure how the SOR fits into the litigation frame work and suggest the request needs legal analysis as to what it would mean for other operations that are "rolled over" from previous BiOps.
- CRITFC/Umatilla Tribe: encouraged the Action Agencies to consider the request and implement a spill level that is best for fish survival; the SOR is on the right track but may need some revision.
- WA: agree that the COR is on the right track and would like to caucus with Salmon Managers. Also agree that the request needs to be addressed quickly.
- BOR: needs more discussion internally and with the COE.
- BPA: needs more discussion internally and with the COE.
- USFWS: appreciate the effort behind the SOR and would like more time to discuss the request internally and with fellow Salmon Managers.
- NOAA: glad ID took first step; think that the proposal is reasonable, but would like more time to discuss the request internally and with the Salmon Managers.

Action/Next Steps: Kiefer will share his reference material via email for TMT reference. TMT members to discuss with their agencies, and each other as needed, before reconvening on this subject during the Monday conference call at 1:00pm.

Spillway Weir Operations at Little Goose

Tim Dykstra, COE, outlined for TMT, per the Fish Passage Plan, the current operation of the spillway weir; he said it was in the high crest position (passing 7 kcfs flows). He reported that a change form had been drafted, to shift to the low crest position (passing 10

kcfs), as the latest STP forecast showed 10-11 days of projected flows over 70kcfs. Dykstra acknowledged that an FPOM meeting was planned for 5/13, but that he wanted to coordinate this effort with the Salmon Managers as soon as possible before peak migration begins, which is expected next week. He clarified that the shift to the low crest position would require the weir to be out of service for about a day and clarified that during the outage, spill would continue with a uniform pattern. A TMT poll was taken on the request to change to the low crest position as soon as possible:

- CRITFC/Umatilla: OK
- ID: OK
- OR: OK
- USFWS: OK
- WA: Supports
- NOAA: Good operation
- BPA: OK
- MT: OK

Action/Next Steps: The operation will take place as early as tomorrow and should take one business day, weather permitting. The COE will send an update on the operation to TMT via email.

Other: The 5/26 TMT meeting will be held at the Spring Creek Hatchery – directions and location information will be shared via email by the facilitation team.

The next TMT meeting will be: conference call on 5/17 at 1:00 pm.

Agenda items will include:

- Dworshak Update
- Ice Harbor Update

Future TMT meeting schedule:

5/19 – conference call at 9:00 am.

Agenda items will include:

- Libby Operations Update
- Priest Rapids Update
- Treaty Fishing Update
- Dworshak Update
- Ice Harbor Update

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM OFFICIAL MINUTES

May 12, 2010

Notes: Pat Vivian

1. Introduction

Today's TMT conference call was chaired by Steve Barton (COE) and facilitated by Erin Halton (DS Consulting). Representatives of the COE, NOAA, Washington, Montana, USFWS, Idaho, CRITFC, Oregon, BOR, BPA, the Colville Tribe, Nez Perce Tribe and others attended. This summary is an official record of the proceedings, not a verbatim transcript. Anyone with questions or comments about this summary should provide them to the TMT chair or bring them to the next meeting.

2. Review Meeting Minutes for April 21, 28, and May 5

There were no changes to the April 21 and 28 facilitator's notes today so both were finalized. Halton will redistribute the May 5 facilitator's notes to TMT with newly received comments incorporated.

Dave Wills (USFWS) commented on the April 28 and May 5 official minutes. The COE will make these changes and re-post the minutes:

- April 28 – Libby operations, middle of page 9: Replace “In response to the ICF date change, the COE modified Alternative 1 so that Libby would only release minimum flows until the 260 kaf is out of the reservoir,” with “...so that Libby would only release minimum flows until the 260 kaf is stored in the reservoir.”
- May 5 – Libby operations, page 5: Revise to say, “If the Phase 2 deviation is likewise approved...the COE expects a total of 260 kaf stored,” instead of “260 kaf stored.”

3. Hanford Reach Update

Since the last report to TMT, daily delta constraints in the Hanford reach have been in the 130-140 kcfs range, Russell Langshaw reported. Mean daily discharges from Priest Rapids Dam have been 91.2-128 kcfs, with an average discharge rate of 110.5 kcfs per day. Minimum flows have ranged from 78.2-107.2 kcfs per day with an average of 97.3 kcfs. Maximum discharge rates have been 99.6-146.1 kcfs with an average of 122.7 kcfs. Daily deltas ranged from 0.5 kcfs to 39.7kcfs with an average of 25.5 kcfs.

This past weekend was the last of four weekends of protection flows. Minimum and maximum flows for each weekend are depicted in the graph

attached to this agenda item. The minimum flows for the first two weekends were 96.6 kcfs and 94.6 kcfs, respectively.

The end of emergence has been declared, so protection of critical spawning elevations has ended, and daily deltas are the only remaining constraints in operating the dam. Langshaw will provide another update at the May 26 TMT meeting.

4. Libby Spring Operations

Joel Fenolio (COE) presented a link to this agenda item that depicts storage at Libby Dam accumulated under the Phase 2 operation. Through yesterday, the reservoir stored an extra 140 kaf, or a little over half of the 260 kaf goal. Inflows have been around 7 kcfs the past few days. May 19 is the projected date by which 260 kaf will be stored, and releases will revert from minimum flows to VARQ flows of 14.5 kcfs. Fenolio assured TMT that VARQ flows won't resume until the full 260 kaf has been stored in Libby reservoir.

Jim Litchfield (Montana) asked how the timing of the sturgeon pulse figures into assumptions behind the graph. Montana is concerned that if the sturgeon pulse is pushed later into June, the Libby reservoir elevation could fluctuate because there wouldn't be much time to evacuate the stored volume by the June 30 deadline for flow neutrality of Phase 2.

If the sturgeon pulse occurs later than assumed— it started on June 10 last year – the COE will probably evacuate some of the 260 kaf early, Fenolio said. Outflows at Libby would be matched to inflows as much as possible to smooth out the operation. The main triggers for initiating the sturgeon pulse are fish movement and water temperature. This year is similar to last year so it's highly likely the sturgeon pulse will occur later in June. If that is the case, the discharge would probably be 18-20 kcfs total flows, instead of the VARQ flows of 14.5 kcfs. Aware of concerns about elevation fluctuations, the COE is already working on ways to even out the flows in June.

5. Priest Rapids Flow Objectives

The current flow objective established last week is 135 kcfs at Priest Rapids Dam, but yesterday FPAC focused on concerns about the timing of Snake River migration and the need to match outflows with natural runoff, Wagner said. So the Salmon Managers are recommending a reduction in the flow target from 135 kcfs to 130 kcfs at this time. BPA has sufficient notice to adjust the flow objective for this week down to the 125-135 kcfs range, Tony Norris said.

Every 5 kcfs increase in the daily Priest Rapids flow objective costs about a foot per week in storage released from Grand Coulee, John Roache (BOR) said. A major concern the Salmon Managers have is scheduling releases to the arrival of Snake River runs, which appear to be late this year due to low flows in

the Snake. We need to avoid cutting mid Columbia flows for Grand Coulee refill at the very moment the Snake River juveniles hit the mid Columbia, Wagner emphasized.

In response to these concerns, the Action Agencies proposed a flow objective of 125-135 kcfs at Priest Rapids, with 130 kcfs as the planning target. **NOAA, Montana, USFWS, BOR** and the **Colville Tribe** endorsed the 130 kcfs target. However, the Colville Tribe would object if flows at Priest Rapids drop below 125 kcfs because upper Columbia summer steelhead are currently passing through the mid Columbia and need the water.

6. Water Management Plan – Spring/Summer Update

The COE has incorporated all comments received and is internally reviewing the final version of the WMP spring/summer update. The final document will probably be posted by 5 pm on May 14, at the very latest by the BiOp deadline of midnight May 15, Barton reported.

7. Treaty Fishery – SOR 2010-C2

Treaty fishing under this system operational request began at 6 am on May 11 and will continue through 6 pm on May 14, Tom Lorz (CRITFC) reported. The SOR calls for a 1.5-foot operating band at Bonneville, John Day and The Dalles pools for the duration of the treaty fishery. The SOR states that CRITFC anticipates additional fisheries in May.

The COE will implement this SOR as written. TMT will revisit treaty fishing plans during its May 19 conference call.

8. Dworshak Operations – SOR 2010-02

Paul Wagner (NOAA) introduced this SOR on behalf of the Salmon Managers. It requests that outflows from Dworshak Dam be used for 3 consecutive days to increase discharges to powerhouse capacity. The purpose of the 10 kcfs/day, or 30 kcfsd total outflow, is to augment the peak of an increasing inflow hydrograph. When the SOR was drafted, flows at Lower Granite were expected to peak on May 20. The current forecast, however, has increased substantially.

While the Salmon Managers recognize that SOR 2010-02 puts Dworshak refill at some risk, it appears that a large number of fish have not yet passed Lower Granite Dam, and past years' data suggest that a number of fish remain in the Snake basin, waiting for flows to increase. The Salmon Managers are willing to risk having Dworshak miss its refill target by a few feet in order to give these reluctant spring migrants a signal that it's time to move. The longer they delay, the greater the likelihood they won't return as adults. And recent COE modeling shows the hydro system has an increase of at least 30 kcfsd in operational flexibility to provide this pulse for juveniles.

Dave Statler said the Nez Perce Tribe supports the SOR as long as the risk to Dworshak refill is contained. To address uncertainties in calculating the probability of refill, Barton gave a PowerPoint presentation (linked to today's agenda) that evaluates the risk to date. With the current operation at minimum discharge of approximately 1.3 kcfs from Dworshak, the reservoir is projected to refill in 7 of the 15 most similar years to 2010. If the SOR is implemented, adding 3 days of full powerhouse operation (3 days at approximately 10 kcfs per day), Dworshak reservoir would refill in only 3 of the 15 most similar years.

The current April-July water supply forecast for Dworshak is 1,526 kaf; the current May-July forecast is 1,143 kaf. Steve Hall (COE) said the estimated 56 kaf needed to fulfill this SOR would result in a Dworshak pool elevation that's about 3 feet lower in the historic years that didn't refill. The current operation of 1.3 kcfs minimum outflows offers a 56% chance of Dworshak refilling under the latest water supply forecast, which means refill would happen if all aspects of the forecast are accurate. That forecast shows a 50 kaf cushion that should cover the additional 10 kcfs of full powerhouse flow for 3 days. However, implementing the SOR would absorb all of the COE's operational flexibility to respond to changes in conditions, Hall explained.

Statler suggested the Salmon Managers consider a compromise operation such as 7.5 kcfs for 3 days or 10 kcfs for 2 days. Barton asked whether there's a flow level at which the Salmon Managers would deem this SOR unnecessary. If natural flows at Lower Granite are 100 kcfs or greater, no augmentation would be needed, Wagner replied. This is the only spring flow augmentation proposal the Salmon Managers expect to make this year unless inflows increase dramatically. If not, most species will need a boost, particularly steelhead and spring Chinook.

Barton emphasized that the peak flow at Lower Granite being targeted for augmentation involves assumptions about the operation of Brownlee reservoir that add to the risk. Wagner and Barton agreed that coordinating with Idaho Power regarding Brownlee and Grand Coulee operations would be in the region's best interest this year.

TMT set up a conference call at 1 pm, May 17, to discuss this SOR further. There was general agreement to hold off on implementation until then. A decision to augment peak flows at Lower Granite would be needed at least 3 days before the peak occurs, Barton said. A continued cool spring could result in less runoff volume than anticipated – snowpack has vanished under similar conditions, Litchfield pointed out and Hall agreed. However, there's still a fair amount of snow at higher elevations this year, and it's unlikely all of that will disappear.

If the COE has any relevant updates on May 14, TMT members will be notified. If not, TMT will revisit this SOR at 1 pm on May 17.

9. Ice Harbor Spill Levels – SOR 2010-C3

Russ Kiefer (Idaho) presented this SOR, which he arranged to have posted to the TMT web page late yesterday after reading a draft research study with possibly crucial implications for passage at Ice Harbor Dam this year. SOR 2010-C3 requests that Ice Harbor spill levels be changed to a flat rate of 50% spill in place of the current rollover operation – a spill test comparing 30% spill with 45 kcfs daytime and gas cap spill at night, per the 2004 BiOp.

Kiefer's request is based on PIT tag data that indicate adult return rates are higher for fish passing over surface routes such as the new Ice Harbor spillway weir vs. those that pass through the powerhouse. It appears that 30% spill would pass more fish through the powerhouse and juvenile bypass system than Idaho believes is prudent. While the SOR specified 50% spill, Kiefer would be open to a modified percentage if it's flat spill. He emphasized that this proposal is for spring migration only, and time is of the essence.

The SOR is related to the longer term process of developing a Configuration and Operations Plan for Ice Harbor Dam. However, the COP won't go into effect this year, with the BiOp rollover operation in effect. Kiefer's concern is that the peak of migrants will arrive at Ice Harbor during a block of 30% spill and end up going through the powerhouse. While the SOR is based on recent research findings, he noted that the researchers didn't participate in making this recommendation.

There was general agreement that more time is needed to review SOR 2010-C3 before deciding whether or not to implement it. TMT members shared their preliminary responses:

- **COE** – Still reviewing the SOR internally.
- **Oregon** – Believes the proposal has merit for discussion but would require legal analysis.
- **Montana** – Displacing the rollover operation with this SOR would require legal analysis. Also, more information is needed to substantiate that a spill rate of 50% is preferable to another rate.
- **CRITFC** – Any departures from BiOp spill levels would require consensus. The SOR is on the right track but warrants further discussion. A decision on whether to implement this SOR needs to be made quickly.
- **Washington** – The SOR is probably on the right track. Agrees that more discussion is needed among Salmon Managers and the rest of TMT.
- **USFWS** – More discussion is needed, especially among Salmon Managers.

Steve Barton	COE
Doug Baus	COE
Paul Wagner	NOAA
Charles Morrill	WDFW
Jim Litchfield	Montana
David Wills	USFWS
Russ Kiefer	Idaho
Tom Lorz	CRITFC
Ron Boyce	Oregon
John Roache	BOR
Tony Norris	BPA
Jerry Marko	Colville Tribe
Dave Statler	Nez Perce
Joel Fenolio	COE
Tim Heizenrader	Centaurus
Steve Hall	COE Walla Walla
Laura Hamilton	COE
Kim Johnson	COE
Steve Burrell	COE
Don Faulkner	COE
Dave Benner	FPC
Russ George	WMC
Ruth XX	JP Morgan
Glen Trager	Shell Energy
John Hart	EWEB
XX	Puget
Bill Crampton	CBB
Doug XX	Point Carbon
Rob Dies	Iberdrola Renewables
Tom Le	Puget Sound Energy
Russell Langshaw	Grant PUD
Margaret Filardo	FPC