

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

April 16, 2014

Facilitator's Summary

Facilitator & Notes: Emily Plummer, 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.*

### **Review of Meeting Minutes**

With no suggested edits to the 4/2 and 4/9 Official Minutes or the 4/9 Facilitator's Summaries, the notes were considered final. It was noted that Russell Langshaw, Grant County PUD, may have edits to the Wanapum Update in the 4/2 Facilitator Summary and he will provide those to [emily@dsconsult.co](mailto:emily@dsconsult.co) as soon as possible.

### **Water Supply Forecast**

Doug Baus, COE, shared the current NWRFC water supply forecasts, noting that the official April forecast that was provided at the April 9<sup>th</sup> TMT meeting is the same (noted below). Forecasts are posted on today's agenda (<http://www.nwd-wc.usace.army.mil/tmt/>). Current and official NWRFC forecasts are as follows:

- The Dalles April – August 91 MAF (104% of average)
- Lower Granite April – July 22 MAF (109% of average)
  
- (Official) Dworshak April – July 3,111 KAF (128% of average)
- (Official) Libby April – August 6,868 KAF (117% of average)

It was noted that the April forecasts were derived from the 6<sup>th</sup> working day of the month (instead of the usual 5<sup>th</sup> working day) in order to include the snow and ESP data.

### **Vernita Bar Update**

Scott Bettin, BPA, provided an update on the Vernita Bar operation. He reported that the operation is going as planned and there have not been any exceedences thus far. A Vernita Bar update will be provided at the next TMT meeting.

### **Wanapum Dam Update**

Scott Bettin, BPA, updated TMT on the Wanapum Dam fracture. He noted that according to Russell Langshaw, Grant County PUD, the left bank fish ladder at Wanapum is in operation and 61 fish passed on April 15<sup>th</sup>. A Wanapum update will be provided at the next TMT meeting.

### **Little Goose Navigation Lock Update**

Doug Baus, COE, reported that at this point there is no new information on the navigation lock repair; however, COE is hoping to have more information from the Walla Walla District later today or tomorrow. The lock is still expected to return to service by May 1<sup>st</sup>. Doug suggested the TMT discussion on potential juvenile transport scenarios considering the impact of the navigation lock repair on transport operations. He inquired as to NOAA and FPAC operation recommendations in the case that the lock is back in service prior to May 1<sup>st</sup>. Paul Wagner, NOAA, noted that if the navigation lock is operating by May 1<sup>st</sup>, NOAA recommends starting transport at all projects on the 1<sup>st</sup>, with the first barge leaving on May 2<sup>nd</sup>. If the lock is repaired prior to the 1<sup>st</sup>, the NOAA-recommended start date, per the 2014 Supplemental BiOp, would be to start transport at Lower Granite on April 25<sup>th</sup>, followed by staggered start dates at Little Goose and Lower Monumental. It was noted that, although not all FPAC members were present at the 4/15 FPAC meeting and not all members fully support the May 1<sup>st</sup> start date, there was general agreement to start transport on May 1<sup>st</sup> (with no staggered start date) and therefore recommended that transport be initiated on May 1<sup>st</sup> (with no staggered start date) this year regardless of whether or not the navigation lock repairs are completed earlier. Paul Wagner added that according to models provided by Steve Smith, NMFS Science Center, starting transport on May 1<sup>st</sup> at

Lower Granite, Little Goose, and Lower Monumental should allow for 48% transport and thus meet BiOp requirements for transporting 'about 50%' of the steelhead.

- **Next Steps:** Doug Baus understands the TMT recommendation at this time will be to initiate transport at Lower Granite, Little Goose, and Lower Monumental Dams on May 1<sup>st</sup>, with the first barge departures occurring on May 2<sup>nd</sup>. Doug Baus will provide an update on the Little Goose Navigation Lock and any implications on transportation at the next TMT meeting on April 23.

### **Libby Operations**

Jim Litchfield, MT, presented a proposed SOR (SOR #MT-2014-1) aimed to stabilize Libby flows in July and August and gradually decrease flows in September; a link to the SOR is provided online on today's agenda. Jim noted that Montana has coordinated with Idaho and the Kootenai Tribe on the SOR and that the intention is to allow for channel morphology and protect the aquatic environment for resident fish in the Kootenai River during the most productive period. Brian Marotz, MT, noted that for the last few years a maximum flow hard constraint of 8kcfs has been implemented to provide for the Kootenai Tribe in stream sturgeon habitat work; the drafting constraints are not needed for the habitat work this year, however, will likely be necessary in 2015. Joel Fenolio, COE, noted that the intent of this operation is to target 2,449ft at the end of September, however, there would be increased flexibility to shape the flows to meet Montana's interests for stable or gradually declining flow after the spring freshet. Joel also noted that there would be flexibility and opportunity for TMT input and in season operation changes. Joel walked the group through modelling that he provided on two different scenarios, one targeting a flow of 9kcfs in September and the other targeting 10kcfs; a link to the models is provided on today's agenda. Fenolio noted that this is an operation to target 2,449ft by September 30<sup>th</sup>, however, the actual elevation at the end of September may be higher or lower than 2,449 ft. After September 30<sup>th</sup> the project will be reduced to minimum flows. There was recognition that it is early in the year to determine summer/fall operations, as well as recognition that Montana would like early agreement on the general framework of the operation, the details of which can be revisited in season.

- **Next Steps:** TMT members will review the SOR and modeling results and will poll on the operation framework at the April 30<sup>th</sup> or May 7<sup>th</sup> TMT meeting.

### **Spring Creek Hatchery Release**

Dave Wills, USFWS, reported that the first of two Spring Creek hatchery releases was implemented on Friday, April 11<sup>th</sup>. The operation is going well thus far, with no descaling and little mortality. The fish are moving through the project quickly and were detected at the bypass collection as early as midnight on the 11<sup>th</sup>. Lisa Wright, COE, noted that the operation will continue to be a hard constraint until tomorrow and then will be a soft constraint. TMT will continue to be updated on the operation. The next release is planned for early May.

### **May Snake River Flow Augmentation**

Mary Mellema, BOR, provided an update on the plan for Snake River Flow Augmentation, which currently is expected to release the full 486 kaf. BOR is planning to provide augmentation flows with the following:

- 206 kaf from the Upper Snake River above Milner
- 77 kaf of natural flow
- 162 kaf from the Payette River
- 41 kaf from the Boise River

Mary noted that these numbers are assuming that all the systems will fill: BOR is expecting that the Payette and Upper Snake will fill; however, the Boise is questionable. Timing of augmentation depends on the reservoir filling. Both the Upper Snake and Payette are expected to fill in mid-July and the Boise is expected to fill earlier. Mary will update TMT on the flow augmentation operation as the season progresses.

### **Operations Review**

Lisa Wright, COE, reported on COE projects.

- Libby was at elevation 2,402.2 feet, with 8.4kcfs inflow and 25.2kcfs outflow.

- Albeni Falls was at elevation 2053.4 feet, with 39.6kcfs inflow and 36.5kcfs outflow.
- Dworshak was at elevation 1,491.1 feet with 11.9kcfs inflow and 20kcfs outflow.
- Lower Granite average outflow was 78.7kcfs.
- McNary average outflow was 231.9kcfs.
- Bonneville average outflow was 225.3kcfs.

Mary Mellema, BOR, reported on Reclamation projects:

- Grand Coulee midnight elevation is 1,245.6ft. The project is drafting for an April 30th target of 1,235.2ft.
- Hungry Horse is currently at 3,505.4ft and is releasing approximately 13kcfs, 4kcfs of that is spill and about 9kcfs is going through the units, which will continue through April.

### **Fish**

Paul Wagner, NOAA, reported on fish, noting that the adult spring chinook numbers are looking good for this time of year; 7,727 have passed Bonneville, which represents 140% of the 10 year average. He noted that the percentages decrease upriver, however, Bonneville passage is likely not yet accounted for in upstream percentages. Juvenile yearling chinook numbers are generally increasing: 36,000 passed Lower Granite on April 15<sup>th</sup>, 2,800 passed Bonneville and all projects are showing passage. Juvenile steelhead are steady in the 6,000-8,000 range, the majority hatchery fish; of the wild steelhead, the majority are from Asostin Creek in Washington. Sockeye are being detected at Lower Granite, as well as Bonneville and all projects, except Lower Granite are showing some lamprey passage.

### **Water Quality**

Lisa Wright, COE, reported that the Spill Priority List that was discussed at the March 19<sup>th</sup> TMT meeting is being implemented and in order to meet needs for performance standard testing, McNary will be moved to the bottom of the list on April 28<sup>th</sup> until June 10<sup>th</sup>, followed by John Day moving to the bottom of the list from June 10<sup>th</sup> through August. A link to the SPL is provided on the TMT website.

### **Power System**

Tony Norris, BPA, reported that due to grid congestion a transmission emergency was declared on April 13<sup>th</sup>, causing a spill variance due to reduced generation for 1 hour at The Dalles dam. He will provide more information as available in the coming weeks.

**The next TMT meeting will be a conference call on April 23<sup>rd</sup> at 9:00am.**

Agenda items include:

- Water Supply Forecast Update
- Vernita Bar Update
- Wanapum Update
- Little Goose Navigation Lock Update
- Spring Transport
- Spring Creek Hatchery Release
- Other?

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

**April 16, 2014**  
Minutes: Pat Vivian

**1. Introduction**

Doug Baus, COE, chaired this TMT meeting facilitated by Emily Plummer, DS Consulting. Representatives of the COE, BOR, NOAA, USFWS, BPA, Washington, Idaho, Yakama, Montana, CRITFC, Colville Tribe and others participated. This summary is an official record of the conversation, not a verbatim transcript.

**2. Review Meeting Minutes – April 2 and 9**

There were no changes to the meeting minutes or facilitator's notes today, so they were deemed final. Russell Langshaw said he may have comments on his April 2 presentation regarding Wanapum Dam repairs; Plummer will follow up with him.

**3. Update on Water Supply Forecasts and Operations**

Baus presented the most recent 5-day QPF forecasts for individual basins, and the official forecasts for DWR and LIB from April 8:

- TDA (April-August) – 91 maf, 104% of average
- LGR (April-July) – 22 maf, 109% of average
- DWR (April-July) – 3111 kaf, 128% of average
- LIB (April-August) – 6,868 kaf, 117% of average

**4. Vernita Bar and Wanapum Dam Updates**

Scott Bettin, BPA, reported for Russell Langshaw, Grant PUD. The emergence protection operation has been going well with no violations to date. Fish ladder modifications at Wanapum Dam are complete, and 61 fish used the ladder yesterday.

**5. Little Goose Navigation Lock Update**

Baus had no new information to report since last week's TMT meeting. May 1 is still the scheduled return to service date for the navigation lock. Because the lock outage has potential effects on the juvenile transport operation, Baus asked TMT to consider options. The current plan is to initiate transport when the lock returns to service on May 1 with no staggered start date. Collection is scheduled to begin May 1 at Lower Granite, Little Goose and Lower Monumental, with barges departing May 2 from each dam. However, if the lock returns to service as early as April 25, would TMT still want the transport operation suspended until May 1?

Paul Wagner said the default plan per the BiOp is to initiate transport at Lower Granite on April 25, Little Goose 3 days later, and Lower Monumental 4 days after Little Goose. Given the lock outage, no one at FPAC objected to starting transport at all three dams on the same day, although it wasn't their first choice.

While FPAC has discussed the possibility of an early return to service date for the LGS nav lock, there has been no consensus on an alternative operation yet, Charles Morrill, Washington, noted. Because not all TMT members were present today, Russ Kiefer, Idaho, suggested planning for May 1 as the start date for all transport projects until Oregon and the Nez Perce Tribe have an opportunity to weigh in. Wagner estimated that, based on Steve Smith's analysis, a start date of May 1 at all three projects would result in transporting approximately 48% of steelhead, which is close to the BiOp goal of 50%. Baus will keep TMT members apprised of developments in this operation and provide an update at the next TMT meeting.

## **6. Libby Operations**

Jim Litchfield, Montana, described SOR #MT-2014-1, attached to this item on today's agenda. Joel Fenolio, COE, provided modeling of Libby operations over the past two years in relation to his alternative proposal for this year. The proposal calls for releasing stable flows in July and August and gradually ramping down to 9 or 10 kcfs in September to target an end of September elevation of 2,449 feet, per the BiOp. The operation would target a Libby forebay elevation in the range of 2450-2453.5' by end August, given that flows in September will not be restricted to 8 kcfs as they have been the past two years. The Corps would maintain discharges in September of 9-10 kcfs, which may result in reaching the target elevation of 2,449 ft after September 30 if inflows are higher than forecasted.

Fenolio modeled three potential scenarios for Libby operations in 2014:

- Scenario 1 – Past years' operation with 8 kcfs releases in September
- Scenario 2 – Proposed 2014 operation with 9 kcfs releases in September
- Scenario 3 – Proposed 2014 operation with 10 kcfs releases in September

Litchfield said Montana coordinated with the Kootenai Tribe to develop the SOR, which requests stable flows that gradually ramp down through July, August and September and draft the reservoir to approximately 2449' as a soft constraint. It's important that attaining a forebay elevation of 2449' be a soft constraint so the river is managed to gradually ramp down for the sake of fish biology in July through September, which are Montana's most productive months. In past years, drafting the reservoir to target an elevation in response to storm events has been problematic. This year's operation differs from the past three years (2011-2013) in that the Kootenai Tribe does not need flows restricted to 8 kcfs in September for their ongoing sturgeon habitat restoration (next year, flow restrictions will probably resume).

Generally there's more operational flexibility in July than later in the season, when flows start ramping down, Fenolio said. For example, in September 2010 a rain event made it difficult to get the Libby forebay elevation down to 2449' in a timely manner by the end of the month. Although Libby won't be limited to 8 kcfs releases in September this year, Fenolio favored the operation depicted in Scenario 1 because it meets the intent of trying to refill the reservoir, increase flows through summer, and attain elevation 2449' by end September. The proposed operation for this year targets a higher elevation range (2450-2453.5') by end August than the past three years.

Tony Norris said the lack of a definite elevation target for end of August is acceptable, but BPA would want flows to be adjusted in September to capture the gradual decline without taking the reservoir below the BiOp draft limit of 2449' by end September. If inflows are less than anticipated and the forebay elevation is below 2449' by end August, flows would need to be 6 kcfs through

September. Therefore, to accommodate Montana's request for stable flows, the Libby operation should not rely on an August flow rate that predisposes a low flow rate in September.

Brian Marotz said 9 kcfs flows in the Kootenai River keep nearly all productive riffle habitat wetted, which is the main food supply for fish. It's not advisable to release flows above 9 kcfs unless the subsequent decline is gradual. Most of the flexibility in terms of drafting the reservoir down during summer is in mid-July to end August, Fenolio said. The operation depicted in scenario 2 would draw the reservoir down to an elevation of approximately 2448.8' by end September; the operation depicted in scenario 3 would draw the reservoir down to approximately 2452.2' by end August and about 23 feet below 2449' elevation by end September.

Wagner asked how the COE proposal differs from past Libby operations. Instead of the reservoir ending August at 2451.2' elevation, the end of August elevation is about 26' higher, and the average flow from July 15 to August 31 is about 700 cfs lower (11.6 kcfs instead of 12.3 kcfs), Fenolio replied. The major difference between the actual operation over the past three years and the proposed 2014 operation is that the proposed operation would release about 1 kcfs less in July and August and higher flows through end September.

Litchfield asked whether TMT members would vote today on the SOR. Norris commented that it essentially asks the Action Agencies to follow the BiOp, with one possible exception: The potential for the reservoir elevation to be above 2449' by September 30 deviates from the BiOp and should be voted on at TMT. There was agreement to poll TMT members on their views of the SOR at a future TMT meeting after people have had time to consider the options.

## ***7. Spring Creek Hatchery Release***

David Wills, USFWS, reported that this year's hatchery release operation has been one of the smoothest in recent years, with no descaling, low mortality, and rapid fish movement downriver. The fish were released from the hatchery at 10 am April 11, and the first fish showed up at Bonneville around midnight.

The Bonneville operation coordinated at TMT will remain in effect as a hard constraint until tomorrow, then as a soft constraint for the next five days based on fish numbers, Lisa Wright, COE, said. Wills will provide another update on Spring Creek operations at the next TMT meeting.

## ***8. Upper Snake Flow Augmentation***

Mary Mellema, BOR, reported that 486 kaf of flow augmentation is expected from the upper Snake in 2014. This includes predictions for

- 206 kaf from the upper Snake basin above Milner Dam;
- 77 kaf in natural flows;
- 162 kaf from the Payette basin; and
- 41 kaf from the Boise basin.

The only caveat is that not all basins might fill as this estimate assumes they will. The upper Snake and Payette basins have reliable water supplies, but the Boise basin forecast is less reliable. There will still be 427 kaf of flow augmentation if the Boise basin doesn't fill. The timing of flow augmentation releases this year will depend on when the reservoirs fill.

## 9. Operations Review

**a. Reservoirs.** Libby is at elevation 2402.2' with average inflows of 8.4 kcfs and releases of 25.2 kcfs. Albeni Falls is at elevation 2053.4' with average inflows of 39.6 kcfs and releases of 36.5 kcfs. Dworshak is at elevation 1491.1' with inflows of 11.9 kcfs and releases of 20 kcfs.

Grand Coulee is at elevation 1245.6' and drafting to an April 30 flood control elevation of 1235.2'. Hungry Horse is at elevation 3505.4' and releasing 13 kcfs, with 4 kcfs as spill and 9 kcfs through the turbines. This operation is expected to continue through end April.

Lower Granite daily average inflows are 78.7 kcfs. McNary daily average inflows are 231.9 kcfs. Bonneville daily average inflows are 225.3 kcfs.

**b. Fish.** Paul Wagner reported. Adult passage is going well. To date, 7727 spring Chinook adults have passed BON, 1756 yesterday and 1300 the day before. This level of activity equates to 140% of the 10 year average, but the percentages drop farther upriver – by TDA, spring Chinook passage drops to 97% of the 10 year average.

Juvenile passage is on the rise. Yearling chinook numbers at Lower Granite are increasing, with a passage index count of 36,000 yesterday and 22,000 the day before. All sites are showing that outmigration is underway. Subyearling counts at Bonneville Dam from Spring Creek peaked at 322,000 and are now down to 3900 per day. Steelhead passage is steady in the 6,000-8,000 range per day. Most of these counts are hatchery fish. Sockeye are still passing Lower Granite and Bonneville. Bonneville is also seeing a bump in lamprey passage, with all projects passing some lamprey except Lower Granite.

**c. Water Quality.** Starting April 28, McNary Dam will move to the bottom of the current spill priority list for spring and summer performance testing, Lisa Wright said. On June 11, JDA will also move to the bottom of the list for summer performance testing. The end date for the modified priority order of MCN and JDA is currently scheduled for August 10 when data collection will be complete; however, the end date could be extended through August 31 since a new spill priority list will go into effect September 1.

**d. Power System.** On April 13, congestion on one of the intertie lines led to a transmission system emergency, Norris reported. As a result, for one hour there were spill variances at The Dalles Dam from FOP levels due to reduced generation. He will report back to TMT when he has more details on the cause of the problem and its effects.

## 11. Next TMT Meeting

The next TMT meeting will be a conference call April 23, with updates on the Lower Granite spring transport operation and the Little Goose navigation lock repair on the agenda. The next TMT meeting in person will be April 30.

<b>Name</b>	<b>Affiliation</b>
Mary Mellema	BOR
Paul Wagner	NOAA
David Wills	USFWS
Doug Baus	COE

Tony Norris	BPA
Lisa Wright	COE
Charles Morrill	Washington
Russ Kiefer	Idaho
Tom Iverson	Yakama Nation

Phone:

Jim Litchfield	Montana
Brian Marotz	Montana
Scott Bettin	BPA
Steve Hall	COE
Heather Dohan	Puget
Don Tinker	SCL
Russell Langshaw	Grant PUD
Joel Fenolio	COE Seattle
Barry Espenson	CBB
Bill Rudolph	NW Fish Letter
Tom Lorz	CRITFC
Sheri Sears	Colville Tribe