

COLUMBIA RIVER REGIONAL FORUM

TECHNICAL MANAGEMENT TEAM

May 3, 2006 Meeting

FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Donna Silverberg

Notes: Robin Harkless

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.

Priest Rapids Update

Priest Rapids operations for the weeks of April 17-23 and 24-30 were posted. A communication issue between operators and dispatch occurred that caused fluctuations outside the band width on two days during the two weeks. There will be an update on operations at the May 17 TMT meeting.

WMP Spring/Summer Update

The latest (May 2nd) draft was posted to the TMT web page, which included some revisions from NOAA. The latest flow augmentation charts and ESP runs, additional research information for the RM&E section, and elevation levels from BOR projects need to be added. Additionally, USFWS shared a number of comments including a need to check and include language from the 2006 USFWS BiOp on bull trout flows.

ACTION: Bernard Klatter, COE, will update the RM&E section to include both narrative and a table for all research that will occur in 2006 that could impact or be impacted by operations. The COE will incorporate the changes. All parties agreed to finalize the spring/summer update with the exception of the update to the research section and the bull trout language. TMT will receive the finalized document with the additions as requested..

HYSSR-ESP Runs

Julie Ammann presented the COE's updated HYSSR/ESP model runs, which included inflows through last week. The graphs are linked to today's agenda on the COE's TMT web page. Generally, ESP volumes remained lower than water supply volumes, as with the previous runs, but the two were closer and may shift as the season continues. The COE was given kudos and thanked for their work on the different models.

ACTION: At the request of Montana, the COE will run flow projections for different operation scenarios for Libby dam, and share it at the May 17 TMT meeting.

Operations Review

Reservoirs:

Lower Granite Navigation – Cathy Hlebechuk, COE, shared a report from the Lower Granite chief operator that spill was reduced at Lower Granite to provide safety for towboats navigating the channel on nine different occasions since April 19 for an average 20 minutes each. Spill was reduced to zero one time, and the other reductions were to RSW plus training spill, per the salmon managers' recommendation.

Upper Snake – Tony Norris, BOR, reported the Upper Snake will provide the full 487 kaf for flow augmentation, per the Nez Perce agreement.

Flow augmentation volumes – Graphs were provided by the COE, projecting Hungry Horse flow augmentation volumes between 377-569 kaf; Libby volumes between 138-546 kaf; and Dworshak similar to previous years. A daily flows exceedance plot showing monthly average flows and the Box-Whiskers plot were presented by Randy Wortman. TMT said the graphs were useful and informative.

Operations – Libby was at elevation 2416.7'. Project inflows were 29 kcfs and outflows were 4 kcfs. The COE is anticipating a sturgeon pulse operation request from the USFWS in the next couple weeks. Albeni Falls was at 2056', releasing 50 kcfs and filling. Dworshak was at elevation 1538.4', filling slightly and operating at full load. Lower Granite outflows were at 142 kcfs; McNary averaged 359 kcfs outflows; and Priest Rapids averaged 196 kcfs outflows – all were above their targeted flow objectives. Grand Coulee was at elevation 1231.6', with 165 kcfs in. Hungry Horse was at 3516.2' and outflows were being reduced to 5-7 kcfs.

Fish:

Adults – Adult spring chinook numbers at Bonneville were increasing, averaging about 2,500/day and totaling 12,000. The numbers remain well below the average. It was noted that temperatures are lower for this time than in previous years, and that adults tend to begin migrating at about 50° F.

Transportation – Walla Walla COE submitted a request for a transport permit, and NOAA granted an extension for one year, until March 31, 2007. Barging began at Lower Granite on 4/20, Little Goose on 4/24 and Lower Monumental on 4/28, per consensus recommendation from the TMT.

Juveniles – Yearling chinook index numbers have increased in the Snake and Lower Columbia. Steelhead showed a similar trend. Compared to historical index numbers, yearling chinook are on target with the trend and steelhead are on the higher side of the trend (with McNary and Bonneville steelhead numbers much higher than the trend).

John Day spill – FPOM met on 4/18 to discuss a salmon manager proposal to change the spill pattern at John Day to 30% day/30% night. FPOM recommended continuing with the current operation (0/60%) and monitoring for any adverse effects on fish at the fish ladders. At this point involuntary spill is occurring at the project, so it likely is a non-issue for this year.

Chum – Rick Kruger, ODFW, reported that no additional fry have been observed, and declared the end of chum emergence. Sampling will continue for chinook at Hamilton.

ACTION: Rick will share information on error bounds at the May 31 TMT meeting.

SLED's – Dave Clugston, COE Portland District, shared a handout with hourly adult passage information at Bonneville during a three-day test during which two sea lion exclusion devices on the Washington side were pulled (4/24-26). Passage numbers began to increase before the SLED's were lifted and again after the test ended, leading to the conclusion that SLED's were NOT an impediment to fish passage. The COE will continue to monitor this issue.

Power System:

John Day T-1 Outage – Testing continues to discover the extent of the damage done to the John Day transformer. Cathy Hlebechuk shared that units 3 and 4 might be back up as early as June, which is an improvement from earlier estimates.

Water Quality:

Jim Adams, COE, shared hourly spill and TDG exceedances for April 26-May 3. Many of the exceedances were the result of involuntary spill. One was due to the outage at John Day. A question was asked about The Dalles: although there is 274 kcfs turbine capacity currently only 170-200 kcfs is passing through the powerhouse, causing spill to exceed the 40% level. If more turbine capacity were used at this project spill could be reduced closer to the 40% objective. The COE will check into this and let NOAA know what was happening at the project. It was also noted that TDG levels had dropped at Bonneville. Jim explained that a wind event affected the previous spike in TDG, and involuntary spill at The Dalles was expected to cause an increase in TDG at Bonneville in the next day or two

TMT Meeting Schedule

Wednesday, May 17 agenda items include:

- Priest Rapids Update
- Libby Operation Scenarios
- Finalize 2006 WMP
- State Fish Run Forecasts (WA)
- Sturgeon Pulse SOR
- John Day T-1 Outage Update
- System Operations Review

May 31 agenda items include:

- HYSSR-ESP Runs
- Permit Process re: Marine Mammals
- Adult population analysis of chum – error bounds

Technical Management Team Meeting Minutes

May 3, 2006

1. Greetings and Introductions.

Today's TMT meeting was chaired by Cathy Hlebechuk and facilitated by Donna Silverberg. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at this meeting. Anyone with questions or comments about these notes should contact Hlebechuk at 503-808-3942.

2. Priest Rapids Update.

The group briefly reviewed the information on recent operations at Priest Rapids; no comments were offered.

3. Finalize Spring/Summer Update.

Hlebechuk said the most recent version of the spring/summer update is now available via hot-link from the TMT homepage; she said she has incorporated comments from NOAA Fisheries, but is still awaiting further comments from other TMT members. Paul Wagner said most of NOAA's comments had to do with the need for more detail about planned research operations. Wagner noted that the format (a table) used to capture research operations in the 2002 or 2003 spring/summer update was excellent. Hlebechuk said she will endeavor to emulate that format in the 2006 update. David Wills also offered a few minor comments on the 2006 update at today's meeting; Hlebechuk said she will incorporate them. It was agreed that Wills will double-check the Fish and Wildlife Service website to ensure that he hasn't missed anything; once he has done so, it was agreed that the 2006 spring/summer update will be considered final.

4. HYSSR/ESP Runs.

The Corps reviewed its most recent HYSSR/ESP model runs, dated May 2. The full text of this presentation is available via hot-link from today's agenda on the TMT homepage. It included the following table of forecast period average flows (in Kcfs):

Project	May	June	July	Aug 1-15	Aug 16-31	Sept.
LIB	12.3	18.3	22.4	16.2	15	7.5
HGH	4.7	1.8	6.3	5.8	4.5	1.6
GCL	161	138	143	92	90	70
PRD	183	163	155	98	94	74
DWR	6.4	4.5	10.1	10.1	12.6	4.5

BRN	44	29	15	14	14	14
LWG	132	118	55	35	36	27
MCN	321	288	215	137	132	102
TDA	342	300	219	140	136	106
BON	347	305	222	142	138	108

The Corps also provided runoff forecast data for the following projects, based on the May early-bird forecast:

- Grand Coulee: 60.9 MAF, 101% of average
- Lower Granite: 29.4 MAF, 136% of average
- The Dalles: 98.5 MAF, 106% of average
- Hungry Horse: 2.16 MAF, 104% of average
- Libby: 6.07 MAF, 97% of average
- Dworshak: 2.63 MAF, 99% of average.

The group devoted a brief discussion to this information, offering a few clarifying questions and comments. At Jim Litchfield's request, the Corps agreed to do a few additional model runs showing various Libby operations.

5. Operations Review.

Revisiting the Lower Granite navigation issue discussed at the last TMT meeting, Hlebechuk said there were nine times in the past month when spill has been reduced to allow tow-boats to pass; the average length of time spill was reduced was about 20 minutes. One time spill was reduced to zero; the other eight times it was reduced to RSW plus training spill.

Tony Norris said Reclamation is expecting to be able to provide the full 487 kaf flow augmentation volume from the Upper Snake projects in 2006, the first time this volume has been made available.

Hlebechuk then discussed flow augmentation from Hungry Horse in 2006; the group reviewed the graph displaying this information (available via hot-link from today's agenda on the TMT homepage). In general, it showed that about 400 kaf will likely be available from Hungry Horse in 2006, while about 300 kaf will be available from Libby, in addition to the 1.03 MAF sturgeon pulse. Wagner noted that the May early-bird forecast shows a significant increase in the available volume at Libby – 6.38 MAF vs. 5.92 MAF, according to the River Forecast Center – an increase of 400 kaf. However, the Corps' April final forecast for Libby was 6.131 MAF; the Corps' May early-bird forecast was 6.179 MAF. The group also discussed the most recent Dworshak ESP run, which showed an average flow augmentation volume of about 500 kaf across the 43 historic ESP years.

The group also looked at a graph titled "Dworshak Inflows – ESP Daily Flows Exceedence Plot with Max/Min of Historic Average Monthly Flows," as well as a box-whiskers plot of Dworshak daily ESP inflows for the period May 1-August 31. These graphs are available via hot-link from today's agenda on the TMT homepage; please refer to these documents for full details. There was general agreement that both graphs were useful and informative.

Moving on to current project operations, the Corps reported that Libby is at elevation 2416.7 feet, currently, with 29 Kcfs inflow and 4 Kcfs (minimum) outflow. The Corps is awaiting the sturgeon pulse SOR; it will likely be presented

at the next TMT meeting. Albeni Falls is releasing 50 Kcfs, but the lake is continuing to fill. It is currently above 2056 feet. Russ Kiefer said he will provide an update on the 2007 winter elevation request for Albeni Falls (2055 vs. 2051 feet) as soon as the steering committee makes a decision.

The Corps said the current elevation at Dworshak is 1538.4 feet, the project is releasing full load (10 Kcfs) and filling slightly. At Lower Granite, day-average outflow has decreased from 153 to 142 Kcfs over the past two days. At McNary, the daily average flow was 359 Kcfs yesterday. Priest Rapids discharge increased from 184 Kcfs on Monday to 196 Kcfs yesterday. Grand Coulee is currently at elevation 1231.6 feet, with 165 Kcfs inflow and rising. Grand Coulee will probably pass inflow over the next week. Hungry Horse is currently at elevation 3516.2; discharge is being reduced to either 7 or 5 Kcfs over the next couple of days.

Moving on to fish, Wagner said both juveniles and adults are now moving through the system. At Bonneville, the long-awaited increase in adult passage has begun; we're now seeing about 2,500 fish per day, which brings the 2006 adult count at Bonneville to about 12,000 fish, well below the 10-year average, he said. John Wellschlager said he had heard from one biologist that the increase in adult passage was likely due to an increase in water temperature.

With respect to transport, it was noted that NMFS has extended the Walla Walla District's juvenile transport permit for one year; in the interim, NMFS will be processing the Corps' application for a new five-year permit. The one-year permit expires March 31, 2007. Hlebechuk said transport started at Lower Granite on April 20; at Little Goose on April 24, and at Lower Monumental on April 28, as the SOR requested.

With respect to juveniles, Wagner said yearling chinook numbers continue to increase at Lower Granite and at Little Goose, with daily indices in excess of 100,000 at both projects. There are also many yearling chinook passing the Lower Columbia projects. Juvenile steelhead show a similar trend, Wagner said. Kokanee and sockeye counts continue to confound pre-season predictions, he said. He noted that yearling chinook at Lower Granite are closely following the historic trend, with respect to timing; the same is true of passage at McNary. The timing of juvenile steelhead passage at Lower Granite, McNary and Bonneville is at the high end of the historic scale for this date, Wagner added.

Moving on to John Day spill, it was reported that, at the April 18 FPOM meeting, there was consensus to change minimum spill to 25 percent. A formal process must be completed before this change is made; in the interim, minimum spill at John Day will continue at 30 percent. It was also agreed to continue to monitor adult passage at John Day, particularly the performance of the north ladder, before making further changes to spill at that project.

Rick Kruger said that, based on the most recent spawning ground surveys, it appears that chum emergence is now over, although no official pronouncement has been made to that effect. Wellschlager asked ODFW to make such a declaration as soon as possible; although it isn't really possible, at this point, to change Bonneville operations, it would be useful to the historic record to officially note the end-of-emergence date. I'll go out on a limb and call it official, Kruger said; the last chum fry was sampled on April 20.

Dave Clugston of the Corps then provided information on adult counts, by ladder, at Bonneville over the past two weeks. This information included hourly counts, by ladder, for the three days when the Washington shore SLEDS were removed (April 24-26). In general, the Corps saw that counts had begun to increase before the SLEDS were lifted; the test indicated no detrimental impacts, in terms of impaired adult passage, when the SLEDS are in place. He noted, however, that many of the radio-tagged fish used in the test simply disappeared.

The bottom line is that there is no indication, at this point, that the SLEDS are an impediment to adult passage, Clugston said; it appears that the 2006 adult run is simply late, well behind the timing shown in the 10-year average. In response to a question, Cindy LeFleur said the pre-season return forecast, at the river mouth, was 88,400 spring chinook.

It was noted that marine mammal predation continues to be a problem at Bonneville, with about 30 sea lions present, taking an estimated 100 adult chinook per day. In response to a question from Scott Bettin, Clugston said the task force is still evaluating the request, from the states, for a permit that will allow them to move, or even lethally take, some of the most problematic animals. It is a long, careful process, he said, noting that the permit will certainly not be forthcoming in 2006, and is unlikely to be available in 2007. Tom Lorz said the tribes are working in coordination with the states to find a possible legislative solution that will speed this process up. Bettin noted that Sea World has indicated a willingness to take the most problematic animal, C404, if he can be captured.

Moving on to the John Day T1 outage update, Hlebechuk said T1 is still out. The last time we talked, we said September was the best-case scenario for full repair, she said; it now appears possible to restore two units – units 3 and 4 -- to service by June. The question is how many phases of the transformer were damaged, Wellschlager observed, adding that there are no other power system problems to report at this time.

Jim Adams briefed the group on water quality exceedences at the FCRPS projects over the past 30 days, noting that, as might be expected at this point in the runoff season, there have been, and continue to be, numerous exceedences due to involuntary spill. Adams provided a complete overview of the current spill

caps and involuntary spill volumes at each project; this report, again, is available via hot-link from today's agenda on the TMT homepage.

6. Next TMT Meeting Date.

The next meeting of the Technical Management Team was set for Wednesday, May 17. Meeting summary prepared by Jeff Kuechle, BPA contractor.

**Technical Management Team Participant List
May 3, 2006**

Name	Affiliation
Donna Silverberg	Facilitation Team
Cathy Hlebechuk	COE
Jim Adams	COE
Bill Crampton	CBB
David Wills	USFWS
Rick Kruger	ODFW
John Wellschlager	BPA
Paul Wagner	NOAAF
Tony Norris	USBR
Jim Litchfield	Montana
Robin Harkless	Facilitation Team
Ruth Burris	PGE
Dan Spear	BPA
Shane Scott	Consultant
Randy Wartman	COE
Tom Haymaker	PNGC
Dan Bedbury	EWEB
Todd Cook	PPM
Margaret Filardo	FPC
David Benner	FPC

Russ George	WMCI
Bruce MacKay	Consultant
Scott Bettin	BPA
Mike Buchko	Powerex
Tom Lorz	CRITFC
Glenn Traeger	Avista
Tom Le	PSE
Cindy LeFleur	WDFW