

# COLUMBIA RIVER REGIONAL FORUM

## TECHNICAL MANAGEMENT TEAM

February 25, 2009 Meeting

### FACILITATOR'S SUMMARY NOTES ON FUTURE ACTIONS

Facilitator: Robin Gumpert

Notes: Erin Halton

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 Minutes/Agenda**

The 2/11 facilitator notes and official meeting minutes were posted to the TMT webpage. With no further edits made during the meeting, the 2/11 sets of notes were considered final.

#### **Hanford Reach Protection Flows**

Russell Langshaw, Grant County PUD, reported that current temperature units were at 853. Langshaw added that 1000 temperature units are required for emergence/daily protection flow bands, and they are currently accumulating at a rate of about 5 units per day, so it will likely be a month down the road before emergence is declared. He clarified that the timing is tracking fairly closely to that of previous years.

**Action/Next:** This item will be on the agenda for the March 11 TMT meeting.

#### **3D Cam Controller Update**

Dan Ramirez, COE Hydro-electric Design Center, provided TMT with a power point presentation to update on 3D cam controller operations. [Note: the power point was posted to the agenda following the meeting.] Ramirez reviewed the troubleshooting efforts, hardware modifications, and the programming revisions made to improve reliability. He described the on-going efforts to ensure turbine operation and clarified that the 3D cam is an add-on to the physical cam in existing governors and said that the 3D cam provides linkages to perform minor blade adjustments independent of gate movement. The presentation included slides that showed how issues previously identified at Ice Harbor, McNary and Little Goose have been addressed and how those adjustments have increased the percentages of time that blades are within .5° of their target. Ramirez reported that while most projects are functioning well at this point, unit 3 at Little Goose is still experiencing frequent faults and corrections are not performing as expected; the COE is working closely with project staff to ensure corrective actions are taken. TMT members thanked Ramirez for the update, noting that the tables in the presentation were particularly useful.

**Action/Next Steps:** Ramirez said the COE will be conducting performance surveys during March-April and July-August 2009; he offered to provide updates via tables and/or in person to TMT on an as-requested basis.

### **Fish Operations Plan / Fish Passage Plan Update**

Jim Adams, COE, reported that the regional review period on the Fish Passage Plan (FPP) has closed. Adams also reported that the Fish Operation Plan (FOP) will be out for review and comment after the March 6<sup>th</sup> BiOP hearing date. Rick Kruger, OR, said that postponing the review period denies regional representatives the opportunity to prepare FOP-related statements for the hearing. Adams said he would carry that message back to his COE colleagues.

**Action/Next:** This item will be on the agenda for the March 11 TMT meeting.

### **Operations Review**

**Reservoirs:** Grand Coulee was at elevation 1280.6' and operating to maintain the 11.5' tailwater elevation below Bonneville. Hungry Horse was at elevation 3514.92', with outflows in the range of 2.8-9 kcfs. Libby forebay elevation is at 2406.5 feet and was passing minimum flows of 4.0 kcfs. Albeni Falls was in the range of 2051 - 2052' and passing inflows. Seven day average inflows were 24.4 kcfs at Lower Granite, 113.3 kcfs at McNary and 129.6 kcfs at Bonneville; Jim Adams noted that these flow levels were fairly low for this point in the season.

**Fish:** Paul Wagner, NOAA, noted the promising forecasts for adult returns in 2009; with predictions for 183,000 sockeye, 298,000 spring Chinook and 70,000 for summer Chinook.

**Power System:** **Action:** Jim Adams said he would correct and re-post the wind generation data web link on the TMT page.

**Water Quality:** Nothing at this time.

**Next TMT Meeting:** 9 a.m., March, 11 2009 – at NOAA Fisheries.

Agenda items will include:

- Hanford Reach Protection Flows Update
- BiOP Status Hearing Update
- Status of FPP / FOP
- Updated Water Supply Forecasts / Flood Control Operations
- Operations Review

**Columbia River Regional Forum  
Technical Management Team Meeting  
Feb. 25, 2009**

***1. Introduction***

Today's TMT meeting was chaired by Jim Adams (COE) and facilitated by Robin Gumpert (DS Consulting) with representatives of COE, USFWS, BOR, BPA, NOAA, Oregon, Montana, Idaho and others participating. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at the meeting. Anyone with questions or comments about these notes should provide them to the TMT chair or bring them to the next meeting.

***2. Review Meeting Minutes for Feb. 11, 2009***

There were no comments today on either the facilitator's notes or the official minutes for Feb. 11, so both were deemed final.

***3. Hanford Reach Protection Flows***

The latest cumulative reading was 853 temperature units as of yesterday, Russell Langshaw (Grant PUD) reported. Rearing and emergence period protections begin at 1,000 temperature units, which he estimated will occur in approximately one month. Langshaw will provide updated information on temperature units at the next TMT meeting March 11.

***4. HDC 3D Cams Update***

Dan Ramirez (COE) gave a slideshow presentation. Since his last report to TMT in April 2008 regarding 3-d cam controller operation on plants in the Walla Walla District, the COE has addressed several problems that were identified in earlier surveys.

From 2001-06, the 3-d cams were installed at McNary, Ice Harbor, Little Goose, Lower Monumental and Lower Granite, in that order. Observations during Index testing and limited operational surveys indicated that some 3-d cam controllers were not functioning as intended. This is a different issue than operating within the 1% megawatt limits, which are being adhered to, Ramirez pointed out. Within the specified 1% operating range, the 3-d cam controller has to function properly to ensure efficient turbine operation. Proper 3-d cam controller operation is especially important when operating near lower or upper end of limits. Snapshot surveys in 2004-05 found intermittent problems with the 3-d cam controllers. In 2007, the COE identified several issues at several Walla Walla projects.

Ramirez showed TMT a graph depicting successful 3-d cam controller operations and gave a project-by-project status report on 3-d cam operations.

Lower Monumental and Lower Granite: These were the last projects at which 3-d cam controllers were installed, so they have benefited from lessons learned. Historically, Lower Monumental and Lower Granite have had few 3-d cam operational issues. The most recent survey, conducted in August-September 2008, showed that for most of that time the 3-d cams successfully positioned the blades within the dead-band or 0.5% of target position. This is consistent with past findings at both projects.

McNary: Index test data surveys in December 2007 identified several 3-d cam issues at McNary. First, the dead-band was set incorrectly, meaning that correction of the blade wasn't as tight as it should be. Also, equipment that was providing forebay information to five units failed, resulting in head errors of up to 5 feet at these units. There were also frequent 3-d cam faults caused by binding of the mounting mechanism. Since these problems were identified, the COE has redesigned the mounting mechanism, tightened up the dead-band, corrected the head error problem, and is now in the process of replacing all of the faulty blade position mounting mechanisms at McNary. Units still awaiting this replacement require ongoing physical adjustments by project staff. March 2008 surveys indicated that progress has been made. Unit 14 at McNary is still experiencing frequent faults because the blade angle mechanism hasn't been replaced yet. However, overall 3-d cam operation at McNary has improved significantly.

Ice Harbor. In 2007, there were numerous 3-d cam faults and long periods of operation with the controllers in fault status. Ice Harbor was one of the first projects to have 3-d cams installed, and it has experienced significant problems since installation. Updating the programming logic and other troubleshooting resulted in significant improvements by March 2008. During a recent survey, Unit 6 came back on line after being out of service, which caused problems. However, subsequent surveys may show that the 3-d cams in unit 6 are operating correctly. Like McNary, Ice Harbor has shown significant improvements in the functioning of its 3-d cam controllers.

Little Goose. In December 2007, GDACS maintenance teams found the 3-d cam program at Little Goose had been overwritten or corrupted, resulting in frequent faults of extended duration. They rebuilt the program, which has been operating fairly effectively at all units except Unit 3. The problems at Unit 3 have been addressed successfully according to project staff and unit is not experiencing faults at frequency shown in Fall 2008 survey. Repeat surveys will be performed before the 2009 fish passage season to confirm that any problems at Unit 3 have been addressed.

Robyn MacKay (BPA) asked Ramirez to give TMT an update when the next survey results for Little Goose are released. David Wills (USFWS) suggested posting updated 3-d cam operations graphs for all of the projects on

the TMT web page when they become available. Ramirez said he'll follow up on both requests.

## **5. Status of Fish Operations Plan/Fish Passage Plan**

The comment period for the Fish Passage Plan has ended, but the FPP awaits finalization of the Fish Operations Plan, Adams said. The COE is waiting for the outcome of the March 6 BiOp court hearing to update the FOP and expects to release it a week to 10 days after the BiOp hearing takes place.

Rick Kruger (Oregon) objected to that. Oregon wants the opportunity to review the updated FOP before March 6 so any FOP-related issues can be raised at the hearing, he explained. Adams said he would notify Corps policy personnel of this request. TMT will revisit FOP and FPP development at its next meeting March 11.

## **6. Operations Review**

**a. Reservoirs.** Grand Coulee is at elevation 1,280.6 feet, operating conservatively which currently is pretty close to passing inflows. Maintaining the 11.5-foot tailwater at Bonneville for chum is driving the Grand Coulee operation and will continue to do so for the near future, John Roache (BOR) reported. Hourly data shows that BPA is running power generation at Grand Coulee very close to criteria because of limited water supply for the Bonneville chum operation, Tony Norris (BPA) noted. Streamflows have been quite low over the past week.

Hungry Horse is at elevation 3,514.92 feet, releasing 2.8-2.9 kcfs. Russ Kiefer (Idaho) noted that the current elevation is below the flood control target and asked what the minimum outflow requirement is. The Columbia Falls minimum, which is driving Hungry Horse operations at present, is 3.5 kcfs Columbia Falls flows are running around 3.5-3.7 kcfs now, which includes Hungry Horse discharges and the unregulated portions of the basin, Roache replied. Minimum flow criteria will be updated when the March forecast is released. The project minimum now is 900 cfs, which is not expected to change. It's not unusual for Hungry Horse to be below its flood control elevation at this time of year, unless there's a wet forecast.

Libby is at elevation 2,406.4 feet, approximately 30 feet below its flood control elevation, operating at minimum flows of 4.0 kcfs as it has for quite some time. This operation will continue for the foreseeable future.

Albeni Falls is still operating between 2,051-2,052 feet elevation, passing inflows of 14-18 kcfs most days, which is expected to continue for a while.

Dworshak is at elevation 1,524.9 feet, doing some daily load shaping and drafting to an end of February flood control elevation target of 1,524.5 feet. Kiefer expressed concern that water being released now to meet flood control elevation targets will be needed later for fish passage. TMT will discuss this in further detail at its next meeting, when the March water supply forecasts and flood control elevations will be available. The RFC's final March forecast will be posted to the web on March 10, the day before TMT meets next.

Seven-day average inflows are 24.2 kcfs at Lower Granite, 113.3 kcfs at McNary, and 129.6 kcfs at Bonneville.

**b. Fish.** There was nothing new to report today. TMT reviewed last year's run forecasts for 2009 – 183,000 sockeye, 298,900 adult upriver spring Chinook, and 70,000 spring Chinook, which is 128% of the 2008 return.

**c. Power System.** Tony Norris (BPA) showed TMT the latest wind generation statistics, accessible from a link in the upper right corner of the TMT web page. With added funds from the stimulus package, the BPA transmission business line will install a 75-mile line from John Day to McNary to increase the region's capacity for transmitting wind power generated in the Columbia Gorge. Installation will begin soon, as all NEPA work is already complete and the line will follow existing rights-of-way.

**d. Water Quality.** Temperatures are still cool and gas levels low, Adams said. The most recent pinniped report shows that several repeat offenders are back in the Bonneville Dam area. Trapping operations will begin soon.

## ***6. The Dalles Spill Wall Site Visit***

Following today's meeting, TMT members went to The Dalles to view construction of the spill wall between bays 8 and 9 that will guide fish away from a shallow area near the shoreline where they get picked off by predators. Pat Duyck, the COE manager of spill wall construction, used a model to explain to TMT the intricacies of constructing a wall in giant blocks that must be anchored together.

## ***7. Next Meeting***

The next regular TMT meeting will be March 11, 2009. The agenda will include updates and discussion of the March 6 BiOp hearing, Hanford protection flows, the Fish Operations Plan, water supply forecasts, flood control operations, and the standard operations review. This summary prepared by consultant and writer Pat Vivian.

<b>Name</b>	<b>Affiliation</b>
Jim Adams	COE
David Wills	USFWS
John Roache	BOR
Tony Norris	BPA
Robyn MacKay	BPA
Rick Kruger	Oregon
Paul Wagner	NOAA
Brian Marotz	Montana
Dan Ramirez	COE
Russ George	WMC

Phone:

Scott Bettin	BPA
Barry Espenson	CBB
Tim Heizenrader	Centaurus
Holli Krebs	JP Morgan
Richelle Beck	DRA
Shane Scott	PPC
Steve Hall	COE Walla Walla
Bob Diaz	Integral Renewables
Tom Le	Puget Sound Energy
Russell Langshaw	Grant PUD
Russ Kiefer	Idaho