COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

October 15, 2014

Facilitator's Summary

Facilitator and 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

The September 17th Official Minutes and Mediator's Summary were approved.

Treaty Fishing SORs

Tom Lorz, CRITFC, shared the operation request for fall fishing under SOR 2014-C11, SOR 2014-C12, SOR 2014-C13, and SOR 2014-C14. The SOR's request to hold the three lower Columbia River pools at a 1.5ft variation. Doug Baus, COE, reported that C-11, C-12, and C-13 have been successfully implemented and C-14 is currently being implemented and will conclude at 1800 on Thursday, October 16th.

Preliminary Survival Estimates

Paul Wagner, NOAA, shared the preliminary survival and transport estimates for PIT-tagged juveniles. He noted that these are preliminary estimates and the refined counts will be provided at the TMT Year End Review; he also noted that more details are available in a memo on the TMT website. He qualified the results he was presenting as what he remembered and did not have the data in hand.

The spring chinook survival estimates looked close to average, with survival in the low 50% range. Steelhead survival in the Lower Granite to Bonneville reach was high at 72%, NOAA is looking closely at data for this reach because the estimate seemed abnormally high and there is some concern that there may have been a methodology issue. Snake River sockeye looked good, with 70% survival between Lower Granite and Bonneville. The Mid-Columbia reach was lower than normal, with survival being 43% from Rock Island to McNary and 24% from Rock Island to Bonneville Dam. The reason for the low survival is uncertain, however, upstream projects and descaling at McNary were noted as possible contributors.

Paul also reported on the transport percentages. He noted that 30% of wild spring chinook were transported, along with 40% of steelhead. Russ noted that the goal this year, as outlined in the BiOp, was to get higher percentages for transport. Those higher percentages may not have been satisfied because fish moved out early when the flows were good and transport benefits are lower; regardless, it seemed to be a good operation this year.

Water Management Plan

Doug Baus and Lisa Wright, COE, reminded TMT that the draft Water Management Plan is available on the TMT website. Suggested edits are to be submitted by October 31st and draft 2 will be posted by November 17th. Please see the TMT website for more detail on how and when to submit comments.

Operations Review

Reservoirs:

Mary Mellema, BOR, reported on Reclamation projects:

- Hungry Horse midnight elevation was 3,548.04ft, with 3.2kcfs outflow. Mary noted there is a special operation October 14-16th to fulfill the minimum generation requirement. Then the project will ramp down on the 16th to meet the Columbia Falls requirement.
- Grand Coulee elevation was 1,285.6ft.

Lisa Wright, COE, reported on Corps projects:

- Libby midnight elevation was 2,447.8ft, with 4.0 outflow.
- Albeni Falls midnight elevation was 2,055.4ft, with 27.0kcfs outflow.
- Dworshak midnight elevation was 1,518.1ft, with 1.7kcfs outflow.
- Lower Granite average inflow was 18kcfs with 17.8kcfs outflow.
- McNary average inflow was 100.3kcfs with 95.7kcfs outflow.
- Bonneville average inflow was 99.1kcfs with 98kcfs outflow.

Fish: Paul Wagner, NOAA, reported on fish. He noted juvenile numbers are normal for this time of year, however, are slowing down, with a range of 100 to 100's per day. Collection at Lower Monumental stopped as of October 1st.

Adults have had a good season. Fall chinook at Bonneville reached 843,000, which is less than last year (932,000), however, is still 210% of the 10 year average. Jacks are at 200% of the 10 year average which is a predictor that next years runs will likely be strong. Steelhead counts looked good with 319,000, which is 92% of the 10 year average and more than last years counts which totaled 230,000. Wild steelhead at Bonneville reached 128,000, which is 130% of last years average and 118% of the 10 year. It was noted that the 2-year ocean returns for steelhead also looked good. Lower Granite had a record year for fall chinook, however, it is not a record if fallback is factored in. Lower Monumental and Little Goose were lower than Lower Granite by quite a bit, with a 10% re-assention rate currently estimated at Lower Granite Dam. There were 58,000 fall chinook at Lower Granite, which is 262% of the 10 year average. It was pointed out that the 10 year average includes very low years, thus there is a lot of room for big increases, and the Nez Perce hatchery program efforts have greatly contributed to the increases in fish at Lower Granite. It was also reported that the natural spawners are doing well, with 16-20,000 this year. Jack counts at Lower Granite are not as high as last year; however, are 125% of the 10 year average. Steelhead at Lower Granite reached 137,000, with 42,000 wild.

Charles Morril, WA, noted that there were lots of net marks on the fallbacks at Lower Granite. He also noted that the sub-yearling samples are looking healthy.

Water Quality: Lisa Wright, COE shared that there is nothing to report for water quality.

Power System: Tony Norris, BPA, shared that there is nothing to report for the power system.

The next TMT meeting will be a conference call on November 5th at 9:00am.

Columbia River Regional Forum
TECHNICAL MANAGEMENT TEAM – OFFICIAL MINUTES

October 15, 2014
Minutes: Pat Vivian

1. Introduction

Doug Baus, COE, chaired this TMT meeting facilitated by Emily Plummer, DS Consulting. Representatives of the BOR, Oregon, Idaho, BPA, COE, Colville Tribe, CRITFC, NOAA, Washington, Montana, and others participated. For those who attended in person, today's TMT meeting was followed by a tour of Grand Coulee Dam. This summary is an official record of the proceedings, not a verbatim transcript.

2. Review Meeting Minutes September 17

The official minutes and facilitator's summary for both meetings were approved as final.

3. Treaty Fishing – SOR 2014-C11, SOR 2014-C12, SOR 2014-C13 and SOR 2014-C14

Tom Lorz, CRITFC/Umatilla, reported on fall treaty fishing at the three lower Columbia River projects. Doug Baus reported the COE has already implemented the first three treaty fishing requests, SOR 2014-C11 through SOR 2014-C13, and is currently implementing SOR 2014-C14 through 6 pm on October 16. The operation is the typical one requested for treaty fishing: maintain the Bonneville, The Dalles and John Day pools within 1.5' elevation bands. Lorz thanked the COE for timely implementation of the treaty fishery requests and said this week will probably be the last of the 2014 fall treaty fishing season.

4. NOAA Preliminary Survival Estimates

Paul Wagner, NOAA, reported on preliminary juvenile survival estimates for listed species, which are covered in more detail in a NOAA memo posted to today's agenda. The recently published memo gives preliminary survival rates for 2014 passage season based on estimates calculated by the NOAA Fisheries Northwest Science Center this spring. Estimates for the survival of listed species are provided for the Snake River (Snake River Trap, Lower Granite, Little Goose, Lower Monumental, and Ice Harbor Dams) , Lower Columbia (McNary, John Day, the Dalles, and Bonneville Dams) , and Upper Columbia River (Rock Island Dam). The memo also estimates transport percentages for listed species in 2014. Wagner summarized the findings on preliminary survival rates in 2014:

- Spring chinook survival to from the Snake River Trap to the Bonneville Dam tailrace was average in 2014, at approximately 50% survival.

- Steelhead survival from the Snake River Trap to Bonneville was amazingly high at 77%. However, an estimate of slightly more than 100% survival in the reach from McNary to Bonneville raises questions about the methodology used for that reach. Steve Smith, NOAA, will cover this topic in depth at the TMT 2014 year-end review.

- Snake River sockeye also had high survival rates of 71% in the reach from Lower Granite Dam Tailrace to the Bonneville Dam Tailrace. However, survival from the Rock Isand Dam Tailrace to the Bonneville Dam Tailrace was poorat 24% Descaling issues at McNary may have contributed to reduced survival rates in 2014.

Transport rates in 2014 were around 30% for wild spring Chinook and 40% for wild steelhead, Wagner reported. Russ Kiefer, Idaho, said the BiOp goal this year was to collect a higher percentage of steelhead, but the fish came out early. Because the benefits of transport are lower during this period, as Science Center data in the past have shown, the 2014 transport operation was probably good for fish even though transport didn't happen when it seemed the most desirable. TMT will cover 2014 survival rates in greater depth at the 2014 TMT year-end review.

5. Water Management Plan

The Draft 2014 Water Management Plan was posted to the TMT website. Comments on the current draft are due October 31 and will be posted to the TMT site. The Action Agencies will consider all comments and post another draft for regional review on November 17. Additional information regarding deadlines associated with the plan may be found on the Water Management Plan website.

6. Operations Review

a. Reservoirs. Hungry Horse is at elevation 3548.04' with releases of 3.2 kcfs, per a special operation on October 14-16 to meet a minimum generation requirement. The project will begin ramping down late in the day on October 16 and follow ramp rates down to Columbia Falls minimum flows.

Grand Coulee is at elevation 1285.6'. Dworshak is at elevation 1518.1' with releases of 1.7 kcfs. Libby is at elevation 2447.8' with releases of 4 kcfs. Albeni Falls is at elevation 2055.4 with releases of 27 kcfs.

Lower Granite daily average inflows are 18 kcfs, with releases of 17.8 kcfs. McNary daily average inflows are 100.3 kcfs, with releases of 95.7 kcfs. Bonneville daily average inflows are 99.1 kcfs, with releases of 98 kcfs.

b. Fish. Paul Wagner, NOAA, reported.

Adults: The favorable 2014 passage season is finally winding down. Conditions were particularly good for fall chinook, but other species flourished as well. To date, 843,000 fall chinook adults have returned to Bonneville. That's less than the 932,000 count for 2013, but still remarkable at 200% of the 10 year average (400,000 fish). Fall chinook jack returns were also 200% of the 10 year average. This augurs well for 2015 fall chinook adult returns.

Steelhead fared better this year than in 2013, with 319,000 marked and unmarked fish returning to Bonneville. That's 140% of last year's return of 230,000 fish but only 92% of the 10 year average. Wild unmarked steelhead returns at Bonneville are estimated at 128,000 for 2014, which is 130% of last year's return and 118% of the 10 year average. Passage numbers at Lower Monumental and Little Goose were less than at Lower Granite by a fair amount in 2014. Fallback was estimated to affect around 10% of adults passing Granite this year, a big jump from the 2% fallback rate for 2012 and 3% for 2013.

It was noted that passage at Lower Granite has been improving steadily over the past two decades. This year's fall chinook return to Granite set a record at 58,000 fish, but it wasn't a record when the effects of fallback are considered. Overall, the 2014 fall chinook return at Lower Granite was 107% of the 2013 return and 262% of the 10 year average. Russ Kiefer credited the Nez Perce hatchery returns plus natural spawning for the recovery from past years' dismal returns. Natural spawning typically produces around 16,000-20,000 fish per year, Wagner said – a big improvement over the 1994 count of just 79 fish. Kiefer said steelhead ocean returns have been good this year for both A-run and B-run steelhead according to Idaho's PIT tag data.

Fall chinook jack returns at Lower Granite were 1,771 for 2014, which is 125% of the 10 year average but only 86% of the 2013 return, Wagner reported. Steelhead returns to Lower Granite were 130,000 wild and hatchery fish combined, which is 95% of the 10 year average. Wild, unmarked steelhead returns at Lower Granite were 42,000, which is 121% of the 10 year average.

Juveniles: Lower Granite subyearling passage appears to be enjoying a bit of a rally. Counts rose from less than 100 a day to 728 on October 12, which is typical for this time of year. Little Goose counts have been following a similar trend. Fish collection stopped at Lower Monumental on October 1 so there's no report on juvenile passage at that project.

Charles Morrill said subyearling chinook are faring exceptionally well in 2014, being generally heavier for their body length and in better overall condition than has been seen in many years. This year, fatter, healthier fish are going into the ocean.

c. Water Quality. There was nothing to report today, Lisa Wright, COE, said.

d. Power System. There was nothing to report today, Tony Norris, BPA, said.

7. Next TMT Meeting

TMT will meet next on November 5.

8. Tour of Grand Coulee Dam

With Mary Mellema and other BOR staff serving as hosts, TMT members toured Grand Coulee Dam and its associated generation and irrigation facilities. At more than 5,000' long and 550' tall and consisting of nearly 12 million cubic yards of concrete, Grand Coulee is the largest producer of hydropower in North America.

The tour began with the 230 - and 500-kV switchyards and the north dam, which stores water for irrigation in Banks Lake. Considered full at 1570' elevation, Banks can be drawn down by up to 5' elevation to meet irrigation requirements. The John W. Keyes pump generating plant moves water 280' uphill from Lake Roosevelt into Banks Lake via 12 of the world's largest pumping tubes.

Lake Roosevelt, the Grand Coulee reservoir for hydropower generation, has 9.5 MAF of storage and 5.5 MAF of active storage. It provides much of the water for fish flows at run-of-the-river dams downstream and figures heavily in regional flood control operations. Lake Roosevelt can be drawn down by up to 82' as needed to capture runoff. When the reservoir elevation is lower than the drum gates that make up the Coulee spillway, water can be released only through the regulating outlets or ROs, which tends to raise TDG levels in the river. From a distance the ROs look like pinpricks but they are actually 8.5' wide.

The tour of Grand Coulee's power generation facilities included the third powerhouse unit G19, which was generating 600 MW, and the enormous G23, which was generating 805 MW via a spinning shaft 11' in diameter. TMT members saw G24 unstacked, the first of the three 805 MW units to be serviced for the first time in 30 years since the Grand Coulee third powerhouse was built. The tour moved on to the left powerhouse and ended with the pump generating plant, whose six units move water at 1.5 kcfs per second uphill into Banks Lake.

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