

COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 15, 2026

Facilitator's Summary

Facilitation Team: Emily Stranz & Colby Mills, 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; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: <https://public.crohms.org/tmt/agendas/2026/>. Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes

TMT Members approved the official meeting minutes and facilitator's summaries from the June 24, 29, and July 8 meetings.

Dworshak Dam Operations

Oscar Espinoza, Corps, reported on operations at Dworshak Dam (DWR). The project experienced a ground fault on one unit circuit, affecting other units and causing issues with the main breaker. Oscar confirmed that repairs were completed on Monday, and ramp-up resumed afterward. Recognizing the concern from some TMT Members, Oscar was confident that operators/maintenance have resolved the issue for the remainder of the season, and he will provide updates if further action is required.

Reservoir elevation this morning was 1,594.85 feet, and the project is currently releasing 12.7 kcfs; releases will likely increase to 13.0 kcfs later today if TDG conditions allow. Observed surface temperatures in the Lower Granite (LWG) forebay are currently above 68°F, and Oscar expects them to rise over the next couple of days due to forecasted warmer weather. He noted the recent cloud-cover cooldown did not reduce temperatures as much as expected. As a result, the LWG tailwater temperature has risen above 68°F after reduced DWR flows over the weekend; the reduction also caused some loss of stratification in the forebay, but ramping DWR releases back up should help restore stratification. The 10-day weather forecast looks very warm, with Lewiston near or above 100°F on some days, and only a chance of rain at the end of the period.

[Model results](#) indicate that observed vs. modeled LWG temperature lines diverge significantly, Oscar noted this is mainly because the model has not fully caught up/accepted the recent DWR release pattern changes, he expects more accuracy soon. LWG tailwater temperatures should not remain above 68°F for more than 4 days. As noted, the Corps' plan is to hold DWR near 13 kcfs throughout the week and Oscar noted that the intent is to keep the water temperature as close to 68°F and not reach 69.5°F, if possible, as pool stratification is impacted at temperatures that high.

Flow augmentation began July 4, 2026. As of July 15, the program is 11 days into augmentation, with a typical season length around 60 days (this year treated as 59 due to a later start). The season is 19% complete, with about 13% of planned augmentation volume used (about 144–145 kaf used to date). Oscar noted if operations hold at 13 kcfs through July 21 and then ramp down (ex: down to 8.5 kcfs briefly, then ramp back to 13 kcfs for testing, then settle at ~10 kcfs), projected water use should be around 29% of water through 31% of the season. Oscar emphasized the plan is highly variable as it depends on weather and inflows.

Oscar introduced a new "[Dworshak Visualizer](#)" graphic that shows percentile bands from historical forebay elevation data, observed elevation, and forecasted elevation based on planned releases. The X-axis spans June 1 through September 1, with a black "X" marking the elevation of 1,535 ft. He noted the graphic is intended primarily for volume accounting and year-to-year comparison; it will be updated

weekly and made available online with updates communicated to the TMT. TMT Members noted support of the new visualizer and appreciated the clear graphics.

Set Agenda for Next TMT Meeting

The group requested the following agenda items for July 22; TMT Members may send additional items to Doug Baus or Emily Stranz. A draft agenda will be posted to the TMT website by Monday COB.

1. DWR Operations

Questions or Comments from Non-TMT Members

In response to questions posted in the chat, Oscar clarified:

1. The DWR visualizer will be updated weekly and made available online on the TMT website.
2. ESPs (ensemble streamflow prediction) are updated weekly, and the inflow forecast projections used follow that same cadence. DWR ESPs indicate around 1.1 maf of expected inflow (1.0 maf if no inflows).

The next TMT meeting will be on July 22 at 9AM PDT.

**Columbia River Regional
Forum Technical Management
Team OFFICIAL MINUTES
Wednesday, July 15, 2026**

Today's TMT meeting was held via Microsoft Teams and conference call, chaired by Aaron Marshall, Corps, and facilitated by Emily Stranz, DS Consulting. Minutes were collected by Andrea Ausmus, BPA (contractor, CorSource Technology Group). A list of today's attendees is available at the end of these minutes.

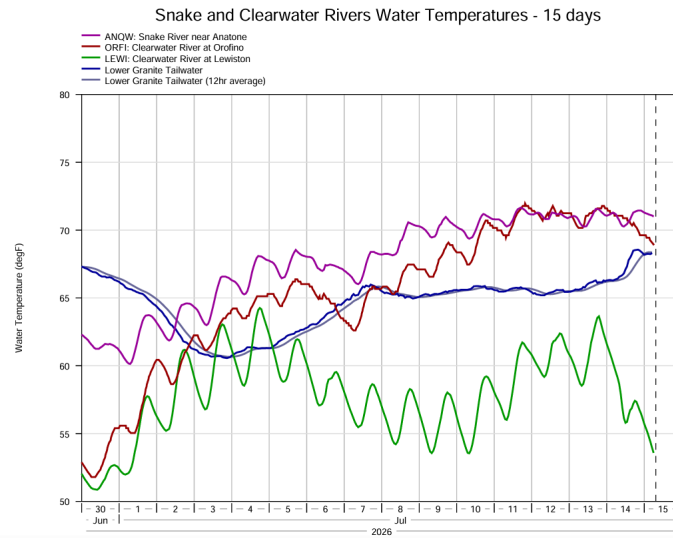
1. Review Meeting Summaries & Minutes – *Emily Stranz, DS Consulting*

- a) June 24
 - Approved
- b) June 29
 - Approved
- c) July 8
 - Approved

2. Dworshak (DWR) Operations – *Oscar Espinoza, Corps*

- a) DWR Update
 - DWR experienced a ground fault over the weekend with one of the unit's circuits which affected all the other units as well.
 - This was compounded with the main breaker having issues due to the ground fault.
 - Resolved on Monday.
 - DWR has since ramped back up.
- b) DWR Current Hourly Data
 - Forebay Elevation: 1594.85 feet
 - Current Outflow: 12.7 kcfs
- c) Snake and Clearwater Rivers Temperature Data
 - Anatone (Snake River):
 - Temperature: ~71°F
 - Orofino (Clearwater River Mainstem):
 - Temperature: ~69°F
 - Dworshak (DWR) Tailwater:
 - Temperature: 42.76°F
 - Lower Granite (LWG) Tailwater:
 - Temperature: >68°F

- Last 15 Days of Temperature



- Red (Orofino) and purple (Anatone) lines show temperatures holding steady.
 - There was a cool down with cloud cover, but this did not have the anticipated response in water temperatures. Expect the lines to steadily rise over the next couple of days as air temperatures are increasing.
- LWG tailwater (blue) is expected to rapidly rise as it experiences the reduction of flows from DWR that happened over the weekend due to the maintenance.

d) Lower Granite Forebay Temperature String

- Shows the effect of the 90°F days toward the top portions of the forebay.
- The stratification is reducing because of the reduced releases from DWR.
- Walla Walla is hoping that the faster than normal ramp up rates is to help stratification as fast as possible and as safely as possible.

e) RFC 10-Day Regional Weather Forecast

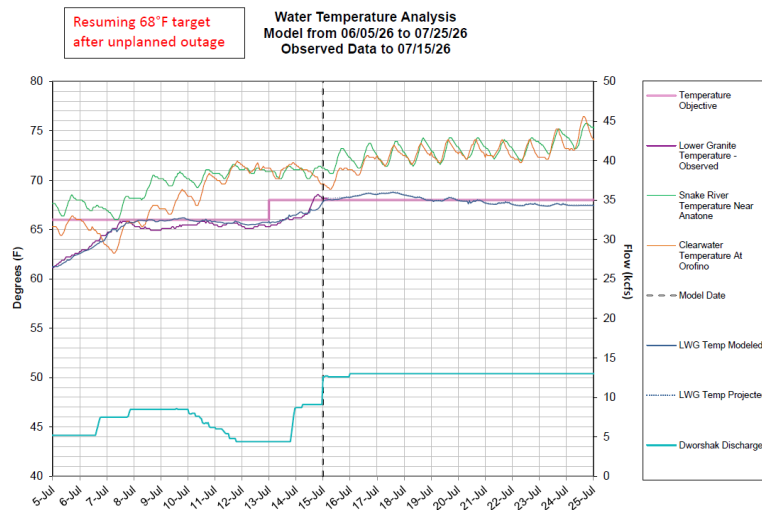
- Temperature:
 - There is a lot of 100°F (red) forecasted.
- Precipitation:
 - Chance of rain coming at the end of the 10-day.

f) Weather Forecast for Lewiston, ID

- Fluctuating close to the 100°F mark.
- At times the forecast is hovering around 101 – 102°F.

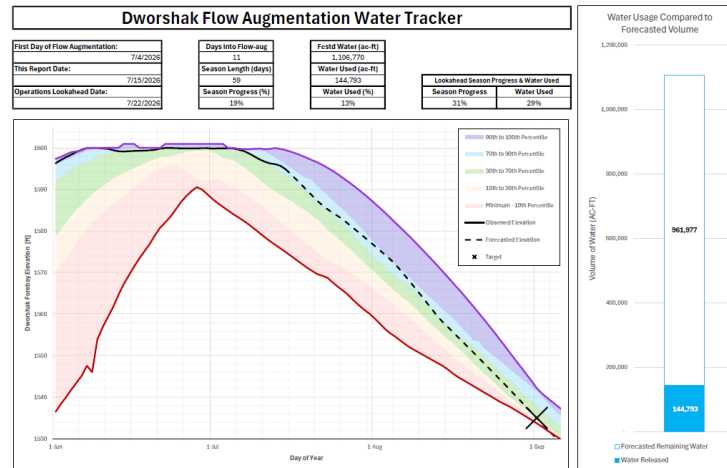
2300	224.14	69.0	67.2	67.3	67.0	66.4	65.6	64.5	64.1	63.9	63.5	13.60
07/13/2026	0000	224.13	68.6	67.7	67.4	67.2	66.4	65.3	64.4	64.1	63.8	13.60
0100	224.13	68.1	68.0	67.8	67.4	66.7	65.4	64.4	64.0	63.6	63.5	13.60
0200	224.12	68.0	68.0	67.7	67.4	66.8	65.5	64.5	64.1	63.4	63.5	13.57
0300	224.11	68.6	68.1	67.9	67.6	66.9	65.6	64.6	64.1	63.7	63.6	13.57
0400	224.11	68.5	68.3	68.1	67.7	66.9	65.7	64.5	64.1	63.9	63.6	13.57
0500	224.10	68.5	68.4	68.0	67.7	66.9	65.7	64.7	64.2	64.0	63.7	13.57
0600	224.10	68.4	68.3	68.0	67.8	66.9	65.7	64.7	64.1	63.9	63.7	13.60
0700	224.10	68.3	68.3	68.0	67.9	66.8	65.6	64.8	64.1	63.9	63.6	13.60
0800	224.11	68.6	68.5	68.2	67.9	66.8	65.6	64.7	64.1	63.9	63.6	13.76
0900	224.10	68.8	68.4	68.2	67.9	66.9	65.9	64.8	64.1	63.8	63.6	13.85
1000	224.11	68.8	68.5	68.2	68.0	67.2	66.0	64.8	64.2	63.9	63.8	13.74
1100	224.15	69.3	68.6	68.3	68.1	67.3	65.8	64.7	64.2	63.8	63.8	13.74
1200	224.13	69.5	68.8	68.4	68.2	67.4	65.9	64.8	64.2	63.8	63.9	13.74
1300	224.14	70.0	69.0	68.7	68.4	67.2	65.9	64.8	64.3	63.9	63.8	13.74
1400	224.15	70.8	69.7	69.0	68.6	67.2	65.8	65.0	64.2	64.0	63.8	13.74
1500	224.15	71.7	69.9	69.1	68.6	67.2	66.0	65.0	64.2	64.0	63.9	13.71
1600	224.16	72.7	70.6	69.3	68.7	67.2	65.7	65.0	64.3	63.9	63.9	13.71
1700	224.16	72.8	70.4	69.1	68.7	67.0	65.9	65.2	64.2	63.9	63.9	13.71
1800	224.16	73.4	70.5	69.2	68.8	67.1	65.7	65.3	64.1	63.9	63.9	13.71
1900	224.17	72.1	70.4	69.3	68.9	67.3	65.8	65.2	64.3	63.9	63.9	13.71
2000	224.17	70.0	70.3	69.2	68.8	66.9	66.0	65.0	64.3	63.9	63.9	13.64
2100	224.16	73.8	70.2	69.1	68.9	67.1	66.1	65.1	64.5	64.0	63.7	13.60
2200	224.15	71.2	69.9	69.3	68.8	67.4	66.1	65.1	64.3	64.0	63.7	13.60
2300	224.15	71.5	70.3	69.5	68.9	67.6	66.2	65.3	64.2	64.1	63.8	13.60
07/14/2026	0000	224.15	72.7	69.9	69.3	68.9	67.6	66.3	65.6	64.3	63.9	13.60
0100	224.15	72.2	70.5	69.4	69.2	67.8	66.3	65.5	64.1	63.8	63.5	13.57
0200	224.14	71.3	70.3	69.7	69.2	67.8	66.7	65.8	64.3	63.9	63.5	13.57
0300	224.13	71.3	70.7	69.6	69.0	67.6	66.6	65.3	64.4	63.9	63.5	13.57
0400	224.14	72.5	70.9	69.6	68.8	68.1	66.7	65.3	64.3	63.8	63.5	13.57
0500	224.14	72.5	70.1	69.7	68.8	67.7	66.6	65.6	64.3	63.9	63.5	13.57
0600	224.15	72.6	70.4	69.5	68.9	68.2	66.8	65.8	64.3	63.9	63.5	13.57
0700	224.17	70.7	70.0	69.3	68.0	68.2	66.8	65.7	64.3	63.9	63.5	13.62
0800	224.17	70.8	70.4	69.8	69.3	67.9	66.8	65.8	64.4	63.9	63.5	13.69
0900	224.21	70.7	70.4	69.7	69.3	67.9	66.6	65.9	64.6	63.8	63.5	13.78
1000	224.21	70.7	70.2	70.0	69.5	67.8	66.6	66.1	64.3	64.0	63.5	13.88
1100	224.25	71.3	71.0	70.1	69.5	67.8	66.7	66.1	64.4	64.0	63.5	13.81
1200	224.27	70.9	70.8	70.4	69.2	67.9	66.8	66.2	64.2	64.0	63.5	13.74
1300	224.25	71.0	70.9	70.3	69.2	68.1	67.0	66.5	65.5	64.1	63.5	13.76
1400	224.27	71.7	71.6	71.2	70.4	68.8	67.3	66.3	65.0	63.9	63.4	13.74
1500	224.28	71.3	71.3	71.1	70.8	68.8	67.7	66.7	64.7	64.2	63.4	13.76
1600	224.26	71.1	71.0	70.9	70.9	69.7	68.8	68.5	65.8	64.3	63.5	13.85
1700	224.26	71.8	71.3	71.0	70.8	70.2	68.3	68.6	65.9	64.3	63.5	13.78
1800	224.27	71.7	71.6	71.5	71.3	69.8	68.9	66.7	64.7	64.0	63.6	13.74
1900	224.26	72.4	72.2	71.8	71.1	70.4	68.6	66.4	64.5	64.1	63.6	13.74
2000	224.25	71.9	71.9	71.8	71.7	70.8	68.8	68.9	64.8	64.1	63.6	13.67
2100	224.28	71.8	71.7	71.6	71.4	70.9	68.8	68.4	64.2	64.1	63.7	13.60
2200	224.25	71.2	71.2	71.1	71.1	71.1	69.2	68.4	64.7	64.0	63.5	13.60
2300	224.25	71.7	71.7	71.7	71.7	71.3	68.6	66.7	65.1	64.0	63.7	13.60
07/15/2026	0000	224.24	71.7	71.7	71.5	71.5	71.3	68.6	66.3	64.6	63.6	13.60
0100	224.24	71.6	71.6	71.4	71.4	71.5	68.4	66.4	64.7	63.8	63.5	13.57
0200	224.24	71.6	71.5	71.5	71.5	71.5	68.3	66.5	65.0	63.5	63.5	13.57
0300	224.24	71.4	71.4	71.3	71.3	71.4	68.5	66.7	64.9	63.6	63.5	13.57
0400	224.25	71.3	71.3	71.3	71.3	71.2	68.4	66.6	64.7	63.8	63.5	13.57
0500	224.24	71.2	71.2	71.1	71.2	70.8	69.1	66.9	64.7	64.0	63.5	13.57
0600	224.25	71.2	71.2	71.1	71.1	71.1	69.2	66.8	64.7	63.9	63.6	13.60
0700	224.27	71.3	71.3	71.3	71.3	70.3	69.4	66.9	64.7	63.9	63.6	13.67
0800	224.27	-	-	-	-	-	-	-	-	-	-	-
0900	-	-	-	-	-	-	-	-	-	-	-	-

g) Model Results – *posted July 15 at 8am*



- There is large divergence between the LWG Observed Temperature (dark purple) and LWG Model Temperature (blue).
 - The model is not generally happy with the releases from DWR – there is a ramp up and a ramp down – the model prefers smoother and steadier states.
- Espinoza believes the model to be accurate after the dashed vertical line and the LWG tailwater will stay slightly above 68°F for no more than 4 days.
- DWR has ramped up to 12.7 kcfs and would be going to 13 kcfs later today if TDG throughout the day looks good.
 - DWR will have to come off of 13 kcfs eventually.
 - At the moment DWR will maintain 13 kcfs throughout the week.
- There is a relaxed temperature period laid out in the SOR. Espinoza would prefer not to dip into that and not go above 68 °F.

h) Dworshak Visualizer Flow Augmentation Water Tracker – *posted July 15 at 8am*



- Developed by Walla Walla engineer, “Young” Colin
 - Colors represent different percentile portions.
 - Percentile portions are made up of forebay elevation data throughout the season for the past 15 years.
 - Solid line is observed and dashed is the forecast elevation based on the release operations that have been set.
- Top left shows the First Day of Flow Augmentation on July 4, Report Date of July 15, and an Operations Lookahead Date of July 22.
 - Currently 11 days into Flow Augmentation.
 - Season Length of 59 days.
 - Typically it is 60 days but because Flow Augmentation started later than typical because of the cooldown.
- Season Progress: 19%
- Water Used: 13%
- Forecasted Water (w/o inflows): 1 maf
- Forecasted Water (w/ inflows): 1.1 maf
 - Detailed in ESP.
- Look ahead with current operations:
 - Hold onto the 13 kcfs through July 21 and then start to ramp down a little bit to save water.
 - Water Used (July 22): 29%
 - Season Progress (July 22): 31%
- Preferred Operations:
 - 14 days of 13 kcfs and try to be above 10 kcfs for the rest of the season.

- The graphic only visualizes volume, but Espinoza said it is a helpful tool to show where DWR is as compared to other years.
 - Beneficial because this year has been hot and there was not much snowpack.
 - The rest of the season is hopeful as we are still in the blue.
- Forecast Elevation:
 - Based on staying at 13 kcfs through July 21 and then ramping down to 8.5 kcfs for about a day and then back up to 10 kcfs.
 - Then will ramp up again to 13 kcfs for double testing (August 10 – 14) and then DWR will ramp back down to 10 kcfs for the remainder of the month.
 - Dashed Line.
- Plans are variable and can change based on the weather.

Espinoza opened up the discussion to get a temperature check on the region to get different perspectives on how to use the water, especially with the relaxed temperature period coming out as outlined in the SOR.

Tom Lorz, Umatilla, asked Espinoza to thank “Young” Colin for his colorful graph. He asked if on the ground fault if Walla Walla thought that they had that sorted or if they felt that there might be some other issues that we might have to deal with going forward or if they thought that we are pretty solid for the rest of the season.

Espinoza said that he had confidence in what the operators and maintenance staff at DWR have told him so he believes that we should be good for the rest of the season, at least with that issue.

Lorz said that he wanted to make sure that this was not more like a little band aid and then later this Winter we would go do a more aggressive, more permanent solution.

Espinoza said that he understood and said that he would keep Lorz updated if/when he hears more about it, if he does.

Erick Van Dyke, OR, said that he appreciated the update and the new visual for those that like to think about numbers and allocations. He said that he had a couple questions about things that were standing out to him. He said that the reason that the plan is dropping to 8 kcfs is because the criteria is being targeted for a different level. He asked if that was correct.

Espinoza said in this initial look it is mostly just for volume accounting trying to get to 1535’. He said that he could update this looking at today’s forecast and he plans to update the Visualizer each week looking at the forecast forward. He said that the primary objective was mostly for volume accounting in conjunction with the different criteria laid out in the SOR.

Van Dyke apologized and said that the way that he had asked the question we were looking at a picture and it was getting to the second part of what Espinoza had provided. He said that it was his bad for sending his question the way he had. He said that he meant that he was assuming this picture for ten days, for now, and utilizes what is in the SOR to inform it through the date at the right side of the X-axis, September. He said that he thought that was how it was functioning. He asked if that was right.

Espinoza said that was correct and that he should have done a better job of explaining on the *X*-axis. On the very left-hand side we have June 1 as the day of year, and we are going all the way out to the large black *X* which is September 1. That black *X* denotes 1535 feet of elevation.

Van Dyke said that was helpful. He said that his question was to the second part, and he thought he got the answer. He said that Espinoza is following what he anticipates using based on what the SOR has provided, which has a period starting July 23, folks are calling it “Relax the Criteria”. He asked if that was right.

Espinoza said that he believed that Van Dyke was correct. It starts on July 23 and goes through August 10 and then it transitions through August 14 back to 68°F.

Van Dyke said that all those details are informing the picture that we are looking at now. He said that was helpful. He said that right now they are spilling DWR 3 kcfs. He apologized because he could not remember if the water came from the surface or if it was a lower elevation. He asked for Espinoza to help him remember how water was delivered to the spillway.

Espinoza said that was a great question. He said that usually they use the spillway as much as possible. He said that he believed in previous years they have used the regulating outlets which are the lower ones, but he believed that they are taking it off the top. He said that he could confirm that for Van Dyke.

Van Dyke said right now water temperatures at the surface are informed by the reservoir temperature strings at DWR and it looked pretty hot on top. He asked how that was influencing or impacting the efficacy of cooling the LWG tailwater. He asked if the 3 kcfs at 75°F was something that could be better if we were taking water lower down.

Espinoza said at the moment, looking at yesterday’s tailwater temperature at DWR, it is at roughly around the high-42°F and right now it is also at that high-42°F. So, it is affecting it slightly, however, we are still >43-44°F coming out of DWR which is about normal.

Van Dyke said that 3 kcfs is high a percentage of what is currently being released and that was why he was asking about what elevation the spillway is drawing from. He asked if it was 20m or was it closer to 3 or 5m.

Espinoza said that he now understood and that he was sorry for misunderstanding the first time. He said that DWR is currently operating at 1595’ and the spillway is operating at 1545’ so that is about 50’, converting that to meters it is ~15 – 20m.

Van Dyke said that the line on this one actually includes what is going through the spillway. He said that was helpful for him and apologized for the long winded and the multiple questions to get to that. He thanked Espinoza for sharing.

Morrill thanked Espinoza for the update and gave his young engineer a thumbs up, the visual is very helpful. He said that they were still following the SOR which would allow for relaxation and going up to 69.5°F. He said that he would like to see the Corps model if we could keep the temperatures at 68 – 68.5°F with the water that we have available rather than see that much relaxation. He said perhaps we can provide an additional model that would show where we might be with water to achieve that. He also said that he did not think that Jay Hesse was on but as Hesse had noted last week that it is more important maintaining the temperature control than it is meeting the 1535’ at the end of the season. The 1535’ is a target. Having water available to carry into September is a beneficial

effect for fish at that point in time, in the early part of September. He said that those were his two comments and a question about a model run that showed climate if we cannot relax the temperature and keep it closer to 68°F throughout the entire time period.

Espinoza thanked Morrill. He said that his goal is to try to keep the temperature as low as possible and not get to that 69.5°F because mostly due to the stratification and keeping that. Once we lose that at the forebay at LWG it is very difficult to try to get that back. The model that we do have and that they can show TMT can only go up to ten days, but he will do his best to communicate his plans, staying under 68°F if possible.

Chris Peery, Corps, said that he wanted to clarify a discussion that Van Dyke and Espinoza had. He said that DWR is not actually passing any water through spillbays right now. He said that they are using one of the regulating outlets (RO) right now, RO2, and that is providing about 4 kcfs right now of about 12.7 kcfs total that is being released from DWR. Most of the flow is coming through the units still.

Van Dyke thanked Peery. He said that he thought maybe the way that he asked the question could have been clearer, just understanding how water is drawn through the RO/Spillway was helpful to understand.

Stranz noted another vote for the graphic and thanked Espinoza for pulling that together.

3. Public Comments/Questions

| Noah Campbell 9:24 AM

| 1) This figure is very useful. Thank you very much for it. How regularly will the figure be updated, and where/how will it be made available?

| 2) I believe it was stated that the inflow forecast projections are the same as the ESP (but presumably updated more regularly than weekly). Is that correct?

Espinoza said that the figure is available online where you can find the model results. He said that he would try to update it weekly, but he would communicate if he cannot. He said that they are using the ESPs that are released weekly so they are updated at the same time.

4. Agenda Items

Next Meeting Scheduled: Wednesday, July 22, 2026

Meeting Location: Microsoft Teams

Next Week's Agenda Topics

- DWR Update

Future Agenda Topics

- Adult Passage Assessment of LMN and JDA
- DART Presentation

Today's Attendees:

Agency	TMT Representative(s)
NOAA Fisheries (NMFS)	Kelsey Swieca, Trevor Conder
Oregon	Erick Van Dyke
Washington	Charles Morrill
Kootenai Tribe	
Confederated Tribes of Colville Reservation	
Umatilla Tribe (CTUIR) & CRITFC	Tom Lorz
Yakama Nation	Tom Iverson
Bureau of Reclamation (BOR)	Chris Runyan
Army Corps of Engineers (COE)	Aaron Marshall (Chair), Lisa Wright
US Fish & Wildlife Service (USFWS)	Dave Swank
Idaho	Jonathan Ebel
Montana	Brian Marotz
Spokane Tribe (STOI)	Brent Nichols
Nez Perce Tribe (NPT)	
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes (CSKT)	
Bonneville Power Administration (BPA)	Tony Norris, Ben Hausmann

Other Attendees (non-TMT members):

COE – Oscar Espinoza, Steven Lee, Kenneth Sears, Tom Conning, Gregory Hoffman, Tiffany Dixon, Chris Peery, Dan Turner, Brian Majeran, Eric Chow

BPA – Tammy Mackey

Washington Ecology – Thomas Starkey

DS Consulting – Emily Stranz (Facilitator), Colby Mills,

CorSource – Andrea Ausmus (BPA note taker, Contractor)

NPCC – Kate Self

Clearing Up – K.C Mehaffey

Energy EPS – Joshua Rasmussen

PSE – John Chandler

FPC – Noah Campbell

AVA – Patrick Maher, Steve Lentini

GCPUD – Eva Stites

Unaffiliated – Mike Buchko