
To: WEI Meeting Participants

From: Tanya Guenther and Rahul Ray

Date: January 10, 2024

Re: Final Rio Tinto WEI Table Meeting 32 Summary, November 8, 2023

A hybrid meeting for the Rio Tinto Water Engagement Initiative (WEI) was held on Wednesday, November 8, 2023, in Vanderhoof from 9 AM to 5:05 PM. The hybrid meeting was held to offer participants the option of meeting in person or virtually in response to COVID-19. The WEI Main Table will continue to adapt meeting options for participants and will follow current public health recommendations for meetings or gatherings.

This document is a summary of the meeting and is not word-for-word “meeting minutes.” The information presented highlights the topics raised, key discussions, and identified action items.

The facilitator was **Rahul Ray** (RR) from EDI. **Tanya Guenther**, from EDI, took notes remotely during the meeting and prepared this summary. **Colin Parkinson**, from EDI, attended to provide support. **Jayson Kurtz** (JK) from Ecofish Research participated as the Technical Working Group (TWG) coordinator. **Katie Healey** and **Kirsten Lyle** from Ecofish were present as process technical support. **Michael Harstone** (MH), from Compass Resource Management, participated as a decision analyst. **Clayton Schroeder** (CS), also from Compass Resource Management, participated as SDM support. A Russell Audio-Visual team member provided AV technical support.

Andrew Czornohalan (AC), Rio Tinto Operations Director Power and Services, Kitimat and Kemano participated as a WEI Table member. **Andy Lecuyer** (AL), Senior Environmental Advisor, Communities and Social Performance Advisor, also from Rio Tinto, participated in the videoconference as support.

A draft agenda was included in the pre-reading package and outlined the anticipated meeting topics.

November 8, 2023 attendance is listed in Table 1 and identifies participants joining in-person or online.

Table 1. November 8, 2023—WEI Main Table Meeting Participants

Individual	Organization	In person	Online
Aman Pahar	<i>Rio Tinto</i>	✓	
Andrew Czornohalan	<i>Rio Tinto</i>	✓	
Andy Lecuyer	<i>Rio Tinto</i>	✓	
Clayton Schroeder	<i>Compass</i>	✓	
Clint Lambert	<i>Area E Representative Regional District of Bulkley-Nechako</i>	✓	
Colin Parkinson	<i>EDI</i>		✓
David Van Dolah	<i>Councillor, District of Vanderhoof</i>	✓	
Tom Bulmer	<i>Councillor, District of Vanderhoof</i>	✓	
Curtis Helgesen	<i>CAO Regional District of Bulkley-Nechako</i>		✓
Dan Sneep	<i>Department of Fisheries and Oceans</i>	✓	
Denis Wood	<i>Public participant</i>	✓	
Donna Klingspohn	<i>Public participant</i>	✓	
Gerd Erasmus	<i>Public participant</i>	✓	
Henry Klassen	<i>Public participant</i>	✓	
James Jacklin	<i>Ministry of Forests</i>	✓	
Jayson Kurtz	<i>Ecofish</i>	✓	
June Wood	<i>Public participant</i>	✓	
Jim D’Andrea	<i>Cheslatta Carrier Nation</i>	✓	
Kaitie Healey	<i>Ecofish</i>	✓	
Kim Menounos	<i>Fraser Basin Council</i>		✓
Kirsten Lyle	<i>Ecofish</i>		✓
Kevin Moutray	<i>Mayor of Vanderhoof</i>	✓	
Linda Sjodin	<i>Public participant</i>	✓	
Lyla Brophy	<i>Nechako Valley Regional Cattlemen’s Association</i>		✓
Maria Sotiropoulos	<i>Department of Fisheries and Oceans</i>		✓
Mark Parker	<i>Chair, Regional District of Bulkley-Nechanko</i>		✓
Michael Harstone	<i>Compass</i>	✓	
Mike Robertson	<i>Cheslatta Carrier Nation</i>	✓	
Phillip Krauskopf	<i>Ministry of Forests, Water Authorizations</i>	✓	
Quentin Beach	<i>Rio Tinto</i>	✓	
Rachel Chudnow	<i>Ecofish</i>	✓	
Rahul Ray	<i>EDI</i>	✓	
Ray Klingspohn	<i>Public Participant</i>	✓	
Shirley Moon	<i>Area F Representative Regional District of the Bulkley-Nechako</i>	✓	
Simon Matte	<i>Rio Tinto</i>		✓
Stephen Dery	<i>UNBC, TWG</i>	✓	
Steve Gordon	<i>Director, Strategic Initiatives, MWLRS</i>	✓	

Tanya Guenther	<i>EDI, Meeting Support</i>		✓
Tim Plesko	<i>Public participant</i>		✓
Wayne Salewski	<i>Public participant</i>	✓	
William Elkins	<i>Cheslatta Carrier Nation</i>		✓

The following provides a summary of the topics discussed during the videoconference.

WELCOME AND UPDATES

Attendees were welcomed to the meeting. The agenda was reviewed and there were no additions or deletions.

The WEI-Approved Meeting Ground Rules were reviewed and there were no questions or objections.

Updates/Past Action Items

The action items from Meeting 31 were reviewed and updates were provided as follows:

- Carry out a more detailed assessment of Tier 2 Power Generation losses associated with the conditionally supported Altern 5D (and also 4D). **Complete.**
- **2015 Flooding Model Assessment** to better ground-truth the model, run it using the historical inflows from 2015 set at the actual reservoir levels at the beginning of the water year. **An update on the modelling was shared in the meeting.**
- Project Team to work on and help develop a Package of Phase 1 Recommendations for the next meeting. **An update and a package of recommendations was included with the pre-reading package.**

Southside Working Group Update

There has been some great feedback from boaters about the buoys.

Rio Tinto Operations Update

Andrew provided updates:

- Current drought situation, with 2023 officially the driest year on record, from a precipitation perspective. Now the second driest year from inflows on record (hydrological year started back in November 2022).
- BC Hydro has been importing energy to the smelter to allow for banking of water under the equal change agreement which is part of the energy purchase agreement. The energy will be called back in winter to secure the grid in the north and provide energy needed to supply the province. It represents about $\frac{3}{4}$ of a foot of water from the top of the reservoir.
- Anticipating a very uneventful winter for total discharge at Vanderhoof. Holding the current release at 32 m³/s. If we accumulate a snowpack, there is still the ability to recover and have

higher than typical inflows, but nothing is indicating we would be above the flood cap at this stage.

- Operations have returned to full capacity.
 - Significant economic benefit flowing through the north with a significant investment in Vanderhoof.
 - Significant number of displaced forestry workers have been employed in the last 12 to 18 months, with many from the Houston area.

Comments/Discussion included:

- *Agricultural concerns including issues with drought, water licences not being available for agriculture, climate change, food security. These are all impacted by the reservoir.*

Technical Working Group Update

Jayson provided an update from the Technical Working Group (TWG). Highlights included:

- TWG has met 3 times since the last WEI Main Table meeting. Discussions have focused on flow modelling and monitoring, and cross participation with the Nechako First Nations TWG.
- Jayson attends the Nechako First Nations TWG meeting, and information is being shared between the working groups. Good progress.

Meeting Overview and Objectives for Today

The objectives for today's meeting were reviewed. Currently in the Phase 1 of the process and looking at immediate-term considerations.

PHASE 1 FLOW ALTERNATIVES

A recap of the Phase 1 Flow Alternatives was shared.

An action item from Meeting 31 was to provide further modelling from the 2015 water year. The modelling showed no flooding at Vanderhoof; however, there was flooding at Vanderhoof that year. The question was whether the model was providing accurate results.

The model does not try to re-create past reservoir operations, but to manage historical inflows while applying current operations parameters (flood thresholds, minimum spills, 2nd tunnel, smelter load, etc.). See slides for additional detailed information.

The surveys and discussions at Meeting 31 highlighted that no one alternative was acceptable to everyone; however, Alt 5D was the most heavily supported. There were concerns about the significance of T2 power generation losses.

At Meeting 31, the Main Table conditionally supported Alternative 5D, if the results of a more detailed evaluation of T2 power losses were showing to be less significant.

The base flow conditions were reviewed along with flexible operating parameters.

Identifying Preferred Flow Alternatives

The new Flow Alternatives (Alt 4E, Alt 5E and Alt 6A) were reviewed and an opportunity was provided for questions and discussion.

- Triggers can be used with the alternatives to act as safeguards for changes.
- This is a large group and still attracting people over four years of working. Structured decision-making is a different approach than most planning processes. Speaks volumes that we are all still here and participating.
- Recommendation from a table member that a recommendation be made today. If it will take another 5 years to resolve data gaps, this member (82 years of age) feels they may not be around to see the impacts of the changes. Want to see the group push through with making recommendations today.
- The Process Team was mindful of the timelines for data gaps and appropriate steps or studies to fill the gaps.
- A separate package was included with the data gaps discussed and reviewed by the Technical Working Group for those interested in more information.
- Online tools have been updated.

Questions/Discussion included:

- Concern about modelling versus actual flows. Detailed discussion of this ensued.
- Concerns about the Tier 2 power export generation losses.
- Tier 2 energy is delivered against a forecast (provided to BC Hydro on an annual basis). BC Hydro uses this forecast to define the provincial energy balance.
- Tier 1 is the firm energy product that BC Hydro and they can schedule and shape it for any time during the year when they need it.
- If Tier 2 energy is not available, there is a financial impact to Rio Tinto. If having to purchase power from the US, there is concern it is not low CO₂ energy and this impacts BC Hydro commitments to CO₂ reduction targets.
- Flooding concerns: Maybe 550 feet is not the right number? What would it look like if we aimed for 500 as the top? The length/duration of flooding is also important.
- 4D has more of a staged, stepped-in approach and it actually smooths things out downstream. Would question the advantage to making a non-natural system natural when it has an impact on species while not much effect downstream?

The Main Table broke for lunch and reconvened at 1 PM. Following the break, a recap of the morning's discussions was provided:

What we've learned is that 4D and 5D are very hard to implement and that led to the development of 4E and 5E.

Continued Questions/Discussions:

- *Has a preferred flow option been identified for sturgeon?*
 - *Allowances have been built and can be included in the triggers to revisit.*
- *Suggestion of dredging some of the channels to prevent the predation on the calving islands which would resolve the issue of 5D not being as good as 5E.*
- *If we make a decision, will there be funding to take action? It is hoped that money comes with the deal.*
- *Favour of scrapping 5D and 4D because they do not seem like they are really believable.*
- *Suggested to remove 4D and 5D from the exercise and move on.*
- *Are there recommendations to the Main Table that, from an ecological perspective, may be the best choice?*
 - *TWG has worked for develop performance measures and characterize impacts without providing a recommendation.*
- *Are any of the flow options presented worth it in terms of providing additional benefits, given how they may affect the different interests around the table?*
- *What safeguards need to be put in place? Should we build in triggers?*
- *Do we pulse water before STMP or do we do a different stepped pulse depending on the option selected?*
- *Or, do we have a more natural flow that is timed with the freshet on the system (6A) although it has consequences?*
- *If the reservoir gets low (if there are more drought years ahead) will a decision need to be made to either generate power or have water in the river?*
 - *Currently there is no Tier 2 forecast for 2024 because it does not look like there will be water to do it. Tier 2 is on the table as part of meeting the minimum flow under the '87 agreement.*
 - *Phase 2 and 3 are yet come and we can use a method of adaptive management to upgrade and improve as we go.*

A ranking exercise was completed, and Main Table members were asked to provide their input.

Ranking Exercise Results

Results were reviewed as a group and members were provided with an opportunity to share their thoughts on how they rated each alternative.

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Name	Alt 1	Alt 4E	Alt 5E	Alt 6A
X H.K. *** Assumes blanks are opposed CS	Oppose Needs some work, address ramping.	Endorse	Endorse	Accept * changed from oppose as long as it didnt steal from baseflows later in the year
X Andy	Endorse moving to phase 2 and 3 to look for opportunities for water budget	Accept ** 4/5	Accept ** 3/5	Endorse like linking release to ecological cues. dont like the stepdown pre-stmp
X Dan Sneepe	Oppose outperformed by other alts. want to see tangible changes out of process to date	Accept * changed from oppose outperformed by other alts that matter for me (e.g. Cheslatta fish, resident fish)	Endorse ** changed from accept outperforms other alts for Cheslatta fish, resident rearing.	Endorse ** changed from accept like the concept of a more natural freshet. may perform well in aspects not represented by current PMs
X tim plesko	Oppose	Oppose	Oppose	Accept best massaged alt
X Kevin Moutray	Oppose	Accept Good to the 90th percentile. In extreme high water years would like to see a different flow regime. Would like to explore reducing the flood PM to 500 M3/s.	Accept Good to the 90th percentile. In extreme high water years would like to see a different flow regime. Would like to explore reducing the flood PM to 500 M3/s.	Accept Good to the 90th percentile. In extreme high water years would like to see a different flow regime. Would like to explore reducing the flood PM to 500 M3/s.
X Curtis Helgesen	N/A	N/A	N/A	N/A
X Linda S	Oppose need an improvement	Accept can live with it	Endorse doesn't focus so much on the power	Accept can live with it
X Denis	Oppose We need something better	Accept same or better than #1	Endorse flooding in v'hoof can be resolved	Accept manage chinook rearing flow
X Andrew Czornohalan	Endorse Sustained energy delivery to BC + Chinook gains have been made over time. BUT still look for opportunity to ramp into STMP	Accept Minimizes loss of energy delivery to BC residents and performs similar to 5E	Oppose Energy loss is more without significant gain.	Endorse Largely the same on most metrics AND favored by Nations seeking to replicate freshet triggers - PMs not sensitive to this

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	Oppose	Accept	Accept	Endorse
Stephan D	change is essential so status quo is not acceptable	improves gradual ramping to stmp	improves gradual ramping to stmp	better mimics natural spring freshet, can also be adaptive on timing of releases bridging gap to stmp
Main Table Member	Significant historical ecological and fisheries concerns, hence coming to the table to assess new options.	prefer the staged approach to the flow increases. proven benefits in the cheslatta system. need to have conversations with TWG specialists to fully understand ecological benefits of approach in contrast to status quo. concern on ramping down from STMP and fish stranding risks.	reasonable approach. concern on ramping down from STMP and fish stranding risks.	accept if this alternative addresses fish stranding through additional mitigation/physical works. there are some initial concerns regarding ramping. concern on ramping down from STMP and fish stranding risks.
Jim	mirror 4e/5e when water budget allows.			***Changed from oppose to accept with works / mitigation + AM *** risk of stranding. increasing stranding beyond current is not acceptable. time of year increased water temp in pools. decrease DO. Increase algae. stranding already occurs at stmp flows
Wayne			stepped up ramping	but no ramping has issues
June Wood	the flow pattern does not replicate a natural river flow pattern.			as in all alternative, the balance seems to weigh more heavily toward power production (from tier 2 as well as tier 1)
Ray and Donna *** Assumed blanks are opposed CS		***changed from oppose	*** changed from accept would suggest lowering vanderhoof max flows from 550 to 500	***changed from oppose
No Name Provided (Clint) *** Assume blanks are opposed CS	***changed from oppose need to remove course woody debris for moose and caribou. dig soil out around islands to create more water between island and shore to deture predation	***changed from oppose need to remove course woody debris for moose and caribou. dig soil out around islands to create more water between island and shore to deture predation	***changed from oppose need to remove course woody debris for moose and caribou. dig soil out around islands to create more water between island and shore to deture predation	need to remove course woody debris for moose and caribou. dig soil out around islands to create more water between island and shore to deture predation
Gerd	*** changed from accept - existing water budget inadequate insufficient ... at minimum water levels in low water years	existing water budget is inadequate in low water years.	existing water budget is inadequate in low water years.	existing water budget is inadequate in low water years.

Gerd expressed a lack of support for any of the Phase 1 alternatives. He feels that more water needs to be available, any he does not want to be associated with any of the Phase 1 alternatives.

Outcome: WEI Participants selected Flow Alternative 6A to move forward.

OVERVIEW OF BUILDING A PACKAGE OF PHASE 1 RECOMMENATIONS

See the pre-reading package for a summary and details of the non-flow recommendations.

The Process Team feels it is reasonable for WEI Participants to develop a priority list of data gaps that are needed to be addressed for moving forward into Phase 2 and Phase 3. Michael asked Main Table Participants to consider if there are items missing from the list or if there is anything that should not be on the list.

Comments/Discussion included:

- *Who is paying for the studies/research?*
 - *We are not yet looking at the costs involved but will at a later stage.*
- *Concern about the length of time to study and fill these data gaps. One member has commented as his age of 80, he does not have much time left to see the changes and many of the people at this table will no longer with here.*
- *The list is good and is going down the right pathway. This type of ecological baseline work is important for moving into Phase 3.*
- *Questions about protection of aquatic life and may have been a provision in the '49 agreement, but not sure?*
- *Do we want to look back or do we want to look forward to see what we can do?*
- *Looking after the river is a lifetime commitment. It is not a chapter to do and then go home. Need to mark every success on the wall, hold tight, and build on it.*

Phase 1 Research and Studies (Data Gaps)

Additional discussion is required at the next WEI Main Table meeting.

Phase 1 Physical Works

Additional discussion is required at the next WEI Main Table meeting

Phase 1 Other Implementation Considerations

Additional discussion is required at the next WEI Main Table meeting

NEXT STEPS

Meet again in the next few weeks to continue the discussion on building the Package of Phase 1 Recommendations

MEETING ADJOURNED

The meeting was adjourned at 5:05 PM.