



---

**To:** WEI Meeting Participants  
**From:** Tanya Guenther and Rahul Ray  
**Date:** April 19, 2023  
**Re:** Final Rio Tinto WEI Table Meeting 30 Summary, March 8, 2023

---

A hybrid meeting for the Rio Tinto Water Engagement Initiative (WEI) was held on Wednesday, March 8, 2023, from 9:00 a.m. to 4:06 p.m. 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. Unfortunately, he had Covid, so facilitated remotely. **Tanya Guenther**, from EDI, took notes remotely during the meeting and prepared this summary. **Colin Parkinson**, from EDI, attended (remote) to provide support. **Jayson Kurtz** (JK) from Ecofish Research participated as the Technical Working Group (TWG) coordinator (remotely). **Katie Healey** (in-person) and **Kirsten Lyle** (remote) from Ecofish were present as process technical support. **Michael Harstone** (MH) (in-person), from Compass Resource Management, participated as a decision analyst. **Clayton Schroeder** (CS) (in-person), also from Compass Resource Management, participated as SDM support. **John Russell** from Russell Audio-Visual provided AV technical support (in-person).

**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 & Social Performance Advisor, also from Rio Tinto, participated in the videoconference as support. **Quinten Beach**, Rio Tinto, also participated.

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

Table 1 lists the participants attending in person and Table 2 lists the participants joining via videoconference.

**Table 1. March 8, 2023—WEI Main Table meeting  
In-Person Participants**

| Individual         | Organization                                 | Individual     | Organization  |
|--------------------|--|----------------|---|
| Andrew Czornohalan | <i>Rio Tinto</i>                             | Linda Sjodin   | <i>Public participant</i>                           |
| Andy Lecuyer       | <i>Rio Tinto</i>                             | Mike Robertson | <i>Cheslatta Carrier Nation</i>                     |
| Clint Lambert      | <i>Bulkley-Nechako<br/>Regional District</i> | Shirley Moon   | <i>Public participant</i>                           |
| Denis Wood         | <i>Public participant</i>                    | Steve Gordon   | Ministry of Water, Land and<br>Resource Stewardship |
| Gerd Erasmus       | <i>Public participant</i>                    | Tim Plesko     | <i>Public participant</i>                           |
| Gina Layte Liston  | <i>Public participant</i>                    | Wayne Salewski | <i>Public participant</i>                           |
| Henry Klassen      | <i>Public Participant</i>                    |                |   |
| Jim D'Andrea       | <i>Cheslatta Carrier<br/>Nation</i>          |                |   |
| Kevin Moutray      | <i>District of Vanderhoof</i>                |                |   |
| Kim Menounos       | <i>Fraser Basin Council</i>                  |                |   |
| Lyla Brophy        | <i>Public participant</i>                    |                |   |

**Table 2. March 8, 2023—WEI Main Table meeting Online Participants**

| Individual       | Organization                                    | Individual         | Organization                                  |
|------------------|---|--------------------|---|
| Alec Mercier     | <i>Rio Tinto</i>                                | Maria Sotiropoulos | <i>Department of Fisheries and<br/>Oceans</i> |
| Colin Parkinson  | <i>EDI</i>                                      | Matthew Pruett     | <i>Ecofish</i>                                |
| Dan Sneep        | <i>Department of<br/>Fisheries and Oceans</i>   | Rachel Chudnow     | <i>Ecofish</i>                                |
| Donna Klingspohn | <i>Public participant</i>                       | Ray Klingspohn     | <i>Public participant</i>                     |
| James Jacklin    | <i>Ministry of Forests</i>                      | Stephen Dery       | <i>UNBC, TWG</i>                              |
| William Elkins   | <i>Cheslatta Carrier<br/>Nation</i>             | Donna Klingspohn   | <i>Public participant</i>                     |
| Justin Greer     | <i>Regional District of<br/>Bulkley-Nechako</i> | Tanya Guenther     | <i>EDI, Meeting Support</i>                   |
| Kristen Lyle     | <i>Ecofish</i>                                  |                    |   |

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

## WELCOME AND UPDATES

Attendees were welcomed to the meeting and a roundtable of introductions were completed with in-person and online attendees.

### Review

- The draft agenda was reviewed as presented in the pre-reading package. No additions or deletions were requested.
- The summary of the last meeting was shared with participants for review and there were no requested changes submitted.

### Past Action Items

There were no action items arising from the last meeting.

### South Side Working Group Updates

- Navigation buoys: They buoys are being stored at Ootsa Lake laydown. The anchors are poured and ready. Plans are in place for installation in May to early June.
- Wisteria boat launch: Engaging with BC Parks and exploring installation of a simple dock and anchor with lock blocks or similar.

### Expanded Communication

- There is interest in greater awareness of the work of WEI in the community. The Get Involved Nechako website is undergoing updates; however, the content generated by the WEI will not be changed.
- After each Main Table meeting, RR will prepare a one-page summary. It will be sent to the WEI Table for review, revised, and then posted publicly. ***The group agreed to move forward with this plan.***
- It has been proposed that RR will provide a presentation to newly elected officials about the work of the WEI. ***The group agreed to move forward with this plan.***

### Rio Tinto Operations Update

An update of current operations was provided by AC. Highlights included:

- The reservoir level has been trending down and is inline with what is to be expected. At the end of January, the snowpack was significantly lower than average. There were mild temperatures in the watershed which was unusual. Across February there has been a number of storm events and significant snowfall. We are now at 100% of long-term average snowpack.

- Observed inflows and discharge versus historical show we are sitting right on the long-term average curve. Stable for the winter period and will continue to be stable across the remainder of the winter as we move into the maintenance period.
- Spring freshet inflow volume: It is early in the season. May 1 snowpack survey will provide a prime indication.
- Vanderhoof forecast sits alongside the long-term average between 150 and 200 m<sup>3</sup>/sec.
- Reservoir level is expected to trend down and then pick up and finish in line with the long-term average.
- Investigative work has begun on mechanical interventions. Look forward to being able to report moving through TWG as this work progresses.
- Kemano updates:
  - Working with Dan, Maria and the Haisla Nation on operating protocols for better ramping, shaping and real-time interaction of the powerhouse with the Kemano River.
  - Eulachon are expected to start arriving soon. Last year's run was one of the strongest on record with a harvest of 40 tonnes. This gives encouragement that the eulachon protocol has continued to be effective.
    - Discussion was held about the eulachon protocol and how it affects powerhouse operations. All equipment is maintained to allow for no interventions during the 2-month period. Invasive maintenance is limited, along with anything that could impact the generation levels at that time. This shrinks the maintenance window over the summer. There is continued habitat enhancement work this summer at Kemano and continuing to normalize following the T2 project.
    - T2 is complete and operational. The Cheslatta contracting team has been transitioning into an operational role. Now looking at the 40-year strategic rebuild campaign. Generators are approaching their 40-year end of life. Setting up now for the major rebuild campaign over the next 8-10 years. This is a big investment.
  - Smelter updates:
    - Continue to restart the smelter. Takes time, effort, and resources to complete.
    - Additional 1000 people are working after the strike.
    - Currently at 75% of production.
    - Significant gap in skilled workers. Have recruited 380 full-time people and upskilled 600 contractors. Gaps remain with millwrights, electricians, engineering staff, supervisors, etc. Over 130 vacancies in the smelter currently.
  - Metal markets are volatile. The US did not apply sanctions or tariffs to Russian aluminum since the start of the war with Ukraine. US is now the biggest importer of Russian aluminum which is driving the North American markets down. Continue to see

increase in demand for low CO2 aluminum from auto manufacturing. Formal deals with major automotive manufacturers and consumer goods suppliers, which is encouraging. Continue to see desire to strengthen production capacity in North America.

Discussion highlights following Rio Tinto update:

- What would be the income if only electricity was generated?
  - AC responded that selling electricity generates only a fraction of what the smelter can provide. Heavily incentivized by the nature of the industrial development act and pricing. It is better to put the water into aluminum versus what the energy market can provide.
- Can you provide an update on the Kenney Dam spillway talks?
  - AC: As earlier reported to this group, undertaking an order of magnitude study for a water release facility at Kenney Dam. The report will include updates for 2023 costing with provisional pricing for remediation of the Cheslatta fan, how to rewater Nechako Falls, which were not included in past studies. This will allow for meaningful discussions with First Nations, communities, stakeholders, and governments. This report will be shared publicly when it is finalized.
- In the costing, is there anything about Tahtsa Narrows?
  - Currently unpacking viability of Tahtsa Narrows in response to changing weather conditions. Continue to look at gathering more data.
- With smelter operational constraints and concerns around the strike, are there mitigations being considered to avoid labour disruptions in the future?
  - A strike is a breakdown in a relationship. There has been lots of hurt in the community and some families have still not reconciled following the strike. We have come a long way, however, and are currently seeing historically low grievance rates.
- Is there consideration of power production at the release facility?
  - Yes, we are working with the First Nations Major Project Coalition and others around power generation at Kenney Dam as part of a water release facility.

## Technical Working Group Updates PMs and Alternatives

The TWG has met 5 times since the last main table meeting on November 16, 2022. Work continues on the following items:

- finalizing technical memos;
- revisions to flow alternatives;
- review of PMs;
- modelling and reviewing results; and,
- data gaps and monitoring.

Thank you to all of the TWG participants for the extraordinary amount of work they have done! There has been a large effort in the background and lots of smart people doing really great work to support the Main Table. The committee has been productive and is excited to share their results with the Main Table.

## Meeting Overview and Objectives

The overall process schedule was reviewed, as well as the objectives for today's meeting. The schedule anticipates Main Table meetings for a full day approximately every 8 to 12 weeks as we work to reach agreement on a preferred Phase 1 flow regime.

Discussion included the following:

- If this group agrees on recommendations, and there are enough representatives at this table, would that help with government approval?
  - DS responded that from past experiences, when a process like this is undertaken and there are concerned citizens as well as well as the proponent in the room, there has been no basis for the province to not accept the recommendations.
  - Rio Tinto has a meeting planned with DFO and the province. Want to be aware of the output required before we know what the regulatory needs would be. Reminder that there is still an ongoing court case and litigation.
  - Discussions are ongoing with the water comptroller's office to keep them apprised.
  - Concern was expressed: what if this group comes up with recommendations and Rio Tinto decides not to pursue them? Could this group take it to the government.
    - This is a voluntary process. The aim is to balance interests. It is possible that everyone's interests may not be met. The process is created around a consensus model to represent as many interests as possible.
    - A member shared that while there have been challenges in the past, "Andrew has been more honest, friendly, and connected to us than past representatives"

Observations from last meeting included:

- Frustration of not being able to discuss substantive flow changes, specifically in relation to a wholesale change.
  - This was discussed at the last meeting. We are currently focussed on Phase 1, with discussion for Phase 2 and 3 later in the process.
- Frustration with the ranking exercise and not having enough information.
  - The first exercise was only a dress rehearsal to test the information.
  - Additional sessions were held to review and summarize the PMs as well as Hydroviz and Altaviz tools.

- An additional session was added to do a deeper dive into the PMs and values (March 7).
- Challenge discussions on flow changes without factoring in sturgeon recovery.
  - TWG has reviewed and discussed a draft strategy including a 3-phase approach:
    - Collaborate with the NWSRI.
    - Monitor effects
    - Identify triggers to re-open WEI

Discussion included:

- There is no other rivers with the same precondition as the Nechako does for sturgeon. Are we comparing apples to apples?
  - Not trying to compare apples to apples or even apples to oranges. Looking at techniques or processes used in other areas to identify lessons learned and any that may also be successful for us.
- Triggers to reopen WEI could include:
  - What happens if new information arises?
  - How much information/certainty is required to trigger a WEI action?
  - When/how do we introduce a sturgeon PM and reassess alternatives?
  - Technical or other committee review?
  - Fully open WEI (re-do SDM process)?
  - Implement alternative flows?

TWG has drafted a memo about sturgeon.

**Action item: There was agreement to move forward with this 3-phased approach regarding sturgeon as presented.**

## ROUND 1—PHASE 1 FLOW ALTERNATIVES

### Review of Flow Alternatives

### Summary and Evolution of Round 1 Flow Alternatives

Flow alternatives were reviewed. Discussion included the following:

- In reviewing alternative 1-2, why is there is a low dip in August?
  - The dip is a construct of STMP and allows the Cheslatta Lake system to empty and normalize. Other considerations are the chinook protocol where flows in September/October effectively set the level for the remainder of the winter flow.

- There was a discussion about stranding in different systems. The TWG is looking at data gaps and what kind of monitoring can be done. The TWG will continue to explore and will share their findings at future Main Table meetings.
  - Cheslatta system: the lake acts as a buffer for downstream. Ramping from the Cheslatta perspective is a large issue/concern. There are burial grounds impacted by the water levels. Human remains in this burial ground have been dated back to 1700s with remains of 7 humans with carbon dating putting them back to 5000 years old. Restoration projects need to be done in a culturally sensitive way. We need to do the restoration work. The fish do not know when the hydrograph will change. There needs to be a balance of the people and animals on the land.

## ASSESSING THE ROUND 1 FLOW ALTERNATIVES

### Hydrology

Flow regimes were reviewed and highlights of discussion included the following:

- There is a need for people downstream to receive information from the reservoir managers (anticipated flow, planned events that would alter the flow, changes in operations, and a followup with a summary at the end of the year.
  - AC: Rio Tinto is providing this information through the Community Leaders Forum providing real-time decisions and an annual debrief. The reports of this meeting are public and available on the website.
- Why was the reservoir high for two years? Could it not have been drained down somewhat during those periods? Is there a target reservoir level that can be used to calibrate this?
  - Work has been undertaken to look for correlations between high flows in Vanderhoof and reservoir levels during the high flow years. They have looked for correlations between levels the previous fall and none has been found. It is a small reservoir and it reacts to events seasonally. It is difficult to predict.

### Performance Measures

Performance Measures (PMs) were reviewed and discussion included:

- Tier 1 difference between firm annual energy capability of Kemano and the maximum smelter load Rio Tinto is required. What does this mean?
  - The energy purchase agreement was developed with a theoretical maximum. They overlay hydrology and then determine the volume of energy available to be considered tier 1. BC Hydro can rely on 92% of the years having this available for the provincial energy balance. BC Hydro relies on Rio Tinto power to achieve the BC energy balance. Any additional energy production is not considered firm energy on a multi-



year basis. Traditionally BC Hydro schedules Tier 1 energy need in the winter; however, they can ask for it at any time of the year.

There is no mandate for tier 2 energy, and we have ability to flex the model. The provincial energy balance and the needs of the province are pushing Rio Tinto to supply more. During the strike there was an ability to explore more energy and BC Hydro was selling it to mid markets and charging a premium. While not considered “firm”, it is planned for annually and BCH schedule accordingly using the predicted energy volumes.

At an Energy symposium last year, even with Site C online, within five years BC will be short of energy again.

Currently, the energy purchase agreement is valid until 2034.

- Question about the elevations of the reservoir and what is the 2810?
  - Each time a new study is complete, a new probable maximum flood value is calculated. The releases going down the Nechako and that is what the spillway was designed to release at. It is the theoretical maximum flood for a 1:10,000-year flood event. The number 2820 is a product of the original including a safety factor.
- Comment that the alternatives presented either mean ramping up the flows or other changes, but we don't actually have the extra water to do that. Regardless of Tahtsa Narrows, we have an annual water budget to spend.
- There are contributing factors from year to year.

## Review of current TWG Shortlisted PMs

Since the last meeting, 46 issues with 56 PMs have been shortlisted to 17. All PMs were reviewed between rounds. There are 19 PMs for this meeting with modifications made to 21, 22a, and 66 along with new PMs of 22B and 26. The TWG continues to review PMs between rounds of alternatives, has deferred some PMs until more information is known, and is interested in expanding socio-economic PMs. The shortlisted PMs were reviewed.

## Preliminary Calculated PM Results

Results were reviewed and are summarized and presented on page 48 of the pre-reading package.

Discussion included:

- It was requested that only one measurement type be used. Some are showing metres and some in feet.
- **Action item: Materials will be reviewed to make sure there is consistency with the measurement units.**

- Gerd commented that there are lots of scenarios, but they seem to be built on fictitious numbers.
  - We started with 70 interests and are working to get down to what is really important to the members of this table. We are continuing to inform and gain from the selected alternatives.
  - AC: interested in understanding the benefits and costs of the range of options.
- Is there a reason for the dip in August and September even in the wettest year?
  - Suspected to be due to maintenance as there is usually 1 generator down during that time period.
- There was a lengthy discussion about flows and impacts on sturgeon and the need to include the impacts in our considerations.

### **Commentary and discussion:**

- There was a desire to see a mix/hybrid of Alt 1-4 and Alt 1-5.

## **RANKING THE FLOW ALTERNATIVES**

[https://www.getinvolvednechako.ca/wp-content/uploads/2023/03/WEI\\_Table\\_Meeting\\_30\\_presentation\\_Mar8\\_2022\\_forDistribution.pdf](https://www.getinvolvednechako.ca/wp-content/uploads/2023/03/WEI_Table_Meeting_30_presentation_Mar8_2022_forDistribution.pdf)

An exercise was completed for ranking the alternatives and the results were reviewed after the in-person paper responses and online responses were combined.

## **REVIEW AND DISCUSS PERFORMANCE OF FLOW ALTERNATIVES**

### **Towards Improved Flow Alternatives**

### **What have we learned through the preliminary modelling and assessment of flow alternatives?**

General observations included:

- Temperature benefits greatest for release just before STMP.
- STMP varies from year to year—ramping regime around STMP also need to vary.
- Flow alternative affect reservoir filling rate, maximum reservoir elevation.
  - Also affected by reservoir history, inflows.
- More water could be available to maintain tier 1 if dry years were managed differently.

Discussion included:

- Is the reference to the risk of flooding referring to only Vanderhoof, or is it all the way down to the Fraser Valley?
  - Current decision-making process consider first Cheslatta Lake, then Vanderhoof. There is a loose consideration for PG, but more around ice jam versus typical flooding. The river forecast centre does build our forecast into their Fraser River decisions, but we do not actively include in our decision making.
- Alt 1-4 allows for some dynamic management. Could see smoothed out curve overall. This allows for a bit of social license to bob and weave and address things.
  - These would be more of a target than minimums. Can potentially provide relief in dry years to drive some bigger impacts. This option provides flexibility in that space. We also need a PM with pre-freshet releases. In the past it was a tool used quite a bit. We've learned from technical team members that pre-freshet releases can have a considerable negative impact. Should potentially penalize a model that may see pre-freshet releases.
  - Could look at the suggestion of stepping rather than constant release. Another modification could take this alternative and redistribute water over winter flows back up to the status quo.
- What is the reservoir elevation worth to Rio Tinto? Higher elevation gives more pressure and makes more power from the same amount of water.
  - AC: It is an outcome/product. In April/May we look at it being higher and usually pull down a machine at that time of year. It is not a static effect. The benefits of high water on generation are already built in. With T2 in place, there is no longer a loss through the tunnel as there was previous. The water is moving through the tunnel more efficiently now.

## What are the implications for building new and improved flow alternatives?

### BUILDING NEW FLOW ALTERNATIVES

#### Reaching agreement on new flow alternatives to be modelled

1-2: Agreement to remove 1-2 from the list.

1-3: General like as a group, keep as is or keep as it and try to improve?

- January to June line is good. Don't like the big jump. More about bring the water in slow and let the animals get used to it. Would like to see ramping more of a curve.
- How many days to prewet the system before peak flows?
  - How much water to reallocate over the winter?

*Ran out of time to review the remaining items on the agenda. The project team will generate examples and set up another 1-hour online meeting to continue this discussion.*

## NEXT STEPS

It was suggested that we continue the content from this meeting via video conference.

**Action item: A Doodle Poll will be sent out to members with date and time options to continue the flow alternative discussion. This is to be a one-hour meeting.**

The next Main Table meeting date will be selected at the online meeting once determined how much time is needed to address the adjustments or new alternatives for modelling.

Feedback from today's meeting:

- Is it possible to skip the introductions at future meetings to save time?
- Preference would be for in-person meetings; however, there is interest in continuing to offer the hybrid option.
- May need to consider a larger venue as the room was full. If more people attending in person, will need more space.
- Hard copies of the pre-reading package can be available through Aman. Contact her if you would like a package printed and made available for pick up at the Rio Tinto office.
- **Action item: RR to send out a one-page summary of the meeting will be created and sent out Main Table for review before posting.**
- Consideration for holding a meeting in Burns Lake instead of Vanderhoof, possibly for one of the summer meetings?

## MEETING ADJOURNED

The meeting was adjourned at 4:06 p.m.

## ACTION ITEMS

- **Action item: There was agreement to move forward with this 3-phased approach regarding sturgeon as presented.**
- **Action item: Materials will be reviewed to make sure there is consistency with the measurement units.**
- **Action item: A Doodle Poll will be sent out to members with date and time options to continue the flow alternative discussion. This is to be a one-hour meeting.**
- **Action item: RR to send out a one-page summary of the meeting will be created and sent out Main Table for review before posting.**