



---

**To:** WEI Meeting Participants

**From:** Brodie Smith, Jason Collier, and Rahul Ray

**Date:** March 1, 2021

**Re:** Rio Tinto WEI Table Meeting 16 (Videoconference) Summary, February 10, 2021

---

A videoconference for the Rio Tinto Water Engagement Initiative (WEI) was held on February 10, 2021, from 10:00 am to 12:05 pm. The videoconference was held instead of an in-person Main Table meeting to promote social distancing in response to COVID-19, while making progress on aspects of the WEI. There was no meeting held in January 2021.

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

The facilitators were Rahul Ray (RR) and Jason Collier (JC) from EDI. Brodie Smith, also from EDI, took notes during the meeting and prepared this summary. Jayson Kurtz (JK) from Ecofish Research participated as the Technical Working Group (TWG) coordinator.

Andrew Czornohalan (AC), Operations Director - Power and Services, Kitimat and Kemano participated as a WEI Table member. Justus Benckhuysen, Rio Tinto Nechako Operations Coordinator, participated in the videoconference as technical support. Devrie Sanghera and Andy Lecuyer, Rio Tinto, also attended.

A draft agenda was included in the invitation, and outlined the anticipated meeting topics:

- Action item review
- Technical Working Group (TWG) update
- Southside update
- Climate change research presentation by Dr. Stephen Dery
- Review of WEI Update document
- Next Main Table meeting dates
- Potential next meeting topics

Table 1 lists the participants that were involved in the videoconference and the organizations they represent.

Table 1. February 10, 2021 - WEI Videoconference Participants

<b>Individual</b>	<b>Organization</b>
John Alderliesten	Public participant
Garry Blackwell	Public participant/Southside representative
Lyla Brophy	Nechako Regional Cattlemen's Association
Andrew Czornohalan	Rio Tinto
Stephen Dery	UNBC
Gerd Erasmus	Public participant
Curtis Helgesen	Regional District of Bulkley Nechako
Jennifer Howell	District of Fort St. James
James Jacklin	FLNRORD
Deborah Jones-Middleton	Protective Services - Regional District of Bulkley Nechako
Henry Klassen	Public participant
Donna Klingspohn	Public participant
Ray Klingspohn	Public participant
Phillip Krauskopf	FLNRORD
Clint Lambert	Regional District of Bulkley Nechako
Gina Layte-Listen	Public participant
Jason Llewellyn	Regional District of Bulkley Nechako
Kim Menounos	Fraser Basin Council
Kevin Moutray	District of Vanderhoof
Mark Parker	Regional District of Bulkley Nechako
Jerry Petersen	Regional District of Bulkley Nechako
Tim Plesko	Public participant/Southside representative
Charlie Rensby	Village of Burns Lake
Wayne Salewski	Public participant / NEWSS
Carrie Smith	MLA John Rustad's office
Dan Sneep	Department of Fisheries and Oceans
Gerry Thiessen	District of Vanderhoof
Dennis Wood	Public participant
June Wood	Public participant

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

- RR opened the meeting by welcoming participants and reviewing the draft agenda.
- RR answered a participant's questions about how agenda items are decided. He outlined the segment at the end of each meeting where participants identify topics for the next meeting's agenda.
- For today's meeting, Rahul identified a request by Lyla Brophy, if time permits, to outline agricultural interests.
- He also identified that the request to discuss the Eton Flows will occur as part of the TWG update.
- RR reviewed action items from Meeting 15:
  - Rio Tinto to review when and how spillway information is provided. **Update:** The "Get Involved Nechako" website is getting a good amount of traffic. Rio Tinto is in the process of increasing the amount of data available through Flow Facts, including average and raw data of precipitation levels and snowpack, for the last 65 years. Rio Tinto expects the data to be available in the next one to two months.
  - The TWG will investigate the effects of reservoir flooding on water pH, and the potential for effects on fish populations. **Update:** These topics have been added to the TWG list of interests and research is ongoing.
  - Rio Tinto to compile contact information into one source. **Update:** This task is ongoing and part of Communication Improvement 3: Team Member Awareness and Communication Efficiency – Rio Tinto to make information about their representatives broadly available, e.g., this should be digital and posted in various locations and revised as personnel change.
  - Rio Tinto to determine if other communities would benefit from regular meetings with Rio Tinto. **Update:** This task is ongoing and part of Communication Improvement 3: Team Member Awareness and Communication Efficiency – Rio Tinto to expand the list of municipal, regional district, and Indigenous communities to meet with on a defined basis to discuss Rio Tinto operations and relevant personnel.
  - RR to provide AC with more information what is involved in Communication Recommendation 4. **Update:** This task is ongoing and part of Communication Improvement 4: Maintain "Get Involved Nechako" Website.
  - Rio Tinto to add link to additional average precipitation data to the Get Involved Nechako website. **Update:** Rio Tinto is integrating all platforms with reservoir operating data, snow, weather etc.

- Rio Tinto to provide smelter energy usage data to the WEI Main Table. **Update:** AC presented a smelter update during the meeting. AC presented a figure that shows smelter energy use and energy exports from 1954 to present. <https://www.getinvolvednechako.ca/7037/widgets/27362/documents/49993>. In 1978, the system was connected to BC Hydro. The decrease in exports in the 1980s was due to low amounts of precipitation. The increase in exports during the 1990s was due to high amounts of precipitation. In 2000, the decrease in energy production due to a water shortage which resulted in a line drop. Currently, the new smelter is consuming more energy, so exports have decreased.
- RR will provide a WEI Process Update for the Main Table to review. **Update:** Draft WEI Process Update included in pre-meeting reading package. The draft document to be discussed during the meeting. *Due to time constraints during the meeting, the draft Process Update document was not reviewed.*
- The TWG will provide a list of water quality monitoring sites at the next meeting. **Update:** The TWG is working on summarizing the water quality monitoring sites. Three types of water quality monitoring sites have been identified: industry, Provincial/Federal government, and health related. There is one site on the lower Nechako River with very good long-term data. The TWG will be putting together a summary.
- RR reminded participants that all Main Table presentations and meeting documents are available on the Get Involved Nechako website. <https://www.getinvolvednechako.ca/wei>
- RR introduced two new Rio Tinto employees that are joining the WEI.
  - Devrie Sanghera – she will be working as part of the Rio Tinto communications team.
  - Andy Lecuyer – he will be supporting the WEI in a technical capacity and will be taking over JB's role after he retires on March 17, 2021.
- JK provided an updated on the Technical Working Group (TWG). The update included a review of the TWG objectives, meeting frequency, and the three phases of the TWG (brainstorming, technical work, and review/recommendations).
  - Objective is to support Main Table by developing draft objectives, Performance Measures (PMs), and flow alternatives.
  - The TWG continues to meet bi-weekly (there have been three meetings since the last Main Table meeting) and is on track to complete work by April as planned. The brainstorming phase is nearly complete and members are proceeding with technical work.

- The TWG is compiling a list of interests that will be categorized and reviewed. One of the final TWG deliverables will be a complete list of interests. Currently, the TWG list of interests includes:
  - General (healthy river, natural hydrograph, climate change, information sharing).
  - Heritage and culture (inundation or erosion of heritage sites, gravesites).
  - Flooding, erosion, and low water (ice jams, property damage, land loss, effects on landowner and public infrastructure, sediment generation).
  - Recreation (navigation, boat ramps, canoeing, hiking trails).
  - Wildlife (caribou, osprey, waterfowl, beavers, amphibians, wetlands).
  - Fish (sturgeon, salmon, resident species, habitat availability and quality, tributary access, water temperature, water quality, entrainment, stranding).
  - Rio Tinto Operations (operational flexibility, cost, power supply certainty, risk management).
  
- Technical work involves input from subject matter experts, the review and summary of existing information, understanding and confirming effects (including the mechanisms, scale, timing and location), identifying uncertainty and recommending performance measures. Current technical work underway includes:
  - Natural hydrograph – rebuilding the Nechako River hydrograph as if all flows since 1952 went down the Nechako River (no diversion through Kemano).
  - Reservoir erosion and large woody debris (LWD) accumulation – determine how LWD and other factors affect erosion, and what best management practices can reduce erosion and restore sites.
  - River erosion – determine what factors affect erosion and how much flow contributes to erosion and determine what best management practices can reduce erosion and restore sites.
  - Wetlands – determine if wetlands are affected by changes in the reservoir level, identify wetlands adjacent to the reservoir, and provide a professional opinion on the types of effects.
  - Wildlife – determine what species are potentially affected by changes in reservoir elevation or river flow
  - River limnology – determine limiting factors for fish, how operations affect reservoir productivity and water quality, the limiting factors of productivity, the effect of operations on reservoir temperature, and the key factors driving reservoir water quality.
  - Fish entrainment – determine the likelihood of fish being swept downstream through Skins Lake Spillway; the BC Hydro risk screening approached is being applied.
  - Flow ramping rates – determine what changes in water level can strand fish and cause erosion and how quickly the water level changes; ramping rates will be calculated and compared to provincial standard rates to determine the risk to fish.
  - Salmon temperature tolerance – determine how river temperature affects salmon and what temperature thresholds are important.

- Other technical work underway includes summaries and assessments that will support the list of interests, including floatplane access, flooding, ice jams, water quality, bull trout habitat, fish access to spawning tributaries and water intakes.
- The TWG has reviewed an existing study that assessed the impacts of underwater logging in the Nechako reservoir. It includes several case studies from other reservoirs. The study includes an examination of the benefits of leaving the trees and vegetation, a review of baseline information, and suggests recommended procedures to follow if trees are to be removed.
- The final phase of work for the TWG will be to provide recommendations. This phase will support the Main Table by developing draft objectives, performance measures and flow alternatives. The deliverables will include a revised list of issues with technical rationale, a shortlist of objectives and performance measures, a range of flow scenarios, and a trade-off “results” table. JK noted that the TWG is working well and that the next few months will be critical in completing their work.
- A participant asked about the relevance of the Natural Hydrograph. JK noted that the development of the Natural Hydrograph was the result of an Action Item from the Main Table and will be used when developing flow scenarios. Dan Sneep from DFO noted that natural hydrographs are often used to help frame the options and perspectives when assessing flow scenarios.
- A participant pointed out that understanding the impacts of activities adjacent to the river is very important and is encouraged to see that Land Use Planning is being factored into the work the TWG is doing.
- A participant asked why JK did not mention the tunnel and its effects on fish. JK responded that the TWG has already looked into this issue by reviewing a fish entrapment study, which was completed for the tunnel. AC noted that the TWG should meet with interested and knowledgeable participants to review results of the existing studies and determine if further action is needed.
- **ACTION ITEM: The TWG will meet with interested participants to review existing entrapment studies (potentially during the next Southside Workshop).**
- A participant asked about the validity of the Eton flows, and if they were outdated. RR noted that the TWG will be reviewing the Eton Flows and can update the Main Table when they have completed their review. JK commented that all flow scenarios will be run to quantify the effects of each flow scenario and the Eton flows can also be considered.
- JC provided a Southside update. The Non-Flow Recommendations Report has been sent out to Main Table participants for review. The report is a culmination of non-flow related interests identified through the WEI process to date, information gathering efforts, and the feedback from the Southside group. The Southside Workshop identified pathways to begin addressing interests, including erosion, livestock, water

pumps/intakes, water quality, navigation, recreation, wildlife, funding, wildfire, and communications and power. Follow-through has begun for several of the Southside Action Items. To ensure continuous improvement, EDI will draft a potential Reservoir-specific process for the Nechako Reservoir for the Main Table to review, which will also establish a “Reservoir Advisory Group.”

- A participant noted that the scope of the TWG seems to be expanding and asked if the additional work will be completed concurrently or sequentially with the in-river assessments, and if the TWG timeline will be affected. JK responded that most of the work will be completed concurrently; however, some of the non-flow work will be completed later and some will be looked at sequentially. No delays in the TWG timeline are expected, and additional resource will be brought in as needed.
- Dr. Stephen Dery presented “Climate Change and Water Security Research at UNBC.” The presentation was an overview of several projects and initiatives currently underway in the Nechako watershed, including Climate Change in the Nechako Watershed (research in collaboration with UNBC’s Integrated Watershed Research Group), and the Industrial Research Chair (IRC) on Climate Change and Water Security. The full presentation is available to view on the Get Involved Nechako website. <https://www.getinvolvednechako.ca/7037/widgets/27362/documents/49994> Participants should email [irc@unbc.ca](mailto:irc@unbc.ca) to be added to the mailing list to receive updates on the research.
- A participant asked Dr. Dery if it was possible to calculate the temperature of the stream inputs below the dam to better understand the influences of the inputs on the river and reservoir system. Dr. Dery replied that calculating a temperature budget of incoming systems can be done. He also noted that temperature loggers are inexpensive, and the current monitoring network could be easily expanded.
- A participant noted that the Main Table participants have minimal opportunities for input and would like more opportunities to provide input. RR responded that the WEI process has been unfolding under the directions of the Main Table and following the Structured Decision Making (SDM) process. Main Table input will be critical when it comes to discussions around the Performance Measures and Objectives—which are being developed by the TWG at the direction of the Main Table—as well as the evaluations and selection of an alternative flow scenario.
- Due to the earlier items in the agenda going over time, RR asked if it was okay to postpone the review of the WEI Update and set aside time for Lyla’s presentation until the next meeting. Participants raised no objections.
- **ACTION ITEM: Review the WEI update during the March meeting**
- **ACTION ITEM: Lyla to present agricultural interests at the March meeting.**
- RR presented the proposed topics for the next Main Table meeting, including an overview of TWG materials, a presentation from the Province of BC on the Land Use Planning initiatives, adaptive management

structures and an update on the Nechako White Sturgeon Recovery Initiative (NWSRI). *These topics were not confirmed.*

- A participant was worried that the Main Table meetings were becoming diluted with presentations and were not making headway on the main topics. Another participant suggested that there could be a separate group established to learn more about topics such as land management. RR suggested that the meetings could be longer in order to accomplish all the agenda tasks and still include the presentations. It was agreed that meeting should be longer.
- A participant requested that the Main Table Gantt chart be reviewed at the start of each meeting to help track the progress of the Main Table. The participant also requested that there be a discussion about the scope of the Main Table to help set some parameters and determine what work might be taken on by other groups.
- **ACTION ITEM: Review the Main Table Gantt chart at the beginning of each Main Table meeting.**
- **ACTION ITEM: Review the scope of the Main Table and set scope parameters.**
- RR proposed the date for the next meeting to be held on March 10, 2021. No objections were made. RR also proposed the date for the April meeting (April 14), but conflicts were raised. RR will review other potential dates for Meeting 18 in April and present them at the meeting in March.
- RR proposed that the March meeting be extended to three hours (from 9 am to 12 pm). Main table participants supported this extension.

## ACTION ITEMS

- **ACTION ITEM: The TWG will meet with interested participants to review existing entrapment studies (potentially during the next Southside Workshop).**
- **ACTION ITEM: Review the WEI update during the March meeting**
- **ACTION ITEM: Lyla to present agricultural interests at the March meeting.**
- **ACTION ITEM: Review the Main Table Gantt chart at the beginning of each Main Table meeting.**
- **ACTION ITEM: Review the scope of the Main Table and set scope parameters.**