

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Cc: [Schell, Steve E FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: RE: Ted. Possilbe to get daily river updates for the Fraser to the unified command post?
Date: July 3, 2019 1:50:00 PM

Hi Jenn,

I will speak with the RFC to see if there is an option to develop a product for that location on the Fraser.

In the mean time comparing the [CLEVER model forecast](#) at Marguerite and Texas Creek on the Fraser provide a good indication of the flows.

Who on your team is dealing with authorizations for any changes in and about the stream that may be required?

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: July 3, 2019 12:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>
Subject: Ted. Possilbe to get daily river updates for the Fraser to the unified command post?

Hi Ted,

A decision on whether or not we need to blast/add rock will be on the water velocity levels, which are based on water levels drought.

Is it possible to get daily, (or some scheduled) updates sent directly to the Incident Command post – to guide a series of other decisions that really need to be based on water levels and predictions? I'd like to rely on your info not just DFOs.

If yes, can your person get the info directly to Travis Abbey, Incident Command. With cc to Steve Schell and myself exec command.

Jenn

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC
Tel: 778-974-2336
e-mail: Jennifer.C.Davis@gov.bc.ca

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Cc: [Schell, Steve E FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: RE: Ted. Possilbe to get daily river updates for the Fraser to the unified command post?
Date: July 3, 2019 1:56:00 PM

That is good to hear that Trevor is on point for this one.

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: July 3, 2019 1:55 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>
Subject: RE: Ted. Possilbe to get daily river updates for the Fraser to the unified command post?

We are getting an emergency WSA order this afternoon to authorize some rock scaling (make the site safe for future people), some rock will fall into the river. The plan right now is to run this through the Regional Water Manager (Trevor bohay) and will be fast tracked through front counter.

any concerns or things we are missing?

Application will come from DFO.

J

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development
4th Floor, 2975 Jutland Road, Victoria, BC
Tel: 778-974-2336
e-mail: Jennifer.C.Davis@gov.bc.ca

From: White, Ted T FLNR:EX
Sent: Wednesday, July 3, 2019 1:51 PM
To: Davis, Jennifer C FLNR:EX
Cc: Schell, Steve E FLNR:EX; Abbey, Travis FLNR:EX
Subject: RE: Ted. Possilbe to get daily river updates for the Fraser to the unified command post?

Hi Jenn,

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Tel: 778-974-2336
e-mail: Jennifer.C.Davis@gov.bc.ca

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: Re: BC update - July 8 rockslide.
Date: July 8, 2019 10:19:22 PM

Thanks for the update Jenn.

Let me know if you need anything else from our group.

I would live to see photos over time as the river has responded to the Chilcotin inflows.

Good luck tomorrow with the Ministers

Ted White
Director, Water Management Branch
778-698-3981

----- Original message -----

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: 2019-07-08 10:15 PM (GMT-08:00)
To: "Rasmussen, Paul FLNR:EX" <Paul.Rasmussen@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>, "Manwaring, Richard G FLNR:EX" <Rick.G.Manwaring@gov.bc.ca>, "Ethier, Tom FLNR:EX" <Tom.Ethier@gov.bc.ca>, "McGuire, Jennifer ENV:EX" <Jennifer.Mcguire@gov.bc.ca>, "Mack, James AGRI:EX" <James.Mack@gov.bc.ca>, "Meier, Ian R FLNR:EX" <Ian.Meier@gov.bc.ca>, "Zimmerman, Ted FLNR:EX" <Ted.Zimmerman@gov.bc.ca>, "Valdal, Eric FLNR:EX" <Eric.Valdal@gov.bc.ca>, "Reid, Jennifer D FLNR:EX" <Jennifer.D.Reid@gov.bc.ca>, "Haslam, David GCPE:EX" <David.Haslam@gov.bc.ca>, "Lowther, Brett GCPE:EX" <Brett.Lowther@gov.bc.ca>, "Bates, Stan EMBC:EX" <Stan.Bates@gov.bc.ca>, "Falcao, Tony M FLNR:EX" <Tony.Falcao@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>, "O'Donoghue, Eamon G FLNR:EX" <Eamon.ODonoghue@gov.bc.ca>, "Lucius, Jody FLNR:EX" <Jody.Lucius@gov.bc.ca>
Cc: "Knauff, Mike EMBC:EX" <Mike.Knauff@gov.bc.ca>, "Bison, Robert FLNR:EX" <Robert.Bison@gov.bc.ca>, "Giles, Tim R FLNR:EX" <Tim.Giles@gov.bc.ca>, "Witt, Andy FLNR:EX" <Andy.Witt@gov.bc.ca>, "Ramsay, Mike K FLNR:EX" <Mike.Ramsay@gov.bc.ca>, "Andrusak, Greg FLNR:EX" <Greg.Andrusak@gov.bc.ca>, "Myers, Mary E FLNR:EX" <Mary.Myers@gov.bc.ca>, "McQueen, John FLNR:EX" <John.McQueen@gov.bc.ca>, "Kerr-Upal, Manjit ENV:EX" <Manjit.Kerr-Upal@gov.bc.ca>, "Forsdick, Doug O ENV:EX" <Doug.Forsdick@gov.bc.ca>, "Travia, David V AGRI:EX" <David.Travia@gov.bc.ca>, "Hoffos, Robin FLNR:EX" <Robin.Hoffos@gov.bc.ca>, "Liesch, Nancy FLNR:EX" <Nancy.Liesch@gov.bc.ca>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
Subject: BC update - July 8 rockslide.

BC Update. July 8, 8:00 pm

Good evening, please find attached the daily sit rep from the command center in Lillooet with some highlights from the day. This update is intended for the recipient and not for distribution.

Highlights for today:

Weather

- Road access is improving with drier conditions in the area.
- The river continues to be littered with debris as a result of extremely high flow coming into the Fraser from the Chilcotin, north of the site.
- The forecast calls for less precipitation over the coming days, which should help with operational activity.

Action

- Helicopters completed their work using buckets to knock some rocks off the slide area. Rock scalers continue to remove loose gravel and rock from the site when possible.
- Assessment of various options for next steps continues.

First Nations

- The inaugural First Nations Leadership Advisory Group call took place today. General feedback on using this format to gather perspective and input on next steps was positive.
- A follow up call or email will be set up.

Ministers' visit/tour

- DFO Minister Wilkinson, FLRNORD Minister Donaldson and MP Jag Sadhu are scheduled to be onsite on Tuesday, July 9 for a technical briefing, meeting with staff, helicopter tour of the slide area, etc.

Data collection

- Acoustic monitoring data continues to be temporarily unavailable due to changing river flows and debris.

Thank you, on behalf of Steve Schell and Jennifer Davis.
end.

From: [Davis, Jennifer C FLNR:EX](#)
To: [Justus Benckhuysen \(justus.benckhuysen@riotinto.com\)](#); [White, Ted T FLNR:EX](#); [Jacklin, James FLNR:EX](#)
Cc: [Schell, Steve E FLNR:EX](#)
Subject: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:49:55 AM

Hi – we have a massive operation in play downstream where the big bar rockslide occurred. I understand Rio Tinto will be releasing water as per the agreement to support Early Stuart sockeye spawning.... But can we adjust things a bit?

We have most of the ES Sockeye stuck behind the rocks, and more water might actually make our operations to get them passing harder.

Can we connect the Rio Tinto technical people to our Incident Command Environmental team??

J

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Automatic reply: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:51:51 AM

Thank you for writing. I am away from my office with limited access.

Please contact the a/Director Mike Ramsay (Mike.Ramsay@gov.bc.ca).

If this pertains to the Big Bar Rockslide, I will be monitoring for e-mail but if your matter is urgent, please contact me by cell at [s.17](tel:250-952-1717) or contact Steve Schell (Steve.Schell@gov.bc.ca).

Sincerely,
Jennifer.

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: RE: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:53:03 AM

You are here! Yay. I can take your call at any moment.
s.17

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: White, Ted T FLNR:EX
Sent: Monday, July 29, 2019 10:52 AM
To: Davis, Jennifer C FLNR:EX; Justus Benckhuysen (justus.benckhuysen@riotinto.com); Jacklin, James FLNR:EX
Cc: Schell, Steve E FLNR:EX
Subject: Re: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide

Hi Jenn,

Please set up a call for us to discuss.

Thank you,

Ted White
Director, Water Management Branch
778-698-3981

----- Original message -----

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: 2019-07-29 10:49 AM (GMT-08:00)
To: "Justus Benckhuysen (justus.benckhuysen@riotinto.com)" <justus.benckhuysen@riotinto.com>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "Jacklin, James FLNR:EX" <James.Jacklin@gov.bc.ca>
Cc: "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>
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Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#); [Davis, Jennifer C FLNR:EX](#); [Jacklin, James FLNR:EX](#)
Cc: [Schell, Steve E FLNR:EX](#)
Subject: RE: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:53:24 AM

Lets discuss.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

-----Original Message-----

From: White, Ted T FLNR:EX [<mailto:Ted.White@gov.bc.ca>]
Sent: Monday, July 29, 2019 10:52 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Jacklin, James FLNR:EX <James.Jacklin@gov.bc.ca>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>
Subject: Re: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide

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Date: 2019-07-29 10:49 AM (GMT-08:00)
To: "Justus Benckhuysen (justus.benckhuysen@riotinto.com)" <justus.benckhuysen@riotinto.com>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "Jacklin, James FLNR:EX" <James.Jacklin@gov.bc.ca>
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Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca<<mailto:Jennifer.C.Davis@gov.bc.ca>>

From: [Davis, Jennifer C FLNR:EX](#)
To: [Justus Benckhuysen \(justus.benckhuysen@riotinto.com\)](#); [White, Ted T FLNR:EX](#); [Rex, John F FLNR:EX](#); [Schell, Steve E FLNR:EX](#)
Subject: Water Flows and Early Stuart Sockeye - Rock Slide

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#); ["Silverstein, Adam"](#); [Magnan, Alain](#)
Cc: [Schell, Steve E FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Czornohalan, Andrew \(TI\)](#); [Ian Murphy](#); [White, Ted T FLNR:EX](#)
Subject: RE: Adam/Alain - Rio Tinto Flows.
Date: August 1, 2019 9:13:27 AM
Attachments: [1 August Nechako Update J Davis.pdf](#)

Hi Jennifer et al

According to the current weather forecast air temperature could reach 28 degrees next week. In response, discharge from Skins Lake Spillway has been increased so as to reach the upper end of the flow target range for the Nechako River at Cheslatta Falls (283 m3/s).

Find attached a more detailed description of the Nechako River flow management decision, and an additional chart showing approximate flow recession rates in the Nechako river starting from a position of maximum flow.

Regards,

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Davis, Jennifer C FLNR:EX [<mailto:Jennifer.C.Davis@gov.bc.ca>]
Sent: Monday, July 29, 2019 12:52 PM
To: 'Silverstein, Adam' <Adam.Silverstein@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>
Subject: Adam/Alain - Rio Tinto Flows.

Hi Adam/Alain,

The senior contact with Rio Tinto is Justus Benckhuysen. Ted White, Justus and I had a quick call, and it looks like any changes to flow would not manifest at Big Bar until 2-3 weeks.... At which time we may be worried about drought and too-low flows.

I wanted to connect you with Justus to make sure the IC team has all the info for exploring/discounting options.

Jenn.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

Jennifer Davis
Fish and Aquatic Habitat Branch, Resource Stewardship Division
4th Floor, 2975 Jutland Road, Victoria, BC
Ministry of FLNRORD

Re water flow recession rate in the Nechako River.

Hi Jennifer,

This letter is to keep you and your team informed of flow management decisions in the Nechako River.

Background:

The Summer Temperature Management Program (STMP) operates on a 5-day weather forecast basis, and in response to the potential for water temperature in the Nechako River at Finmore (immediately upstream of Stuart River confluence) to exceed 20 degrees.

If the weather forecast indicates a potential for water temperature to exceed the maximum target of 20 degrees, spillway discharge is increased so as to achieve a maximum flow target of about 283 m³/s in the Nechako River at Cheslatta Falls.

Current status:

The current 5-day weather forecast indicates air temperature could reach 28 degrees early next week, and cause water temperature to exceed the 20 degree temperature target in the Nechako River at Finmore.

In response to the current weather forecast spillway discharge has been increased, with the intent of increasing flow in the Nechako River at Cheslatta Falls from the current level of 170 m³/s to approximately 283 m³/s.

Flow Recession rate:

I previously provided you with information about flow recession rates in the Nechako River based on a starting position of about 170 m³/s, the lower end of the target flow range during the STMP. I have attached below a graph showing the approximate rate of flow recession in the Nechako River in response to a reduction in discharge at Skins Lake Spillway starting from the maximum flow target of 283 m³/s. In this example, flow recession of about 100 m³/s occurs in five days, and the subsequent 100 m³/s in the following 9 days.

RioTinto

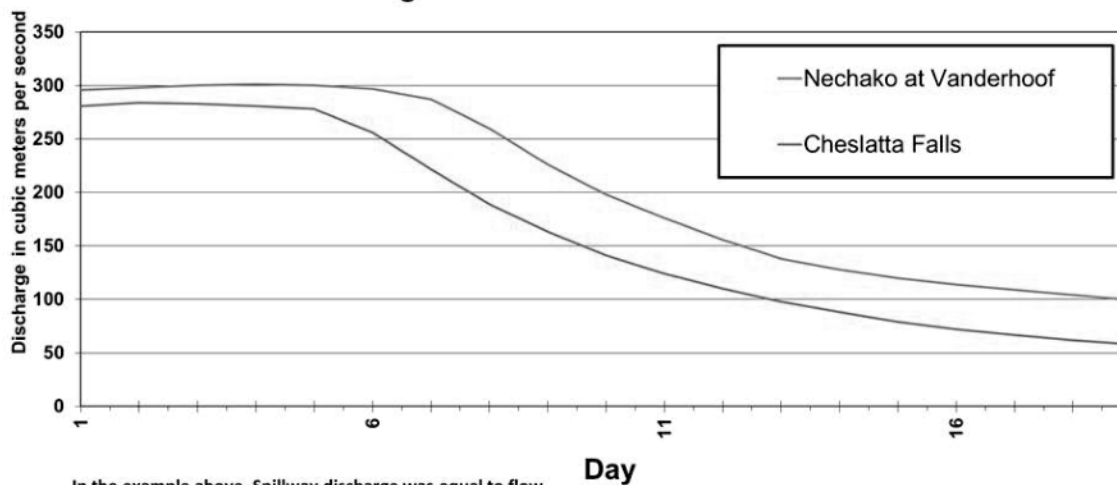
Please contact me if you would like additional information.

Regards,

A handwritten signature in black ink, appearing to read 'J. Benckhuysen', with a long, sweeping horizontal stroke at the end.

Justus Benckhuysen
Nechako Operations Coordinator

Flow recession in the Nechako River at Vanderhoof in response to reduction in Skins Lake Spilway discharge (2004), starting from maximum target flow at Cheslatta Falls of 283 m³/s.



In the example above, Spillway discharge was equal to flow at Chesslatta Falls maximum target of 283 m³/s and then reduce to the minimum allowable discharge. This provides a good estimate of maximum flow recession rate.

Copyright

From: [Davis, Jennifer C FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Cc: [Silverstein, Adam](#); [Magnan, Alain](#); [Schell, Steve E FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Czornohalan, Andrew \(TI\)](#); [Ian Murphy](#); [White, Ted T FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: Re: Adam/Alain - Rio Tinto Flows.
Date: August 1, 2019 2:36:27 PM

Justus, thank you for the update. It is important to ensure spawning ground success. Our team of experts will take a look at this info.

Jenn

Sent from my iPhone

On Aug 1, 2019, at 9:13 AM, Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com> wrote:

Hi Jennifer et al

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Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

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Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>

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Jenn.

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Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

<1 August Nechako Update J Davis.pdf>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Magnan, Alain](#); [Davis, Jennifer C FLNR:EX](#)
Cc: [Silverstein, Adam](#); [Schell, Steve E FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Czornohalan, Andrew \(TI\)](#); [Ian Murphy](#); [White, Ted T FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: Re: Adam/Alain - Rio Tinto Flows.
Date: August 1, 2019 5:08:48 PM

As discussed, the STMP model was re run this afternoon to determine the potential for reducing spillway discharge now, within the normal STMP parameters, so as to minimize water discharge while Big Bar IC considers options and risks related to flow management.

The results indicated that discharge could be temporarily reduced to minimum while still respecting STMP targets. We have enacted that option. Spillway discharge is being reduced to 14.2 m3/s this evening.

NOTE: Spillway discharge will need to be increased to maximum again tomorrow (453.1 m3/s) unless otherwise directed by Comptroller of Water Rights.

Regards,

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>
Date: 2019-08-01 2:49 PM (GMT-08:00)
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>, "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>
Cc: "Silverstein, Adam" <Adam.Silverstein@dfo-mpo.gc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, Gord Sterritt <gord.sterritt@upperfraser.ca>, "Czornohalan, Andrew (TI)" <Andrew.Czornohalan@riotinto.com>, Ian Murphy <imurphy@ecofishresearch.com>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>
Subject: RE: Adam/Alain - Rio Tinto Flows.

Hi Jennifer,

We have a technical meeting scheduled this afternoon at 3:30 pm with Dave Levy, Justice Benckhuysen, Barry Chillibeck (NHC), Mike Henry (DFO), Brian Naito (DFO), Ian Murphy (Big Bar Incident Command) and myself to discuss the technical aspects and considerations of amending the Nechako Flow's to support the Big Bar slide fish passage issues. Following this technical meeting, if there was mutual agreement on potential flow alterations, it was my intention to bring a recommendation up through the Big Bar IC and the leadership team for consideration and discussion.

Please feel free to contact me should you have any questions.

Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command
Cell: 250-714-9196

-----Original Message-----

From: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Sent: August-01-19 2:36 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Cc: Silverstein, Adam <Adam.Silverstein@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>; Ian Murphy <imurphy@ecofishresearch.com>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>
Subject: Re: Adam/Alain - Rio Tinto Flows.

Justus, thank you for the update. It is important to ensure spawning ground success. Our team of experts will take a look at this info.

Jenn

Sent from my iPhone

On Aug 1, 2019, at 9:13 AM, Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com<mailto:justus.benckhuysen@riotinto.com>> wrote:

Hi Jennifer et al

According to the current weather forecast air temperature could reach 28 degrees next week. In response, discharge from Skins Lake Spillway has been increased so as to reach the upper end of the flow target range for the Nechako River at Cheslatta Falls (283 m3/s).

Find attached a more detailed description of the Nechako River flow management decision, and an additional chart showing approximate flow recession rates in the Nechako river starting from a position of maximum flow.

Regards,

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations Aluminium Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com<mailto:justus.benckhuysen@riotinto.com>
<http://www.riotinto.com/beworks><<http://www.riotinto.com/riotintoalcan>>

From: Davis, Jennifer C FLNR:EX [<mailto:Jennifer.C.Davis@gov.bc.ca>]
Sent: Monday, July 29, 2019 12:52 PM
To: 'Silverstein, Adam' <Adam.Silverstein@dfo-mpo.gc.ca<mailto:Adam.Silverstein@dfo-mpo.gc.ca>>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca<mailto:Alain.Magnan@dfo-

mpo.gc.ca>>; Benckhuysen, Justus (RTA)
<justus.benckhuysen@riotinto.com<mailto:justus.benckhuysen@riotinto.com>>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca<mailto:Steve.Schell@gov.bc.ca>>;
Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca<mailto:Bonnie.Antcliffe@dfo-mpo.gc.ca>>;
Gord Sterritt <gord.sterritt@upperfraser.ca<mailto:gord.sterritt@upperfraser.ca>>
Subject: Adam/Alain - Rio Tinto Flows.

Hi Adam/Alain,

The senior contact with Rio Tinto is Justus Benckhuysen. Ted White, Justus and I had a quick call, and it looks like any changes to flow would not manifest at Big Bar until 2-3 weeks.... At which time we may be worried about drought and too-low flows.

I wanted to connect you with Justus to make sure the IC team has all the info for exploring/discounting options.

Jenn.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development 4th Floor, 2975

Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca<mailto:Jennifer.C.Davis@gov.bc.ca>

<1 August Nechako Update J Davis.pdf>

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#); [Justus Benckhuysen](#); [Bohay, Trevor FLNR:EX](#)
Subject: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 12:38:26 PM

Ted and Justus, is this even possible? I didn't see anything in the email about spawning grounds. Jenn

Sent from my iPhone

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From: "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>
Date: August 2, 2019 at 9:01:25 AM PDT
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Cc: "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "Bonnet, Terri" <Terri.Bonnet@dfo-mpo.gc.ca>, "bigbarlandslideic@gov.bc.ca" <bigbarlandslideic@gov.bc.ca>
Subject: Nechako River Flows - Request for Variance to RTA's Water License

Hi Jennifer,

On behalf of the Big Bar Incident Command, we are requesting your assistance to request the water controller to issue Rio Tinto a variance order of their water license to adjust operations at Skins Lake spillway to achieve and maintain a maximum flow of 170 cms in the Nechako River at Cheslatta Falls.

Background:

The current conditions at the Big Bar Landslide site and ongoing actions to improve upstream salmon passage are directly controlled by Fraser River flows. Current flows of 2,600 m³/s are limiting access to the edge of the river channel and in-channel rock manipulation works to allow upstream fish passage along the west bank of the river. One of the factors affecting flow rates in the Fraser River at the Big Bar Slide are the Rio Tinto Alcan's (RTA's) operations at the Skins Lake Spillway into the Nechako River.

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If possible, it would be beneficial to have the Water Controller request RTA to reduce the flows today, as we are entering into the long weekend and an additional four day delay could negatively affect operations here at the Big Bar Slide.

Should you have any questions, please feel free to call me at 250-756-7021.

Yours truly,

Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: RE: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 12:46:00 PM

Hi Jenn, I will be back at my desk in about 30 minutes and will make myself available to discuss as needed.

In the mean time I will review the licence and double check with AG on process.

If you want to pull together a call later this afternoon with RT I will join.

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 12:38 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Subject: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License

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Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Automatic reply: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 12:46:47 PM

Thank you for writing.

I currently have intermittent access to my email while I am working on the Big Bar Rockslide. For all non-rockslide items, please feel free to contact the a/Director.

- July 29 - Aug 9: a/Director Mike Ramsay (Mike.Ramsay@gov.bc.ca).

- Aug 10 - Sept 3: a/Director Andy Witt (Andy.Witt@gov.bc.ca)

Sincerely,
Jennifer.

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 1:46:25 PM

Justus asked me to call him. Shall I do that without your official presence?

Sent from my iPhone

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Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
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To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
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Water License

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Big Bar Landslide Incident Command

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: RE: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 1:47:00 PM

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Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
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Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#); [Justus Benckhuysen](#)
Subject: I'm On a call re flows.
Date: August 2, 2019 2:07:38 PM

Sent from my iPhone

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: FW: IPSFC target maximum flow of 283 m³/s at cheslatta falls
Date: August 2, 2019 2:11:54 PM

The history behind the 283 m³/s maximum flow guide line goes back to the Technical Committee set up after the 1980 agreement. The group had members from DFO(1), the IPSFC(2), BC Hydro(1) (initially) as well as Alcan(2) and Envirocon(2+) (now Triton) as we were responsible for carrying out many of the studies and reported to the TC for guidance and oversight.

In the first year, the IPSFC had a steady state water temperature prediction model that was used to attempt to manage water temperatures. Based on a recommendation from the BC Hydro rep, we contacted Dr. John Edinger from Phillidelphia (who had done modelling work for BCH) as a consultant. He recommended the use and development of the current non-steady state model which was initially used in 1982. As we didn't have any operating guidelines that year, the summer max flow was set at 16,000 cfs (453 m³/s) and operations attempted to limit water temperatures to 20C. However, with the release of this much water during warm periods, some flooding occurred in the low lying hay fields in the vicinity of Fort Fraser. Based on this empirical data, the maximum flow in the Nechako River below Cheslatta Falls was decreased to 12,000 cfs with the agreement of the IPSFC (who had responsibility for managing the sockeye runs at the time).

Hope this is the info you needed. Get back to me if there are further questions.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: FW: I'm On a call re flows.
Date: August 2, 2019 2:34:00 PM

Are you available now?

Ted White, Director
Water Management Branch
778-698-3981

-----Original Message-----

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 2:08 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>
Subject: I'm On a call re flows.

Sent from my iPhone

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 2:37:28 PM

I need 5 mins.

Sent from my iPhone

On Aug 2, 2019, at 1:47 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

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Big Bar Landslide Incident Command

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Subject: RE: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 2:38:00 PM

OK

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Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 1:46 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License

Justus asked me to call him. Shall I do that without your official presence?

Sent from my iPhone

On Aug 2, 2019, at 12:46 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

Hi Jenn, I will be back at my desk in about 30 minutes and will make myself available to discuss as needed.

In the mean time I will review the licence and double check with AG on process.

If you want to pull together a call later this afternoon with RT I will join.

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 12:38 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Subject: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License

Ted and Justus, is this even possible? I didn't see anything in the email about spawning grounds. Jenn

Sent from my iPhone

Begin forwarded message:

From: "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>
Date: August 2, 2019 at 9:01:25 AM PDT
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Cc: "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "Bonnet, Terri" <Terri.Bonnet@dfo-mpo.gc.ca>, "bigbarlandslideic@gov.bc.ca" <bigbarlandslideic@gov.bc.ca>
Subject: Nechako River Flows - Request for Variance to RTA's Water License

Hi Jennifer,

On behalf of the Big Bar Incident Command, we are requesting your assistance to request the water controller to issue Rio Tinto a variance order of their water license to adjust operations at Skins Lake spillway to achieve and maintain a maximum flow of 170 cms in the Nechako River at Cheslatta Falls.

Background:

The current conditions at the Big Bar Landslide site and ongoing actions to improve upstream salmon passage are directly controlled by Fraser River flows. Current flows of $2,600 \text{ m}^3/\text{s}$ are limiting access to the edge of the river channel and in-channel rock manipulation works to allow upstream fish passage along the west bank of the river. One of the factors affecting flow rates in the Fraser River at the Big Bar Slide are the Rio Tinto Alcan's (RTA's) operations at the Skins Lake Spillway into the Nechako River.

RTA's Summer Temperature Management Program (STMP) currently requires that a minimum flow of 283 cms be maintained in the Nechako River at the Cheslatta Falls. We recognize that STMP releases may appear to be a relatively small percentage of the discharge at Big Bar, but as Fraser River flows decrease, STMP flows would become a larger proportion of the total discharge. Lowering STMP flows in the interim to $170 \text{ m}^3/\text{s}$ will reduce stage-discharge at the slide site, and help to maintain access to areas along the right bank where current in-channel works are focused.

The request from the Big Bar Incident Command Post to reduce the Nechako River flows from 283 cms to 170 cms was discussed by conference call on August 1, 2019 with RTA, Nechako Fisheries Conservation Program (NFCP), Big Bar Incident Command and DFO. At the conclusion of the call, there was consensus from participants that a request would be put forward to the Water Controller to issue an amendment to RTA's water license to allow them to reduce the flow discharge in the Nechako River from 283 cms to 170 cms at Cheslatta Falls. In discussions with the Big Bar Slide Incident Command, it was recommended that this request be made directly to yourself. If required, we can make ourselves available for a conference call to support this request, or can submit a request to the Water Comptroller ourselves should you support this request.

If possible, it would be beneficial to have the Water Controller request RTA to reduce the flows today, as we are entering into the long weekend and an additional four day delay could negatively affect operations here at the Big Bar Slide.

Should you have any questions, please feel free to call me at 250-756-7021.

Yours truly,

Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 2, 2019 2:41:46 PM

I'm ready!!

Sent from my iPhone

On Aug 2, 2019, at 2:38 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

OK

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 2:37 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License

I need 5 mins.

Sent from my iPhone

On Aug 2, 2019, at 1:47 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

Justus is going to call me back in a moment. Why don't you call me at the number below and I can link you in

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 1:46 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: Re: justus & Ted — Fwd: Nechako River Flows - Request for Variance to RTA's Water License

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Water Management Branch
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Cc: "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "Bonnet, Terri" <Terri.Bonnet@dfo-mpo.gc.ca>, "bigbarlandslideic@gov.bc.ca" <bigbarlandslideic@gov.bc.ca>

**Subject: Nechako River Flows - Request for
Variance to RTA's Water License**

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Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: I'm On a call re flows.
Date: August 2, 2019 2:46:38 PM

I'm available. Again. Lol.

Sent from my iPhone

> On Aug 2, 2019, at 2:34 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

>

> Are you available now?

>

>

> Ted White, Director

> Water Management Branch

> 778-698-3981

>

> -----Original Message-----

> From: Davis, Jennifer C FLNR:EX

> Sent: August 2, 2019 2:08 PM

> To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>

> Subject: I'm On a call re flows.

>

>

>

> Sent from my iPhone

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#); [Davis, Jennifer C FLNR:EX](#)
Subject: operational details if an order is in place
Date: August 2, 2019 4:02:19 PM
Attachments: [Gate change order form.pdf](#)

FYI

This is the form that is used to request/order changes to spillway discharge.

The process is this:

- 1) The computer model is run to determine water temperature based on weather forecast and flow.
- 2) Decision is made on how much water is required to meet desired flow and/or temperature target.
- 3) Discharge request is sent to Rio Tinto (me and other 2 RT staff authorized to order changes to discharge).
- 4) I calculate required gate settings to achieve desired discharge, based on reservoir elevation.
- 5) I send discharge Order to SLS attendant.
- 6) SLS attendant changes discharge and sends out notifications.

The process is password protected at each step.

I think we can use the attached form and process for the next two weeks.

- 1) Continue to have the independent consultant operate the model – no Rio Tinto direct involvement.
- 2) The model outputs will be provided to Big Bar IC team with expected flow and water temperatures on a 5 day forecast. No Rio Tinto direct involvement.
- 3) DFO/FLNRO work with Independent consultant whom is operating the model, iterative process if required, to determine spillway discharge requirements – No Rio Tinto direct involvement
- 4) DFO/FLNRO complete the attached form requesting a specific discharge, and send to Rio Tinto.
- 5) Rio Tinto confirm request and then send the discharge Order to SLS attendant
- 6) SLS attendant makes change in discharge

Documentation is essential.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351

justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

Water Discharge Change Record (Sample Form)
(File Name: Forms\922OPS\OPS503)

Copyright



From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: SLS Increase
Date: August 2, 2019 4:09:53 PM
Attachments: [1941-C-1916.pdf](#)

This is the original document with respect to STMP management

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

1941-C/1916

ALUMINUM COMPANY OF CANADA, LTD
Kemano Completion Hydroelectric Development

TECHNICAL MEMORANDUM 1941/C

REVIEW OF THE 1984 NECHAKO RIVER
HYDROTHERMAL MONITORING AND
CONTROL PROGRAM

Prepared for:

ALUMINUM COMPANY OF CANADA, LTD
#400 - 1285 West Pender Street
Vancouver, B.C.
V6E 4B1

Prepared by:

ENVIROCON LIMITED
#300 475 West Georgia St.
Vancouver, B.C.
V6B 4M9

Telephone: (604) 687-7588
Telex: 04-53476

February 1985

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Page 098 of 382

Withheld pursuant to/removed as

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From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Cc: [Justus Benckhuysen \(justus.benckhuysen@riotinto.com\)](#); [Antcliffe, Bonnie](#)
Subject: request for suspension of Rio Tinto summer temperature management
Date: August 2, 2019 4:40:16 PM

Mr. Ted White,

Due to an emergency event, I am requesting that you suspend Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate documentation.

Rationale:

We are currently undertaking an emergency response to address a blockage in the Fraser River, near Big Bar, which is stopping salmon migration. This obstruction has been in place since the beginning of the early salmon runs, including the Early Stuart Sockeye which the temperature management program is designed to support. These early runs of fish have now been holding in the area for up to one month, and for the majority of their migration window. These early runs are not reaching their spawning grounds and the emergency response is to do whatever we can in order to get them past the rockslide obstruction. The obstruction is a "velocity barrier". The fallen rock is creating a narrower channel, which is speeding up the water to a level the fish cannot pass. For this reason, managing the water flows is a critical element to success. The predicted drops in water flows have not occurred this summer, due to cooler temperatures and unexpected rain events occurring upstream which resulted in increases, rather than reductions, to the flow and velocity. We are now in a time-critical period. With flows at big bar remaining higher than expected, the scheduled increase in water for Salmon migration may have an unintended negative impact to the targeted salmon's passage at the Big Bar obstruction. While the urgency of this request focuses on the migrating salmon, we also have other migratory species of significant conservation concern. One of the most critical is the Chilcotin sub-population of the Interior Fraser Steelhead, which are at such low levels (estimated approximately 150 animals) that getting every remaining fish through the canyon and to their spawning grounds is paramount.

We also need to consider unintended impacts to other freshwater species, but specifically to the Nechako White Sturgeon. For this reason we are requesting the ability to work with Rio Tinto on flows to benefit the emergency actions for migrating fish passage through the Big Bar site, while also undertaking monitoring of flow at Big Bar and temperature at the Nechako confluences, to ensure any potential for unintended impacts to this species is identified in advance and mitigated through immediate actions with flow releases.

Due to the importance and legal requirements of this request, daily direction to Rio Tinto will come from the Associate Regional Director General of DFO, Bonnie Antcliffe, and the Provincial Director of Fish and Aquatic Resources for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, or their legal delegates.

Please advise if you need further information.

Sincerely

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Davis, Jennifer C FLNR:EX](#)
To: [Brian Toth](#)
Cc: [Gord Sterritt](#); [Antcliffe, Bonnie](#); [White, Ted T FLNR:EX](#); [McAdam, Steve ENV:EX](#)
Subject: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management
Date: August 2, 2019 4:49:07 PM

Good afternoon Brian.

As discussed, we need to do everything we can to get the migration blockage resolved. For this reason we are asking for flexibility on the Rio Tinto summer flows, specifically through the next month. The sturgeon are a key consideration, and we will implement daily temperature monitoring and flow monitoring to ensure any unexpected increases in temperature or flow, that may impact sturgeon, are corrected.

Can you confirm your support for this activity. If you would like to be more fully plugged into the technical team evaluating the flow/temperature and benefits/risks to salmon and other freshwater species, we can connect you directly to the Environmental Unit of the Incident Command. Gord Sterritt is the First Nations representative on the Executive Steering Committee, which oversees the IC. Gord works with Bonnie Antcliffe of DFO and myself on behalf of the Province.

A summary of the request and rationale is below.

Sincerely,
Jennifer.

Due to an emergency event, I am requesting suspension of Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate documentation.

Rationale:

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Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Davis, Jennifer C FLNR:EX](#)
To: [Gord Sterritt](#)
Cc: [White, Ted T FLNR:EX](#); [Antcliffe, Bonnie](#); [Bohay, Trevor FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: Gord - Seeking confirmation of support. request for suspension of Rio Tinto summer temperature management
Date: August 2, 2019 4:52:35 PM

Gord, as discussed and as a member of the Joint Executive Committee, can you please confirm that you are supportive of this request as part of the Emergency response. I have also provided information on how we will address concerns with Sturgeon, which also need salmon as a food source.

I look forward to heaving back. If you could please cc Ted White, that would be of assistance.

Jennifer.

Due to an emergency event, I am requesting suspension of Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate documentation.

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Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Brian Toth](#)
To: [Davis, Jennifer C FLNR:EX](#)
Cc: ["Gord Sterritt"; "Antcliffe, Bonnie"; White, Ted T FLNR:EX; McAdam, Steve ENV:EX](#)
Subject: RE: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management
Date: August 2, 2019 4:59:29 PM

Hi Jennifer. Apologies for missing your call earlier. All things considered, I confirm my support for any desired flexibility in the STMP and other SLS flows considering the priority of dealing with the migration blockage.

Cheers

Brian

From: Davis, Jennifer C FLNR:EX [<mailto:Jennifer.C.Davis@gov.bc.ca>]
Sent: Friday, August 2, 2019 4:49 PM
To: Brian Toth
Cc: Gord Sterritt; Antcliffe, Bonnie; White, Ted T FLNR:EX; McAdam, Steve ENV:EX
Subject: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

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Big Bar, which is stopping salmon migration. This obstruction has been in place since the beginning of the early salmon runs, including the Early Stuart Sockeye which the temperature management program is designed to support. These early runs of fish have now been holding in the area for up to one month, and for the majority of their migration window. These early runs are not reaching their spawning grounds and the emergency response is to do whatever we can in order to get them past the rockslide obstruction. The obstruction is a “velocity barrier”. The fallen rock is creating a narrower channel, which is speeding up the water to a level the fish cannot pass. For this reason, managing the water flows is a critical element to success. The predicted drops in water flows have not occurred this summer, due to cooler temperatures and unexpected rain events occurring upstream which resulted in increases, rather than reductions, to the flow and velocity. We are now in a time-critical period. With flows at big bar remaining higher than expected, the scheduled increase in water for Salmon migration may have an unintended negative impact to the targeted salmon’s passage at the Big Bar obstruction. While the urgency of this request focuses on the migrating salmon, we also have other migratory species of significant conservation concern. One of the most critical is the Chilcotin sub-population of the Interior Fraser Steelhead, which are at such low levels (estimated approximately 150 animals) that getting every remaining fish through the canyon and to their spawning grounds is paramount.

We also need to consider unintended impacts to other freshwater species, but specifically to the Nechako White Sturgeon. For this reason we are requesting the ability to work with Rio Tinto on flows to benefit the emergency actions for migrating fish passage through the Big Bar site, while also undertaking monitoring of flow at Big Bar and temperature at the Nechako confluences, to ensure any potential for unintended impacts to this species is identified in advance and mitigated through immediate actions with flow releases.

Due to the importance and legal requirements of this request, daily direction to Rio Tinto will come from the Associate Regional Director General of DFO, Bonnie Antcliffe, and the Provincial Director of Fish and Aquatic Resources for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, or their legal delegates.

Please advise if you need further information.

Sincerely

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Davis, Jennifer C FLNR:EX](#)
To: [Brian Toth](#)
Cc: [White, Ted T FLNR:EX](#)
Subject: Re: Skins Spillway Releases - Big Bar Landslide
Date: August 2, 2019 5:04:56 PM

Thank you Brian. Tomorrow, are you comfortable giving your support (or not)? Even though the mgt is focused on salmon we would like this info on sturgeon prior to completing the order. Jenn.

Sent from my iPhone

On Aug 2, 2019, at 5:02 PM, Brian Toth ^{s.22} <[brian.toth@saikuz.com](#)> wrote:

Hi Jennifer – fyi – I circulated the note below earlier this afternoon. I will let you know if I receive any feedback.

Cheers

Brian

From: Brian Toth [[mailto:^{s.22}](#)]

Sent: Friday, August 2, 2019 2:40 PM

To: Chief Larry Nooski; 'Chief Archie Patrick'; Chief Priscilla Mueller; Mina Holmes

Cc: Jackie Thomas (jackie.thomas@saikuz.com); Rebecca DeLorey (referrals@nadleh.ca); Rebecca Broadbent; David Luggi (dluggi@netbistro.com); Christina Ciesielski (cciesielski@cstc.bc.ca); Gord Sterritt (gord.sterritt@upperfraser.ca)

Subject: Skins Spillway Releases - Big Bar Landslide

Importance: High

Hi all. I just had a quick discussion with Gord Sterritt from the Big Bar CIRT and there's an interest in requesting RTA to reduce their spillway flows to assist with fish migration at the land slide, and/or work to improve migration conditions at the land slide. We're in the timing-window when RTA is managing releases as per the STMP (to manage river temperature), and the action to reduce flows would be contrary to that interest. As we're in unique year where water temps are quite cool, and the larger pressure is getting fish passed the slide, I suggested to Gord, that the Carrier Sekani First Nations/CSTC would support this action. You will likely be contacted for your thoughts on this matter – as there's some critical time pressures. I'm available to discuss – ^{s.22}

s.22

Cheers

Brian

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Cc: [Bonnie Antcliffe](#); [Gord Sterritt](#); [Bohay, Trevor FLNR:EX](#)
Subject: Fwd: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management
Date: August 2, 2019 5:06:29 PM

Hi. Bryan was great at getting right back to us. J

Sent from my iPhone

Begin forwarded message:

From: Brian Toth <s.22
Date: August 2, 2019 at 4:59:26 PM PDT
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Cc: 'Gord Sterritt' <gord.sterritt@upperfraser.ca>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "McAdam, Steve ENV:EX" <Steve.McAdam@gov.bc.ca>
Subject: RE: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Hi Jennifer. Apologies for missing your call earlier. All things considered, I confirm my support for any desired flexibility in the STMP and other SLS flows considering the priority of dealing with the migration blockage.
Cheers
Brian

From: Davis, Jennifer C FLNR:EX [<mailto:Jennifer.C.Davis@gov.bc.ca>]
Sent: Friday, August 2, 2019 4:49 PM
To: Brian Toth
Cc: Gord Sterritt; Antcliffe, Bonnie; White, Ted T FLNR:EX; McAdam, Steve ENV:EX
Subject: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Good afternoon Brian.

As discussed, we need to do everything we can to get the migration blockage resolved. For this reason we are asking for flexibility on the Rio Tinto summer flows, specifically through the next month. The sturgeon are a key consideration, and we will implement daily temperature monitoring and flow monitoring to ensure any unexpected increases in temperature or flow, that may impact sturgeon, are corrected.

Can you confirm your support for this activity. If you would like to be more fully plugged into the technical team evaluating the flow/temperature and benefits/risks to salmon and other freshwater species, we can connect you directly to the Environmental Unit of the Incident Command. Gord Sterritt is the First Nations

representative on the Executive Steering Committee, which oversees the IC. Gord works with Bonnie Antcliffe of DFO and myself on behalf of the Province.

A summary of the request and rationale is below.

Sincerely,
Jennifer.

Due to an emergency event, I am requesting suspension of Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate documentation.

Rationale:

We are currently undertaking an emergency response to address a blockage in the Fraser River, near Big Bar, which is stopping salmon migration. This obstruction has been in place since the beginning of the early salmon runs, including the Early Stuart Sockeye which the temperature management program is designed to support. These early runs of fish have now been holding in the area for up to one month, and for the majority of their migration window. These early runs are not reaching their spawning grounds and the emergency response is to do whatever we can in order to get them past the rockslide obstruction. The obstruction is a "velocity barrier". The fallen rock is creating a narrower channel, which is speeding up the water to a level the fish cannot pass. For this reason, managing the water flows is a critical element to success. The predicted drops in water flows have not occurred this summer, due to cooler temperatures and unexpected rain events occurring upstream which resulted in increases, rather than reductions, to the flow and velocity. We are now in a time-critical period. With flows at big bar remaining higher than expected, the scheduled increase in water for Salmon migration may have an unintended negative impact to the targeted salmon's passage at the Big Bar obstruction. While the urgency of this request focuses on the migrating salmon, we also have other migratory species of significant conservation concern. One of the most critical is the Chilcotin sub-population of the Interior Fraser Steelhead, which are at such low levels (estimated approximately 150 animals) that getting every remaining fish through the canyon and to their spawning grounds is paramount.

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Please advise if you need further information.

Sincerely

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

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To: [White, Ted T FLNR:EX](#)
Cc: [Bonnie Antcliffe](#); [Gord Sterritt](#); [Bohay, Trevor FLNR:EX](#)
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Brian

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Sent: Friday, August 2, 2019 4:49 PM
To: Brian Toth
Cc: Gord Sterritt; Antcliffe, Bonnie; White, Ted T FLNR:EX; McAdam, Steve ENV:EX
Subject: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

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Please advise if you need further information.

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Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: requested order - feedback requested
Date: August 2, 2019 6:20:30 PM

I dont see the utility of stating 170. But up to you. I would leave it up to jenn/bonnie to dictate what it should be, given their daily assessments.

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
Date: 2019-08-02 6:00 PM (GMT-08:00)
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>, "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>
Subject: requested order - feedback requested

Jenn and Justus,

I am working on the structure of the requested order. I am considering the following. I am asking for your feedback. In our conversations I understood that 170 at Cheslatta Falls is a flow that the fish agencies consider helpful for the passage of fish at Big Bar. However, there may be adjustments required to the 170 to achieve temperature objectives in the Nechako or for other needs of Sturgeon or resident fish.

- Suspend the Summer Temperature Management Program for 2019
- From August 3 to August 16 target 170 cms at Cheslatta Falls
- The flow target at Cheslatta Falls is to be reviewed and adjusted daily in consideration of input from FLNRORD Fisheries and DFO regarding:
 - Flow required to enable fish passage at the location of the Big Bar slide on the Fraser River
 - Water temperature in the Nechako River as measured at Water Survey of Canada hydrometric station 08JA017 and flows required for cooling to protect Chinook and Sockeye Salmon
 - Needs of Sturgeon and other resident fish
- In the event of an emergency the works may be operated in an alternative manner
- The licensee will provide a daily update report on flows at Cheslatta Falls, any gate changes, and rationale for those changes

Based on feedback received an order will be drafted which I will consider for a decision.

Thank you,

Ted White

Director

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: requested order - feedback requested
Date: August 3, 2019 7:47:13 AM

If not too late, make it to 20 August. The official end of stmp. We normally reduce e discharge on about 16 or 17, but I'd we are already at low flow, it may be necessary to continue until 18 or 19

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
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Phone 778 698-3981

Fax (250) 356 0605

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: requested order - feedback requested
Date: August 3, 2019 7:48:00 AM

Thanks for that date. That helps

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 3, 2019 7:47 AM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: Re: requested order - feedback requested

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Phone 778 698-3981

Fax (250) 356 0605

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: RE: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management
Date: August 3, 2019 8:30:00 AM

Hi Jenn,

As I write up the order I would like to refer specifically to First Nations that have endorsed the suspension of the STMP.

Is it appropriate to indicate that the Carrier Sikani Tribal Council has provided support?

Thank you,

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 5:06 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Cc: Bonnie Antcliffe <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
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Please advise if you need further information.

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Jennifer.

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Ministry of Forests, Lands, Natural Resource Operations and Rural Development

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Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Gord Sterritt](#)
To: [Davis, Jennifer C FLNR:EX](#)
Cc: [White, Ted T FLNR:EX](#); [Antcliffe, Bonnie](#); [Bohay, Trevor FLNR:EX](#); [Abbey, Travis FLNR:EX](#)
Subject: Re: Gord - Seeking confirmation of support. request for suspension of Rio Tinto summer temperature management
Date: August 3, 2019 9:55:11 AM

My apologies, not sure how I overlooked this email and that you proceeded as discussed.

I am in support

Regards!

Gordon Sterritt

Upper Fraser Fisheries Conservation alliance

298A Mission Road
Williams Lake, BC V2G 5K9

ph: 250.305.5224

www.upperfraser.ca

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: Friday, August 2, 2019 at 4:53 PM
To: Gord Sterritt <gord.sterritt@upperfraser.ca>
Cc: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, Bonnie Antcliffe <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>
Subject: Gord - Seeking confirmation of support. request for suspension of Rio Tinto summer temperature management

Gord, as discussed and as a member of the Joint Executive Committee, can you please confirm that you are supportive of this request as part of the Emergency response. I have also provided information on how we will address concerns with Sturgeon, which also need salmon as a food source.

I look forward to heaving back. If you could please cc Ted White, that would be of assistance.

Jennifer.

Due to an emergency event, I am requesting suspension of Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate

documentation.

Rationale:

We are currently undertaking an emergency response to address a blockage in the Fraser River, near Big Bar, which is stopping salmon migration. This obstruction has been in place since the beginning of the early salmon runs, including the Early Stuart Sockeye which the temperature management program is designed to support. These early runs of fish have now been holding in the area for up to one month, and for the majority of their migration window. These early runs are not reaching their spawning grounds and the emergency response is to do whatever we can in order to get them past the rockslide obstruction. The obstruction is a “velocity barrier”. The fallen rock is creating a narrower channel, which is speeding up the water to a level the fish cannot pass. For this reason, managing the water flows is a critical element to success. The predicted drops in water flows have not occurred this summer, due to cooler temperatures and unexpected rain events occurring upstream which resulted in increases, rather than reductions, to the flow and velocity. We are now in a time-critical period. With flows at big bar remaining higher than expected, the scheduled increase in water for Salmon migration may have an unintended negative impact to the targeted salmon’s passage at the Big Bar obstruction. While the urgency of this request focuses on the migrating salmon, we also have other migratory species of significant conservation concern. One of the most critical is the Chilcotin sub-population of the Interior Fraser Steelhead, which are at such low levels (estimated approximately 150 animals) that getting every remaining fish through the canyon and to their spawning grounds is paramount.

We also need to consider unintended impacts to other freshwater species, but specifically to the Nechako White Sturgeon. For this reason we are requesting the ability to work with Rio Tinto on flows to benefit the emergency actions for migrating fish passage through the Big Bar site, while also undertaking monitoring of flow at Big Bar and temperature at the Nechako confluences, to ensure any potential for unintended impacts to this species is identified in advance and mitigated through immediate actions with flow releases.

Due to the importance and legal requirements of this request, daily direction to Rio Tinto will come from the Associate Regional Director General of DFO, Bonnie Antcliffe, and the Provincial Director of Fish and Aquatic Resources for the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, or their legal delegates.

Please advise if you need further information.

Sincerely

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC
Tel: 778-974-2336
e-mail: Jennifer.C.Davis@gov.bc.ca

From: [White, Ted T FLNR:EX](#)
To: [Davis, Jennifer C FLNR:EX](#)
Subject: Do you have time for a quick call regarding the order?
Date: August 3, 2019 12:12:00 PM

Ted White

Director

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: Fwd: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management
Date: August 3, 2019 1:10:09 PM

Sent from my iPhone

Begin forwarded message:

From: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
Date: August 3, 2019 at 8:30:26 AM PDT
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Subject: RE: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Hi Jenn,

As I write up the order I would like to refer specifically to First Nations that have endorsed the suspension of the STMP.

Is it appropriate to indicate that the Carrier Sikani Tribal Council has provided support?

Thank you,

Ted White, Director
Water Management Branch
778-698-3981

From: Davis, Jennifer C FLNR:EX
Sent: August 2, 2019 5:06 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Cc: Bonnie Antcliffe <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Subject: Fwd: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Hi. Bryan was great at getting right back to us. J

Sent from my iPhone

Begin forwarded message:

From: Brian Toth ^{s.22}
Date: August 2, 2019 at 4:59:26 PM PDT

To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Cc: 'Gord Sterritt' <gord.sterritt@upperfraser.ca>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "McAdam, Steve ENV:EX" <Steve.McAdam@gov.bc.ca>

Subject: RE: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Hi Jennifer. Apologies for missing your call earlier. All things considered, I confirm my support for any desired flexibility in the STMP and other SLS flows considering the priority of dealing with the migration blockage.

Cheers

Brian

From: Davis, Jennifer C FLNR:EX [mailto:Jennifer.C.Davis@gov.bc.ca]
Sent: Friday, August 2, 2019 4:49 PM
To: Brian Toth
Cc: Gord Sterritt; Antcliffe, Bonnie; White, Ted T FLNR:EX; McAdam, Steve ENV:EX
Subject: Brain - Seeking CSTC support. request for suspension of Rio Tinto summer temperature management

Good afternoon Brian.

As discussed, we need to do everything we can to get the migration blockage resolved. For this reason we are asking for flexibility on the Rio Tinto summer flows, specifically through the next month. The sturgeon are a key consideration, and we will implement daily temperature monitoring and flow monitoring to ensure any unexpected increases in temperature or flow, that may impact sturgeon, are corrected.

Can you confirm your support for this activity. If you would like to be more fully plugged into the technical team evaluating the flow/temperature and benefits/risks to salmon and other freshwater species, we can connect you directly to the Environmental Unit of the Incident Command. Gord Sterritt is the First Nations representative on the Executive Steering Committee, which oversees the IC. Gord works with Bonnie Antcliffe of DFO and myself on behalf of the Province.

A summary of the request and rationale is below.

Sincerely,
Jennifer.

Due to an emergency event, I am requesting suspension of Rio Tinto's summer temperature management program which is designed to support migrating salmon through to their spawning grounds. I am making this

request in order to support emergency actions for these same salmon, which are currently unable to reach their spawning grounds. This request is on behalf of both the Province and the Department of Fisheries and Oceans, who will confirm through separate documentation.

Rationale:

We are currently undertaking an emergency response to address a blockage in the Fraser River, near Big Bar, which is stopping salmon migration. This obstruction has been in place since the beginning of the early salmon runs, including the Early Stuart Sockeye which the temperature management program is designed to support. These early runs of fish have now been holding in the area for up to one month, and for the majority of their migration window. These early runs are not reaching their spawning grounds and the emergency response is to do whatever we can in order to get them past the rockslide obstruction. The obstruction is a “velocity barrier”. The fallen rock is creating a narrower channel, which is speeding up the water to a level the fish cannot pass. For this reason, managing the water flows is a critical element to success. The predicted drops in water flows have not occurred this summer, due to cooler temperatures and unexpected rain events occurring upstream which resulted in increases, rather than reductions, to the flow and velocity. We are now in a time-critical period. With flows at big bar remaining higher than expected, the scheduled increase in water for Salmon migration may have an unintended negative impact to the targeted salmon’s passage at the Big Bar obstruction. While the urgency of this request focuses on the migrating salmon, we also have other migratory species of significant conservation concern. One of the most critical is the Chilcotin sub-population of the Interior Fraser Steelhead, which are at such low levels (estimated approximately 150 animals) that getting every remaining fish through the canyon and to their spawning grounds is paramount.

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Due to the importance and legal requirements of this request, daily direction to Rio Tinto will come from the Associate Regional Director General of DFO, Bonnie Antcliffe, and the Provincial Director of Fish and Aquatic Resources for the Ministry of Forests, Lands, Natural Resource

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Please advise if you need further information.

Sincerely

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

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Jennifer.

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Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [White, Ted T FLNR:EX](#)
To: [Czornohalan, Andrew \(TI\)](#)
Cc: [Benckhuysen, Justus \(RTA\)](#); [Davis, Jennifer C FLNR:EX](#); Bonnie.Antcliffe@dfo-mpo.gc.ca; [Chapman, Connie FLNR:EX](#)
Subject: Suspension of Summer Temperature Management Program for 2019
Date: August 3, 2019 1:44:00 PM
Attachments: [STMP suspension order cover letter Aug 2019.pdf](#)
[STMP suspension order Aug 2019.pdf](#)

Hello Andrew,

Please find attached a cover letter and order regarding the operation of the Skins Lake Reservoir and the Summer Temperature Management Program in response to the Big Bar Landslide.

I appreciate the input from Justus and the responsiveness of Rio Tinto in supporting the flow change to benefit fish passage at the Big Bar Landslide.

s.22 If you would like to discuss this order please contact
Connie Chapman at 778-698-7332 or Connie.Chapman@gov.bc.ca

Thank you,

Ted White

Director and Comptroller of Water Rights

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605



Province of British Columbia

WATER SUSTAINABILITY ACT

ORDER

Section 93

File No.: 0179602

WHEREAS:

1. Rio Tinto Alcan is the operator of the Nechako Reservoir, for which it holds Final Water Licence 102324.
2. Clause (k) of Final Water Licence 102324 requires the release of water from the Skins Lake Spillway for the protection of sockeye and chinook salmon in accordance with the "Short Term Annual Water Allocation" as defined in section 2.1 A of the 1987 Settlement Agreement, dated 14 September 1987;
3. The "Short Term Annual Water Allocation" requires flow releases from the Skins Lake Spillway in accordance with Schedule "C" of the 1987 Settlement Agreement which includes flows for cooling purposes in the Nechako River.
4. The flows, referred to in Section 2.1 A.b of the 1987 Settlement Agreement, are referred to as the Summer Temperature Management Program (STMP). The STMP requires flows of 170 cubic metres per second (m^3/s) to 283 m^3/s at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) for the period of July 20 to August 20 to manage water temperature in the Nechako River at or below 20 degrees Celsius;
5. In late 2018 a landslide into the Fraser River occurred near the vicinity of Big Bar (Big Bar Slide) creating a constriction in the river preventing the migration of salmon in 2019.
6. Fisheries agencies have indicated that a reduced flow in the Fraser River at the Big Bar Slide will help support successful fish passage. Fisheries agencies have indicated that a preferred maximum flow target at Cheslatta Falls, for the benefit of fish passage at Big Bar Slide, would be 170 m^3/s ;
7. In an email dated August 2, 2019, Fisheries and Oceans Canada (DFO) and the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch have requested that the STMP be suspended for 2019 to enable passage of salmon at the Big Bar Slide from August 3 to August 20. The rationale is that the early Stewart Sockeye run are not able to pass the Big Bar Slide and suspension of the STMP is expected to improve the flow conditions in the Fraser River for salmon passage.

Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development

Resource Stewardship Division

Office of the Comptroller
of Water Rights

Water Management Branch

Mailing Address:
PO Box 9340 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 778-698-7344
Facsimile: 250-356-0605

Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9





8. Suspension of the STMP may have temperature related effects on Sturgeon and resident fish in the Nechako River. Monitoring of forecast air and water temperatures and adjusting the release of flow from the Skins Lake Spillway will mitigate potential risks to Sturgeon and resident fish. Flow adjustments will balance the potential benefits to fish passage at the Big Bar Slide and potential implications for resident fish in the Nechako River.
9. The Carrier Sikani Tribal Council and Upper Fraser Fisheries Alliance have provided endorsement for the suspension of the STMP in 2019 to benefit the passage of salmon at the Big Bar Slide.

I HEREBY DIRECT AS FOLLOWS:

1. The licensee is to suspend the Summer Temperature Management Program for the Nechako River for August 2019.
2. From August 3 to August 20, 2019 the licensee is to operate the Skins Lake Spillway to provide flows at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) that balance the needs of:
 - Flow required to enable fish passage at the location of the Big Bar Slide on the Fraser River;
 - Water temperature and flow in the Nechako River as measured at Water Survey of Canada hydrometric station 08JA017 required for cooling purposes to protect Chinook and Sockeye Salmon;
 - Water temperature for Sturgeon and other resident fish.
3. Discharge is to reviewed daily and adjusted with input from Fisheries and Oceans Canada (DFO) and Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch.
4. The licensee may operate the works in an alternate manner in the event of an emergency, dam safety requirement, or extreme hydrological event.
5. The licensee will provide a daily report on flows at Cheslatta Falls, gate changes, and rationale for the changes to Fisheries and Oceans Canada (DFO) and Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch and the Comptroller of Water Rights.
6. This order expires on September 1, 2019.

Dated at Victoria, B.C., this 3 day of August, 2019.


Comptroller of Water Rights

Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development

Resource Stewardship Division

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of Water Rights

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Location:
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August 3, 2019

File: 0179602

Mr. Andrew Czornohalan
Operations Director – Power & Services
Rio Tinto Aluminium, British Columbia Works
1 Smeltersite Road, Box 1800,
Kitimat, B.C., V8C 2H2, Canada

Via Email: andrew.czornohalan@riotinto.com

Dear Mr. Czornohalan:

Re: Suspension of Summer Temperature Management Program for August 2019

Please find enclosed an order regarding the operation the Skins Lake Spillway and the Summer Temperature Management Program for 2019.

There are several activities underway to assist the migration of salmon past the Big Bar Landslide on the Fraser River. The ordered suspension of the Summer Temperature Management Program has been requested as an additional measure to achieve fish passage.

Please review the conditions of the attached order.

Please contact Connie Chapman at 778.698.7332 or Connie.Chapman@gov.bc.ca if you have any questions.

Yours truly,

Ted White
Comptroller of Water Rights





Cc:

Justus Benckhuysen, Nechako Operations Coordinator, BC Power Operations

Bonnie Antcliffe, Associate Regional Director General Fisheries and Oceans Canada

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat, FLNRORD

Connie Chapman, Acting Manager Water Allocation and Business Unit, FLNRORD

**Ministry of Forests, Lands,
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Resource Stewardship Division

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From: [White, Ted T FLNR:EX](#)
To: [Czornohalan, Andrew \(TI\)](#)
Cc: [Benckhuysen, Justus \(RTA\)](#); [Davis, Jennifer C FLNR:EX](#); Bonnie.Antcliffe@dfo-mpo.gc.ca; [Chapman, Connie FLNR:EX](#)
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Thank you,

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Province of British Columbia

WATER SUSTAINABILITY ACT

ORDER

Section 93

File No.: 0179602

WHEREAS:

1. Rio Tinto Alcan is the operator of the Nechako Reservoir, for which it holds Final Water Licence 102324.
2. Clause (k) of Final Water Licence 102324 requires the release of water from the Skins Lake Spillway for the protection of sockeye and chinook salmon in accordance with the "Short Term Annual Water Allocation" as defined in section 2.1 A of the 1987 Settlement Agreement, dated 14 September 1987;
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6. Fisheries agencies have indicated that a reduced flow in the Fraser River at the Big Bar Slide will help support successful fish passage. Fisheries agencies have indicated that a preferred maximum flow target at Cheslatta Falls, for the benefit of fish passage at Big Bar Slide, would be 170 m^3/s ;
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August 3, 2019

File: 0179602

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**Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development**

Resource Stewardship Division

Office of the Comptroller
of Water Rights

Water Management Branch

Mailing Address:
PO Box 9340 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 778-698-7344
Facsimile: 250-356-0605

Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9



From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#)
Subject: dfo official request. Fwd: Nechako River Flows - Request for Variance to RTA's Water License
Date: August 3, 2019 1:44:21 PM

Sent from my iPhone

Begin forwarded message:

From: "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>
Date: August 2, 2019 at 2:23:23 PM PDT
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Cc: "Bonnet, Terri" <Terri.Bonnet@dfo-mpo.gc.ca>, "bigbarlandslideic@gov.bc.ca" <bigbarlandslideic@gov.bc.ca>, "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>, "Thomson, Andrew" <Andrew.Thomson@dfo-mpo.gc.ca>, "Wattie, Brad" <Brad.Wattie@dfo-mpo.gc.ca>, "Fanos, Brad" <Brad.Fanos@dfo-mpo.gc.ca>, Gord Sterritt <gord.sterritt@upperfraser.ca>, "Travis.Abbey@gov.bc.ca" <Travis.Abbey@gov.bc.ca>
Subject: RE: Nechako River Flows - Request for Variance to RTA's Water License

Jennifer, please accept this as the official request from DFO for our request for variance to RTAs water license. We support this request to not increase the flows as per below.

Alain will also put this request into DFO letterhead as well.
Bonnie

From: Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>
Sent: Friday, August 2, 2019 9:01 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Cc: Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Bonnet, Terri <Terri.Bonnet@dfo-mpo.gc.ca>; bigbarlandslideic@gov.bc.ca
Subject: Nechako River Flows - Request for Variance to RTA's Water License

Hi Jennifer,

On behalf of the Big Bar Incident Command, we are requesting your assistance to request the water controller to issue Rio Tinto a variance order of their water license to adjust operations at Skins Lake spillway to achieve and maintain a maximum flow of 170 cms in the Nechako River at Cheslatta Falls.

Background:

The current conditions at the Big Bar Landslide site and ongoing actions to improve upstream salmon passage are directly controlled by Fraser River flows. Current flows of 2,600 m³/s are limiting access to the edge of the river channel and in-channel rock manipulation works to allow upstream fish passage along the west bank of the river. One of the factors affecting flow rates in the Fraser River at the Big Bar Slide are the Rio Tinto Alcan's (RTA's) operations at the Skins Lake Spillway into the Nechako River.

RTA's Summer Temperature Management Program (STMP) currently requires that a minimum flow of 283 cms be maintained in the Nechako River at the Cheslatta Falls. We recognize that STMP releases may appear to be a relatively small percentage of the discharge at Big Bar, but as Fraser River flows decrease, STMP flows would become a larger proportion of the total discharge. Lowering STMP flows in the interim to 170 m³/s will reduce stage-discharge at the slide site, and help to maintain access to areas along the right bank where current in-channel works are focused.

The request from the Big Bar Incident Command Post to reduce the Nechako River flows from 283 cms to 170 cms was discussed by conference call on August 1, 2019 with RTA, Nechako Fisheries Conservation Program (NFCP), Big Bar Incident Command and DFO. At the conclusion of the call, there was consensus from participants that a request would be put forward to the Water Controller to issue an amendment to RTA's water license to allow them to reduce the flow discharge in the Nechako River from 283 cms to 170 cms at Cheslatta Falls. In discussions with the Big Bar Slide Incident Command, it was recommended that this request be made directly to yourself. If required, we can make ourselves available for a conference call to support this request, or can submit a request to the Water Comptroller ourselves should you support this request.

If possible, it would be beneficial to have the Water Controller request RTA to reduce the flows today, as we are entering into the long weekend and an additional four day delay could negatively affect operations here at the Big Bar Slide.

Should you have any questions, please feel free to call me at 250-756-7021.

Yours truly,

Alain (Al) Magnan
Environmental Unit Team Lead
Big Bar Landslide Incident Command

From: [Davis, Jennifer C FLNR:EX](#)
To: [White, Ted T FLNR:EX](#); [Bonnie Antcliffe](#); [Bohay, Trevor FLNR:EX](#); [Gord Sterritt](#)
Subject: Re: Suspension of Summer Temperature Management Program for 2019
Date: August 3, 2019 1:46:16 PM

Ted, thank you for coming in^{s.22} to deal with this.
With appreciation,
Jenn

Sent from my iPhone

On Aug 3, 2019, at 1:44 PM, White, Ted T FLNR:EX <Ted.White@gov.bc.ca> wrote:

Hello Andrew,

Please find attached a cover letter and order regarding the operation of the Skins Lake Reservoir and the Summer Temperature Management Program in response to the Big Bar Landslide.

I appreciate the input from Justus and the responsiveness of Rio Tinto in supporting the flow change to benefit fish passage at the Big Bar Landslide.

^{s.22} If you would like to discuss this order
please contact Connie Chapman at 778-698-7332 or Connie.Chapman@gov.bc.ca

Thank you,

Ted White

Director and Comptroller of Water Rights

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605

<STMP suspension order cover letter Aug 2019.pdf>

<STMP suspension order Aug 2019.pdf>

From: Czornohalan, Andrew (TI)
To: White, Ted T FLNR:EX
Cc: Benckhuysen, Justus (RTA); Davis, Jennifer C FLNR:EX; Bonnie.Antcliffe@dfo-mpo.gc.ca; Chapman, Connie FLNR:EX
Subject: RE: Suspension of Summer Temperature Management Program for 2019
Date: August 3, 2019 2:50:31 PM
Attachments: image001.png

Ted,

I can confirm receipt order and understand the nature and criticality of the Big Bar Landslide situation.

Justus Benckhuysen is nominated as the direct Rio Tinto contact for monitoring and working with both DFO and FNLROD.

We also appreciate the collaborative approach to responding to a very complex situation that impacts so many BC Residents.

Best regards / Cordialement,

Andrew Czornohalan
Operations Director – Power & Services
Rio Tinto Aluminium, British Columbia Works



Rio Tinto - As pioneers in mining and metals, we produce materials essential to human progress.

1 Smeltersite Road, Box 1800, Kitimat, B.C., V8C 2H2, Canada

T: +1 (250) 639 8202 M: +1 (250) 639 6280

andrew.czornohalan@riotinto.com <http://www.riotinto.com>

From: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Sent: Saturday, August 3, 2019 1:44 PM
To: Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Bonnie.Antcliffe@dfo-mpo.gc.ca; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
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Thank you,

Ted White

Director and Comptroller of Water Rights

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

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From: Czornohalan, Andrew (TI)
To: White, Ted T FLNR:EX
Cc: Benckhuysen, Justus (RTA); Davis, Jennifer C FLNR:EX; Bonnie.Antcliffe@dfo-mpo.gc.ca; Chapman, Connie FLNR:EX
Subject: RE: Suspension of Summer Temperature Management Program for 2019
Date: August 3, 2019 2:50:32 PM
Attachments: image001.png

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Operations Director – Power & Services
Rio Tinto Aluminium, British Columbia Works



Rio Tinto - As pioneers in mining and metals, we produce materials essential to human progress.

1 Smeltersite Road, Box 1800, Kitimat, B.C., V8C 2H2, Canada

T: +1 (250) 639 8202 M: +1 (250) 639 6280

andrew.czornohalan@riotinto.com <http://www.riotinto.com>

From: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Sent: Saturday, August 3, 2019 1:44 PM
To: Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Bonnie.Antcliffe@dfo-mpo.gc.ca; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
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Connie Chapman at 778-698-7332 or Connie.Chapman@gov.bc.ca

Thank you,

Ted White

Director and Comptroller of Water Rights

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605



From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#); [JBond@triton-env.com](#); [Alain.Magnan@dfo-mpo.gc.ca](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Chapman, Connie FLNR:EX](#); [Abbey, Travis FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Brad.Wattie@dfo-mpo.gc.ca](#); [Andrusak, Greg FLNR:EX](#); [Bohay, Trevor FLNR:EX](#)
Subject: Re: (for decision) Confirming process, roles and responsibilities for Water Flows - Rio Tinto
Date: August 4, 2019 6:46:58 PM

Yes the stated process is appropriate from my end.

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: 2019-08-04 6:36 PM (GMT-08:00)
To: JBond@triton-env.com, Alain.Magnan@dfo-mpo.gc.ca, "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, [Gord Sterritt](mailto:gord.sterritt@upperfraser.ca) <gord.sterritt@upperfraser.ca>, "Chapman, Connie FLNR:EX" <Connie.Chapman@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>, Brad.Wattie@dfo-mpo.gc.ca, "Andrusak, Greg FLNR:EX" <Greg.Andrusak@gov.bc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>
Subject: (for decision) Confirming process, roles and responsibilities for Water Flows - Rio Tinto

Re: Making sure the Water flow info and Decisions are timely.

Good evening,

Due to the significance and legalities of requesting changes to the water flows, I would like to check that we are all in agreement on roles and responsibilities. If anyone sees errors or omissions in this e-mail, please advise and we can correct it immediately. If the following looks good, then we need 2 actions – determining a scheduled time for the daily requests to Rio Tinto, and confirming the roles and responsibilities.

LEGAL ACCOUNTABILITY: The BC Water Comptroller has assigned legal responsibility directly to myself. It cannot legally be delegated to a group, or to persons outside of the Provincial legal framework.

- Due to the conditions of the Order, we must provide Rio Tinto with daily requests, even if that request is “status quo”.

STRATEGIC ACCOUNTABILITY: the JESC (Gord, Bonnie and I/Trevor) are accountable to ensure everything is being prepared appropriately and has considered and balanced all the strategic

variables.

IC RESPONSIBILITY: Travis/Steve and Brad/ remain responsible for the oversight of all activities at the IC and sites. Their role will be to stay informed of the daily work, to ensure it is occurring smoothly.

3 LEADS. The Primary contacts will be Jenifer Bond (Rio Tinto), Alain Magnun, DFO, but on behalf of the Unified Incident Command, and Greg Andrusak, Provincial Rivers Biologist. Alain has access to the DFO and FLNRO teams of experts for fish. Jenifer has the experts on water flows. Greg has connections to the sturgeon experts as well as river management, and provides a direct link to the FLNRORD legal accountabilities. I would like these three to determine the schedule, and ensure all the requests are in the proper format (Justus and Jen sent a form they prefer). Greg is familiar with Decision-rationale documents which I will require, and would include the info Rio Tinto needs as well as the considerations below.

CONSIDERTIONS: We must ensure any requests are balanced between the salmon passage at Big Bar, SARA listed sturgeon, hydro and the overall water licence, and water flow needs in other areas above Big Bar. In particular, the needs of Vanderhoof and the Carrier-Sekani are on par with everything else. For example, we discussed these first requests in terms of river levels and impacts to homes along the Nechako, and recreational/tourism use.

DAILY TIME. Jenifer and Alain, can you please identify a scheduled time each day to provide the formal request, as JESC can then arrange our schedules and I can ensure formal approval is dealt with swiftly.

DISTRIBUTION of Request. The request will come from Alain, to Bonnie, Gord, Trevor/Steve and myself. It needs to cc Jenifer Bond, Greg, Travis and Brad (or their replacements). Reminder, this information is classified and confidential as it is "decision support" to statutory decision makers, it is not to be shared.

DISTRIBUTION OF DAILY ORDER: Once we have JESC endorsement, I (or my alternate) will formally send the request to Jenifer, cc Bonnie, Gord, Alain, Greg, Travis/Brad (or replacements), along with Connie Chapman (acting BC Water Comptroller), Paul Rasmussen, (Acting Associate Deputy Minister). Again, this information is classified and confidential. A public info pieces will be required. See next.

Distribution of twice weekly update for local Government (municipal and First Nation). We will need the EU to provide us with regular, short info pieces that explain the water levels, temperatures and plan for the next few days. This will need to be provided to the communities through myself or designate.

I am looking for e-mail endorsement of the above from:

1. Jenifer Bond – Rio Tinto
2. Justus Benckhuysen – Rio Tinto
3. Bonnie – DFO Exec

4. Gord – FRAS Exec
5. Trevor Bohay – FLNRORD Exec
6. Connie Chapman – Water Branch
7. Alain – DFO & EU
8. Travis/Replacement – IC Commander
9. Brad/Replacement – IC Commander
10. Greg Andrusak - FLNRORD

Jennifer.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: Czornohalan, Andrew (TI)
To: White, Ted T FLNR:EX
Subject: FW: Suspension of Summer Temperature Management Program for 2019
Date: August 5, 2019 9:46:00 AM

Ted,

See below email trail for District of Vanderhoof Councilors for information and context:

It appears we still have work to do to ensure we are all working to ensure all stake holders are kept informed and consulted through these types of situations that impact the Nechako river. I had been pushing Justus to work with DOV and he kept assuring me it was already happening through Jennifer Davis. I suspect some of the overtly technical approach from Justus has also gotten in the way of meaningful communication.

I am concerned that this could put at risk the work we have done to assemble the Water Engagement Initiative and I feel we will need to rapidly respond and provide a common understanding of the rationale and thinking that led to the order from both FLNRORD and DFO. My goal would be to bring the group to thinking and talking about a difficult choice in a difficult situation rather inferences of malicious intent / conspiracy by Rio Tinto or the province.

Could you and / or your team be available tomorrow (Tuesday) at 1600 for a call if need be.

I am available to discuss any time.

Andrew Czornohalan
T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Czornohalan, Andrew (TI)
Sent: Monday, August 5, 2019 9:28 AM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Gerry Thiessen <mayer@district.vanderhoof.ca>; 'Kevin Moutray' <s.22> >;s.22
s.22
Cc: Rahul Ray <rarray@edynamics.com>; De Kay, Danielle (RTA) <Danielle.DeKay@riotinto.com>; kyoung@sd91.bc.ca; John Murphy <john.murphy@hubinternational.com>; Spencer Siemens <council4@district.vanderhoof.ca>; Councillor Lauze <council2@district.vanderhoof.ca>; Lori Egli <LoriEgli@district.vanderhoof.ca>
Subject: RE: Suspension of Summer Temperature Management Program for 2019

Mayor, Councilors et al,

My sincere apologies for the difficulties in the communication trail on this very important issue. The understanding we had was that FLNRORD had reached out to all stake holders and first nations, they stated they worked extensively with CSTC and in particular Saikuz and Stellaten first nations. When I picked up the communication trail on return from vacation late last week I had assumed (clearly wrongly) that also included DOV, RDBN etc. As soon as I learned of the miss yesterday I spoke to

Mayor Thiessen and discussed the situation extensively.

A few points;

- ✚ The discussion was initiated by the Big Bar recovery team that has both Federal and Provincial team members as they assessed a real benefit to the Big Bar recovery effort and was unrelated to reservoir conditions or operations
- ✚ This order has all come about in less than the last week, and they have pushed as my understanding is that speed of response (i.e. over the weekend) was critical to the benefit as we were planning to increase releases to 450cms as per STMP.
- ✚ DFO has investigated the need and assessed the impact / benefit and made a request to FLNRD to order Rio Tinto to reduce flow in order to have a favorable impact holistically to have Salmon pass the Big Bar restriction
- ✚ The order was made formally by FLNRD, water Comptroller of Water Rights against our water license

Again, I feel the communication and involvement could and should have been handled with all members of Water Engagement more effectively. I think this is the key moving forward, for the group to define how and for what type of issues to we assemble an emergency conference call, communication trail or interaction of the group. We need all members of the group to hear from DFO, the province as well as the interests brought by the group, not just directing all energy to Rio Tinto.

I think there is still value to assemble a call between those on this email trail, members of WEI, especially the province and DFO to have them impart their rationale and science as to why this important to the Big Bar recovery effort.

I suggest we target 1600 Tuesday for a call and work on the mechanics of a call with my team.

Andrew Czornohalan

T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Kevin Moutray <[s.22](mailto:kmoutray@edynamics.com)>

Sent: Sunday, August 4, 2019 7:09 PM

To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>

Cc: <[s.22](mailto:kmoutray@edynamics.com)>; Rahul Ray <[rray@edynamics.com](mailto:r.rahul@edynamics.com)>; Gerry Thiessen <mayor@district.vanderhoof.ca>; Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>; De Kay, Danielle (RTA) <Danielle.DeKay@riotinto.com>; <k.young@sd91.bc.ca>; John Murphy <john.murphy@hubinternational.com>; Spencer Siemens <council4@district.vanderhoof.ca>; Councillor Lauze <council2@district.vanderhoof.ca>; Lori Egli <LoriEgli@district.vanderhoof.ca>

Subject: Re: Suspension of Summer Temperature Management Program for 2019

Andrew,

Is Justus' reply Rio Tinto's official response? If so we are in a very sorry state and I don't see the path forward. I would find it quite shocking that a request for flow information (the math

must have been done to make a decision this important) and number of temperature violations would be refused or deferred to another group. I would echo that this flies in the face of the inclusive socially responsible path you have said you see BC Works becoming. If a government starts releasing decisions on the Sunday of a long weekend we know that they are trying to avoid the scrutiny of the news cycle, I imagine this is true of corporations too. I'm dumbfounded that there wouldn't have been a conference call with stakeholders on Friday. I would like to know how to access the temperature information myself. I know it's 20 degrees right now in Vanderhoof and assume warmer upstream of the Stuart confluence.

Thanks,
Kevin Moutray
Earthen Ware Ltd
Sent from my iPhone

On Aug 4, 2019, at 5:39 PM, Benckhuysen, Justus (RTA)
<justus.benckhuysen@riotinto.com> wrote:

With respect, Rio Tinto is following orders.

The questions you are asking are best posed to the Big Bar Incident command team, DFO and FLNRO.

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From^{s.22}

Date: 2019-08-04 5:33 PM (GMT-08:00)

To: Rahul Ray <rray@edynamics.com>, Gerry Thiessen
<mayor@district.vanderhoof.ca>, "Benckhuysen, Justus (RTA)"
<justus.benckhuysen@riotinto.com>, "Czornohalan, Andrew (TI)"
<Andrew.Czornohalan@riotinto.com>, "De Kay, Danielle (RTA)"
<Danielle.DeKay@riotinto.com>

Cc^{s.22} <kyoung@sd91.bc.ca>, John Murphy
<john.murphy@hubinternational.com>, Spencer Siemens
<council4@district.vanderhoof.ca>, Councillor Lauze
<council2@district.vanderhoof.ca>, Lori Egli <LoriEgli@district.vanderhoof.ca>
Subject: Re: Suspension of Summer Temperature Management Program for 2019

Hi Rahul et al

Is this really going to make a difference? i doubt it. Andrew this is why there no trust with your company. Im trying hard to see the new RTA as per our conversations but.....!

Please have your team calculate how much difference this will make in your reservoir.

I would like daily temperature readings for August to know how many days exceed 20 celcius.

You are not saving salmon by helping reduce flows at big bar but you are putting salmon and sturgeon at risk in the Nechako.

Brian

Sent from my Samsung Galaxy smartphone.

----- Original message -----

From: Rahul Ray <r-ray@edynamics.com>

Date: 2019-08-04 12:34 p.m. (GMT-08:00)

To: Gerry Thiessen <mayor@district.vanderhoof.ca>, "Justus Benckhuysen (RTA)" <justus.benckhuysen@riotinto.com>, "Andrew Czornohalan (TI)"

<Andrew.Czornohalan@riotinto.com>, "Danielle De Kay (RTA)"

<Danielle.DeKay@riotinto.com>

Ccs.22 <kyoung@sd91.bc.ca>, Brian Frenkel

<s.22>, John Murphy <john.murphy@hubinternational.com>,

Spencer Siemens <council4@district.vanderhoof.ca>, Councillor Lauze

<council2@district.vanderhoof.ca>, Lori Egli <LoriEgli@district.vanderhoof.ca>

Subject: Re: Suspension of Summer Temperature Management Program for 2019

Hi Gerry,

I have forwarded your email to Rio Tinto representatives.

I was not a part of or aware of the discussions that led to this action.

My apologies,

Rahul

On Aug 4, 2019, at 12:15 PM, Gerry Thiessen <mayor@district.vanderhoof.ca> wrote:

Is this engagement? This is the exact opposite of what we were told the last meeting.

Gerry Thiessen
Mayor
District of Vanderhoof

Begin forwarded message:

From: Nechako Reservoir Updates
<NechakoReservoirUpdates@riotinto.com>
Date: August 4, 2019 at 9:21:43 AM PDT
To: <mayor@district.vanderhoof.ca>
Subject: Suspension of Summer Temperature
Management Program for 2019
Reply-To: <NechakoReservoirUpdates@riotinto.com>

From: [Czornohalan, Andrew \(TI\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: FW: Suspension of Summer Temperature Management Program for 2019
Date: August 5, 2019 11:03:57 AM

Ted,

Further to previous, see latest from Gerry Thiessen below:

Chief Muller is Chief Councilor of Saikuz First Nation.

Andrew Czornohalan
T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Gerry Thiessen <mayor@district.vanderhoof.ca>
Sent: Monday, August 5, 2019 10:58 AM
To: Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Kevin Moutray
<s.22>; <s.22>; Rahul Ray <rray@edynamics.com>;
De Kay, Danielle (RTA) <Danielle.DeKay@riotinto.com>; kyoung@sd91.bc.ca; John Murphy
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Councillor Lauze <council2@district.vanderhoof.ca>; Lori Egli <LoriEgli@district.vanderhoof.ca>
Subject: Re: Suspension of Summer Temperature Management Program for 2019

Chief Priscilla Mueller, she said she had not heard. I think this is a fairly big change in the water license.

Gerry Thiessen
Mayor
District of Vanderhoof

On Aug 5, 2019, at 9:28 AM, Czornohalan, Andrew (TI)
<Andrew.Czornohalan@riotinto.com> wrote:

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Andrew Czornohalan

T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Kevin Moutray [s.22](mailto:Kevin.Moutray@bc.ca)

Sent: Sunday, August 4, 2019 7:09 PM

To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>

Cc: [s.22](mailto:Kevin.Moutray@bc.ca); Rahul Ray <[rray@edynamics.com](mailto:r.rahul@edynamics.com)>; Gerry

Thiessen <mayor@district.vanderhoof.ca>; Czornohalan, Andrew (TI)

<Andrew.Czornohalan@riotinto.com>; De Kay, Danielle (RTA)

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Subject: Re: Suspension of Summer Temperature Management Program for 2019

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Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

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<NechakoReservoirUpdates@riotinto.com>
Date: August 4, 2019 at 9:21:43 AM PDT
To: <mayor@district.vanderhoof.ca>
**Subject: Suspension of Summer
Temperature Management Program for
2019**
Reply-To:
<NechakoReservoirUpdates@riotinto.com>

From: [Chapman, Connie FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: Comptroller Order
Date: August 5, 2019 11:35:00 AM

Hi Justus,

Do you have a couple minutes to check in regarding the order issued to RTA on August 3, 2019?
Please feel free to call when convenient for you^{s.17} Just want to make sure the
expectations are clear.

Thank you so much!

Connie

From: Benckhuysen, Justus (RTA)
To: Chapman, Connie FLNR:EX
Subject: Fwd: Suspension of Summer Temperature Management Program for 2019
Date: August 5, 2019 1:09:09 PM

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: Gerry Thiessen <mayor@district.vanderhoof.ca>
Date: 2019-08-05 10:58 AM (GMT-08:00)
To: "Czornohalan, Andrew (TI)" <Andrew.Czornohalan@riotinto.com>
Cc: "Benckhuysen, Justus (RTA)" <iustus.benckhuysen@riotinto.com>, Kevin Moutray
<s.22>, Rahul Ray
<rRay@edynamics.com>, "De Kay, Danielle (RTA)" <Danielle.DeKay@riotinto.com>, kyoung@sd91.bc.ca, John Murphy <john.murphy@hubinternational.com>, Spencer Siemens <council4@district.vanderhoof.ca>, Councillor Lauze <council2@district.vanderhoof.ca>, Lori Egli <LoriEgli@district.vanderhoof.ca>
Subject: Re: Suspension of Summer Temperature Management Program for 2019

Chief Priscilla Mueller, she said she had not heard. I think this is a fairly big change in the water license.

Gerry Thiessen
Mayor
District of Vanderhoof

On Aug 5, 2019, at 9:28 AM, Czornohalan, Andrew (TI)
<Andrew.Czornohalan@riotinto.com> wrote:

Mayor, Councilors et al,

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**Subject: Suspension of Summer
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Reply-To:
<NechakoReservoirUpdates@riotinto.com>

From: Czornohalan, Andrew (TI)
To: White, Ted T FLNR:EX
Cc: Benckhuysen, Justus (RTA); Davis, Jennifer C FLNR:EX
Subject: RE: Suspension of Summer Temperature Management Program for 2019
Date: August 5, 2019 3:51:25 PM

Ted,

Thinking about the situation and the best path forward I would like to suggest / offer the following:

- Some kind of press release from FLNRORD and / or DFO with the order attached and a commentary about why, how and who initiated discussions on the order as well as the collaboration between the parties
- I would propose a teleconference meeting perhaps on Wednesday following a press release on Tuesday open to all members of the Water Engagement Initiative group.
- My thoughts are the meeting should be called, hosted (call in numbers) and facilitated by FLNRORD and / or DFO, covering:
 - Context of the Big Bar situation
 - Recovery efforts to date and ongoing
 - The interconnectedness of the Nechako and Fraser systems
 - The impetus and rationale for the order
 - Assessments / considerations made to other fish species in the Fraser / Nechako system as well as the work with First Nations
 - Management of the river moving forward with DFO and FLNRORD working with Rio Tinto

I would appreciate your thoughts and look forward to working through this together,

Andrew Czornohalan
T: +1 (250) 639 8202 M: -s.22

From: Czornohalan, Andrew (TI)
Sent: Monday, August 5, 2019 9:46 AM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: FW: Suspension of Summer Temperature Management Program for 2019

Ted,

See below email trail for District of Vanderhoof Councilors for information and context:

It appears we still have work to do to ensure we are all working to ensure all stake holders are kept informed and consulted through these types of situations that impact the Nechako river. I had been pushing Justus to work with DOV and he kept assuring me it was already happening through Jennifer Davis. I suspect some of the overly technical approach from Justus has also gotten in the way of meaningful communication.

I am concerned that this could put at risk the work we have done to assemble the Water Engagement Initiative and I feel we will need to rapidly respond and provide a common understanding of the rationale and thinking that led to the order from both FLNRORD and DFO. My goal would be to bring the group to thinking and talking about a difficult choice in a difficult situation rather inferences of malicious intent / conspiracy by Rio Tinto or the province.

Could you and / or your team be available tomorrow (Tuesday) at 1600 for a call if need be.

I am available to discuss any time.

Andrew Czornohalan

T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Czornohalan, Andrew (TI)

Sent: Monday, August 5, 2019 9:28 AM

To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Gerry Thiessen <mayor@district.vanderhoof.ca>; 'Kevin Moutray' s.22 s.22

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From: Gord Sterritt
To: Davis, Jennifer C FLNR:EX; JBond@triton-env.com; Alain.Magnan@dfo-mpo.gc.ca; Justus Benckhuysen (justus.benckhuysen@riotinto.com); Antcliffe, Bonnie; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Brad.Wattie@dfo-mpo.gc.ca; Andrusak, Greg FLNR:EX; Bohay, Trevor FLNR:EX; Lemon, Steve FLNR:EX
Subject: Re: Version #2. Confirming process, roles and responsibilities for Water Flows - Rio Tinto
Date: August 5, 2019 4:59:30 PM

WRT to communication with the Carrier Sekani Communities I think an official communique would be good.

Regards!

Gordon Sterritt

Upper Fraser Fisheries Conservation alliance

298A Mission Road
Williams Lake, BC V2G 5K9

ph: 250.305.5224

www.upperfraser.ca

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: Monday, August 5, 2019 at 3:45 PM
To: "JBond@triton-env.com" <JBond@triton-env.com>, Al Magnan <Alain.Magnan@dfo-mpo.gc.ca>, "Justus Benckhuysen (justus.benckhuysen@riotinto.com)" <justus.benckhuysen@riotinto.com>, Bonnie Antcliffe <Bonnie.Antcliffe@dfo-mpo.gc.ca>, Gord Sterritt <gord.sterritt@upperfraser.ca>, "Chapman, Connie FLNR:EX" <Connie.Chapman@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>, Brad Wattie <Brad.Wattie@dfo-mpo.gc.ca>, "Andrusak, Greg FLNR:EX" <Greg.Andrusak@gov.bc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>, "Lemon, Steve FLNR:EX" <Steve.Lemon@gov.bc.ca>
Subject: Version #2. Confirming process, roles and responsibilities for Water Flows - Rio Tinto

Good afternoon,

As a follow up to yesterdays e-mail, a few items were identified and have now been clarified. Here is a short summary for our records.

While the roles and responsibilities are critical to have clear, there seemed to be confusion over how much work this actually is. The expectation is this is a 5 minute job at the IC. It appears that today's update to Rio Tinto worked smoothly.

1. Rio Tinto will provide daily updates to the IC outlining their strategy via Jennifer Bond or her designate. Two people need to review it: Alain or designate to check the flows work for Big

Bar, Greg or designate to check the flows and temp work for sturgeon. CC IC command.

2. Once given the green light the formal “approved” is sent from the DFO/FLNRORD JESC members. This is required in order to address issues that are out of scope of the IC.
 - a. This can be fast-tracked by the FLNRORD member taking the lead on behalf of the JESC.
 - b. CC JESC, Connie Chapman, Paul Rasmussen, IC Command, Alain or designate, and Greg or Designate.
3. FLNRORD JESC member and FLNRORD ADM will take on local government communications: Gord can advise at a later date if this would work for Carrier Sekani, or if he continues to be the communication conduit.

A little background on how the management decisions work: Rio Tinto has received the request for changes in water flows to support fish passage at Big Bar, as well as the other factors already in place (e.g. sturgeon and community needs). An Order under the *Water Sustainability Act* was issued by the Comptroller of Water Rights to RTA which will allow them to make daily adjustments. The order issued to RTA by the Comptroller of Water Rights gives RTA the legal authority to operate the Skins Lake Spillway in a manner to provide flows that balance the competing needs. RTA has the legal responsibility to comply with this order and to seek input to their flow decisions from DFO and FLNRORD Fish and Aquatic Habitat group. RTA will have to determine the flows that they consider appropriate taking into consideration the information provided by DFO and FLNRORD.

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: RE: Comptroller Order
Date: August 6, 2019 9:47:56 AM

Contact below

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Chapman, Connie FLNR:EX [mailto:Connie.Chapman@gov.bc.ca]
Sent: Monday, August 5, 2019 11:38 AM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: Comptroller Order

Hi Justus,

Do you have a couple minutes to check in regarding the order issued to RTA on August 3, 2019?
Please feel free to call when convenient for you 250 893 1731. Just want to make sure the expectations are clear.

Thank you so much!

Connie

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#)
Cc: [Chapman, Connie FLNR:EX](#); [Rahul Ray](#)
Subject: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 11:07:02 AM

Hi Jennifer, Connie, and Rahul

This note is to follow up:

Press Release

To be issued by BC on the topic of Nechako River management and the Order received on 6 August.

Action: Connie please confirm with me via email that this is being prepared. When done send press release to Justus and Rahul

Conference call

BC to coordinate a conference call for stakeholders involved in the Rio Tinto Water Engagement Initiative on Wednesday 7 August

Action: Justus to send Connie and Jennifer Rahul contact, Rahul copied on this email.

Action: Connie send Rahul Conference call in detail, and time, and draft agenda.

Action: Rahul send email to all WEI participants with BC call details.

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Chapman, Connie FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Cc: [White, Ted T FLNR:EX](#); [Czornohalan, Andrew \(TI\)](#); [Davis, Jennifer C FLNR:EX](#)
Subject: Follow-up
Date: August 6, 2019 11:57:00 AM

Hi Justus,

Thank you for the call. The province will be generating a one page technical update regarding the importance of the water flows and identifying that RTA was ordered by the province as the province tries to mitigate against the challenges happening at the Big Bar Slide on the Fraser River. We have requested that our ADMs reach out to Vanderhoof and RTA today. We have given Andrew as the primary contact to the ADMs and then yourself. I will follow up with you this afternoon regarding the potential for a conference call with the stakeholders and touch base on anything else.

Please let me know if I have missed anything.

Cheers,
Connie

From: [Chapman, Connie FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#); [Rahul Ray](#)
Cc: [Davis, Jennifer C FLNR:EX](#); [White, Ted T FLNR:EX](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 2:32:00 PM

Hi Justus and Rahul,

We would like to move a head and set up a conference call this afternoon 4:30 pm with the stakeholders involved.

Agenda

1. Emergency Response at the Big Bar Slide – Jenn Davis
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command – Jenn Davis
4. Questions.

Here are the call in details.

Join by phone

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Conference ID **s.17**

Please let me know if this is possible and if you require any additional information.

Thank you for all of your help.

Cheers,
Connie

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 6, 2019 11:07 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Cc: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Rahul Ray <rray@edynamics.com>
Subject: BC Press Release, conference call with stakeholders.

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Nechako Operations Coordinator, BC Power Operations

Aluminium

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T: +1 (250) 639-8904 M: +1 (250) 567 0351

justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Rahul Ray](#)
To: [Chapman, Connie FLNR:EX](#); [Benckhuysen, Justus \(RTA\)](#)
Cc: [Davis, Jennifer C FLNR:EX](#); [White, Ted T FLNR:EX](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 2:37:20 PM

Thanks Connie,

I suspect 4:30 pm today is too short notice for Rio Tinto Water Engagement Initiative (WEI) participants including First Nations and stakeholders.

Can you suggest a time tomorrow?

I will send out an invite to participants this afternoon.

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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Sent: August 6, 2019 2:32 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Rahul Ray <r-ray@edynamics.com>
Cc: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
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Thank you for all of your help.

Cheers,
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Aluminium

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To: [Chapman, Connie FLNR:EX](#); [Justus Benckhuysen](#); [Bohay, Trevor FLNR:EX](#)
Cc: [Rahul Ray](#); [White, Ted T FLNR:EX](#); [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#)
Subject: Re: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 2:45:54 PM

Hi Justus,

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As part of the emergency response we prepare the occasional technical one pager.

We have asked the team to fast track one together today, on water flow and how the Rio Tinto collaboration was requested and is helpful. It is not technically a "News Release". I have copied Colin who is coordinating that work at the Incident Command.

We will definitely circle around to explain the absolute gravity of the situation and why we asked you to help.

As of today we still have NO fish passing. Water flows over the next few days are critical for the early runs' passage.

So again, thank you.

J

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Thank you for all of your help.

Cheers,
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Nechako Operations Coordinator, BC Power Operations
Aluminium

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From: [Rahul Ray](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#); [Justus Benckhuysen](#); [Bohay, Trevor FLNR:EX](#)
Cc: [White, Ted T FLNR:EX](#); [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 2:55:40 PM

Hello,

Connie and I just spoke via telephone.

She will suggest a time for the call tomorrow, shortly.

I will send the invite to Rio Tinto Water Engagement Initiative (WEI) participants this afternoon.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP
Lead Facilitator and Senior Environmental Planner
t. 250.590.0072 | c. 250.893.3830
www.edynamics.com

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-----Original Message-----

From: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Sent: August 6, 2019 2:46 PM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Cc: Rahul Ray <rray@edynamics.com>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Hynes, Colin GCPE:EX <Colin.Hynes@gov.bc.ca>; Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>
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Conference ID~~s~~.17

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Cc: Chapman, Connie FLNR:EX
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<rray@edynamics.com<<mailto:rray@edynamics.com>>>
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justus.benckhuysen@riotinto.com<<mailto:justus.benckhuysen@riotinto.com>>
<http://www.riotinto.com/bcworks><<http://www.riotinto.com/riotintoalcan>>

From: [Chapman, Connie FLNR:EX](#)
To: [Rahul Ray](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 3:12:00 PM

Hi Rahul,

How about 3 pm Wednesday August 7, 2019. The agenda and conference call details are below. Can you please include me in the invite and then I can pass along to the provincial staff who will be on the call.

Thank you again for all your help.

Cheers,
Connie

Agenda

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English (United States)

Conference ID: **s.17**

From: [Rahul Ray](#)
To: [Rahul Ray](#)
Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019
Date: August 6, 2019 3:22:33 PM
Attachments: [image001.png](#)
[STMP_suspension_cover_letter_Aug_2019.pdf](#)
[STMP_suspension_order_Aug_2019.pdf](#)

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently “creating a constriction in the river preventing the migration of salmon”.

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

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English (United States)
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Conference IL^{s.17}

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP
Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

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August 3, 2019

File: 0179602

Mr. Andrew Czornohalan
Operations Director – Power & Services
Rio Tinto Aluminium, British Columbia Works
1 Smeltersite Road, Box 1800,
Kitimat, B.C., V8C 2H2, Canada

Via Email: andrew.czornohalan@riotinto.com

Dear Mr. Czornohalan:

Re: Suspension of Summer Temperature Management Program for August 2019

Please find enclosed an order regarding the operation the Skins Lake Spillway and the Summer Temperature Management Program for 2019.

There are several activities underway to assist the migration of salmon past the Big Bar Landslide on the Fraser River. The ordered suspension of the Summer Temperature Management Program has been requested as an additional measure to achieve fish passage.

Please review the conditions of the attached order.

Please contact Connie Chapman at 778.698.7332 or Connie.Chapman@gov.bc.ca if you have any questions.

Yours truly,

Ted White
Comptroller of Water Rights

Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development

Resource Stewardship Division

Office of the Comptroller
of Water Rights

Water Management Branch

Mailing Address:
PO Box 9340 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 778-698-7344
Facsimile: 250-356-0605

Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9





Cc:

Justus Benckhuysen, Nechako Operations Coordinator, BC Power Operations

Bonnie Antcliffe, Associate Regional Director General Fisheries and Oceans Canada

Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat, FLNRORD

Connie Chapman, Acting Manager Water Allocation and Business Unit, FLNRORD

**Ministry of Forests, Lands,
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and Rural Development**

Resource Stewardship Division

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Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9





Province of British Columbia

WATER SUSTAINABILITY ACT

ORDER

Section 93

File No.: 0179602

WHEREAS:

1. Rio Tinto Alcan is the operator of the Nechako Reservoir, for which it holds Final Water Licence 102324.
2. Clause (k) of Final Water Licence 102324 requires the release of water from the Skins Lake Spillway for the protection of sockeye and chinook salmon in accordance with the "Short Term Annual Water Allocation" as defined in section 2.1 A of the 1987 Settlement Agreement, dated 14 September 1987;
3. The "Short Term Annual Water Allocation" requires flow releases from the Skins Lake Spillway in accordance with Schedule "C" of the 1987 Settlement Agreement which includes flows for cooling purposes in the Nechako River.
4. The flows, referred to in Section 2.1 A.b of the 1987 Settlement Agreement, are referred to as the Summer Temperature Management Program (STMP). The STMP requires flows of 170 cubic metres per second (m^3/s) to 283 m^3/s at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) for the period of July 20 to August 20 to manage water temperature in the Nechako River at or below 20 degrees Celsius;
5. In late 2018 a landslide into the Fraser River occurred near the vicinity of Big Bar (Big Bar Slide) creating a constriction in the river preventing the migration of salmon in 2019.
6. Fisheries agencies have indicated that a reduced flow in the Fraser River at the Big Bar Slide will help support successful fish passage. Fisheries agencies have indicated that a preferred maximum flow target at Cheslatta Falls, for the benefit of fish passage at Big Bar Slide, would be 170 m^3/s ;
7. In an email dated August 2, 2019, Fisheries and Oceans Canada (DFO) and the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch have requested that the STMP be suspended for 2019 to enable passage of salmon at the Big Bar Slide from August 3 to August 20. The rationale is that the early Stewart Sockeye run are not able to pass the Big Bar Slide and suspension of the STMP is expected to improve the flow conditions in the Fraser River for salmon passage.

Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development

Resource Stewardship Division

Office of the Comptroller
of Water Rights

Water Management Branch

Mailing Address:
PO Box 9340 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 778-698-7344
Facsimile: 250-356-0605

Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9






8. Suspension of the STMP may have temperature related effects on Sturgeon and resident fish in the Nechako River. Monitoring of forecast air and water temperatures and adjusting the release of flow from the Skins Lake Spillway will mitigate potential risks to Sturgeon and resident fish. Flow adjustments will balance the potential benefits to fish passage at the Big Bar Slide and potential implications for resident fish in the Nechako River.
9. The Carrier Sikani Tribal Council and Upper Fraser Fisheries Alliance have provided endorsement for the suspension of the STMP in 2019 to benefit the passage of salmon at the Big Bar Slide.

I HEREBY DIRECT AS FOLLOWS:

1. The licensee is to suspend the Summer Temperature Management Program for the Nechako River for August 2019.
2. From August 3 to August 20, 2019 the licensee is to operate the Skins Lake Spillway to provide flows at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) that balance the needs of:
 - Flow required to enable fish passage at the location of the Big Bar Slide on the Fraser River;
 - Water temperature and flow in the Nechako River as measured at Water Survey of Canada hydrometric station 08JA017 required for cooling purposes to protect Chinook and Sockeye Salmon;
 - Water temperature for Sturgeon and other resident fish.
3. Discharge is to reviewed daily and adjusted with input from Fisheries and Oceans Canada (DFO) and Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch.
4. The licensee may operate the works in an alternate manner in the event of an emergency, dam safety requirement, or extreme hydrological event.
5. The licensee will provide a daily report on flows at Cheslatta Falls, gate changes, and rationale for the changes to Fisheries and Oceans Canada (DFO) and Forests, Lands, Natural Resource Operations, and Rural Development (FLNRORD) Fish and Aquatic Habitat Branch and the Comptroller of Water Rights.
6. This order expires on September 1, 2019.

Dated at Victoria, B.C., this 3 day of August, 2019.


Comptroller of Water Rights

Ministry of Forests, Lands,
Natural Resource Operations
and Rural Development

Resource Stewardship Division

Office of the Comptroller
of Water Rights

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Location:
4th Floor, 2957 Jutland Road
Victoria BC V8T 5J9



From: [Rahul Ray](#)
To: [Rahul Ray](#)
Subject: RE: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019
Date: August 6, 2019 3:29:55 PM
Attachments: [image001.png](#)

Hello again,

For clarity, the call is at 3 pm tomorrow (Wednesday, August 7).

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)	English (United States)
Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)	English (United States)
Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)	English (United States)

Conference ID: ~~s~~.17

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>
Sent: August 6, 2019 3:23 PM
To: Rahul Ray <r-ray@edynamics.com>
Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently "creating a constriction in the river preventing the migration of salmon".

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

Agenda

1. Emergency Response at the Big Bar Slide – Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command – Trevor Bohay
4. Questions

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)

English (United States)

Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)

English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)

English (United States)

Conference ID:**s.17**

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

www.edynamics.com



EDI Environmental Dynamics Inc. | Down to Earth Biology

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From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#)
Cc: [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [White, Ted T FLNR:EX](#)
Subject: conference call tomorrow.
Date: August 6, 2019 4:12:49 PM

Hello All

For tomorrows call you may wish to be prepared for questions related to:
(with some of my thoughts in red)

- Who is monitoring the river temperature, where can we get real time data, are you sending out river condition reports? (BC is utilizing Rio Tinto water temperature probes in Nechako River at Finmore, and this data is being used to operate the computer model normally used to operate the Summer Temperature Management Program (STMP), BC/DFO team is assessing this data to make decisions about spillway management)
- Will you force Rio Tinto to report river condition during this period? (Rio Tinto position is that this is BC responsibility, Rio Tinto will continue to produce weekly Flow Facts- to sign up, send an email requesting subscription to: nechakoreservoirupdates@riotinto.com)
- What water temperature is bad for sturgeon and rainbow trout etc.?
- How much of a difference can this lower flow really make for salmon passage?
- Will Rio Tinto be forced to release water saved during the STMP? (no)
- The STMP normally ends on 20 August but the Order expires 1 September, is Rio Tinto going to get ordered for more flows beyond 20 August if temperature remains high? To protect salmon that do get through. (by that time of year the water temperature is normally below 20 degrees and falling)
- Why weren't we consulted before the Order was issued.
- Did Rio Tinto ask for this Order?
- Did the province do this to help out Rio Tinto reservoir water levels, to get more revenue from Rio Tinto?
- Why did you wait until a long weekend to do this? To avoid scrutiny and pushback? You have known about this slide and STMP for 2 months.
- Is Rio Tinto telling you what spillway discharge should be? Who is? (Rio Tinto not involved in deciding discharge, Environmental consultant is using STMP computer model to determine discharge needs to meet current targets of 170 m³/s and 22 degrees. These targets were set by BC/DFO)

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
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From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#)
Cc: [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [White, Ted T FLNR:EX](#)
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From: [Benckhuysen, Justus \(RTA\)](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#)
Cc: [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [White, Ted T FLNR:EX](#)
Subject: RE: conference call tomorrow.
Date: August 6, 2019 4:28:21 PM

More questions that just came in:

From Mike Robertson, Cheslatta Carrier Nation:

First of all, please send out an invitation to the call.

Secondly, I have a problem with a decision to reduce or eliminate the Nechako STMP flows in order to reduce the flows at the Big Bar Slide channel. It is my guess the reduction of STMP flows would have minuscule diminishment of volume and velocity of flows at Big Bend. I'm aware that Skins Lake Spillway's mean annual flow contributes only 3% of the mean annual flow of the Fraser River at Hell's Gate. It is unacceptable to put the Nechako River fragile fish stocks at further risk all for the sake of a perceived major reduction of flows at Big Bar.

In order to fully understand this rationale, I need some facts before the call tomorrow.

- 1. What is the current flow in (m3/sec) of the Fraser River at the Big Bar Slide site with and without the STMP flows?**
- 2. What is the distance from Cheslatta Falls to the Big Bar Slide site?**

I look forward to your response.

Mike

Justus Benckhuysen
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From: Benckhuysen, Justus (RTA)
Sent: Tuesday, August 6, 2019 4:13 PM
To: Davis, Jennifer C FLNR:EX (Jennifer.C.Davis@gov.bc.ca) <Jennifer.C.Davis@gov.bc.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Cc: Colin.Hynes@gov.bc.ca; Paul.Rasmussen@gov.bc.ca; Trevor.Bohay@gov.bc.ca; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>

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Justus Benckhuysen

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From: Benckhuysen, Justus (RTA)
Sent: Tuesday, August 6, 2019 4:13 PM
To: Davis, Jennifer C FLNR:EX (Jennifer.C.Davis@gov.bc.ca) <Jennifer.C.Davis@gov.bc.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Cc: Colin.Hynes@gov.bc.ca; Paul.Rasmussen@gov.bc.ca; Trevor.Bohay@gov.bc.ca; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>

Subject: conference call tomorrow.

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Justus Benckhuysen

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From: [Rahul Ray](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#); [Justus Benckhuysen](#); [Bohay, Trevor FLNR:EX](#)
Cc: [White, Ted T FLNR:EX](#); [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 6, 2019 5:02:07 PM

Hello,

Rio Tinto Water Engagement Initiative (WEI) participants are submitting questions to me, ahead of the call tomorrow.

I will compile the questions I have and the ones I receive over night first thing in the morning and send them over.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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-----Original Message-----

From: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Sent: August 6, 2019 2:46 PM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Cc: Rahul Ray <r-ray@edynamics.com>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Hynes, Colin GCPE:EX <Colin.Hynes@gov.bc.ca>; Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>
Subject: Re: BC Press Release, conference call with stakeholders.

Hi Justus,

Sounds like a Wednesday call works better for you. I want to flag that Trevor Bohay has the BC lead for Wednesday and Steve Schell is back on Thursday. I am trying to take a few days off but if you need me I am only a phone call away. Trevor is excellent to work with.

As part of the emergency response we prepare the occasional technical one pager.

We have asked the team to fast track one together today, on water flow and how the Rio Tinto collaboration was requested and is helpful. It is not technically a "News Release". I have copied Colin who is coordinating that work at the Incident Command.

We will definitely circle around to explain the absolute gravity of the situation and why we asked you to help.

As of today we still have NO fish passing. Water flows over the next few days are critical for the early runs' passage.

So again, thank you.

J

Sent from my iPhone

On Aug 6, 2019, at 2:32 PM, Chapman, Connie FLNR:EX
<Connie.Chapman@gov.bc.ca<<mailto:Connie.Chapman@gov.bc.ca>>> wrote:

Hi Justus and Rahul,

We would like to move a head and set up a conference call this afternoon 4:30 pm with the stakeholders involved.

Agenda

1. Emergency Response at the Big Bar Slide – Jenn Davis
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/
Connie Chapman
3. Day to day process at the incident command – Jenn Davis
4. Questions.

Here are the call in details.

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)
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Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)
English (United States)

Conference ID: ~~S~~.17

Please let me know if this is possible and if you require any additional information.

Thank you for all of your help.

Cheers,
Connie

From: Benckhuysen, Justus (RTA)
<justus.benckhuysen@riotinto.com<<mailto:justus.benckhuysen@riotinto.com>>>
Sent: August 6, 2019 11:07 AM
To: Davis, Jennifer C FLNR:EX
<Jennifer.C.Davis@gov.bc.ca<<mailto:Jennifer.C.Davis@gov.bc.ca>>>
Cc: Chapman, Connie FLNR:EX
<Connie.Chapman@gov.bc.ca<<mailto:Connie.Chapman@gov.bc.ca>>>; Rahul Ray
<rray@edynamics.com<<mailto:rray@edynamics.com>>>

Subject: BC Press Release, conference call with stakeholders.

Hi Jennifer, Connie, and Rahul

This note is to follow up:

Press Release

To be issued by BC on the topic of Nechako River management and the Order received on 6 August.

Action: Connie please confirm with me via email that this is being prepared. When done send press release to Justus and Rahul

Conference call

BC to coordinate a conference call for stakeholders involved in the Rio Tinto Water Engagement Initiative on Wednesday 7 August

Action: Justus to send Connie and Jennifer Rahul contact, Rahul copied on this email.

Action: Connie send Rahul Conference call in detail, and time, and draft agenda.

Action: Rahul send email to all WEI participants with BC call details.

Justus Benckhuysen

Nechako Operations Coordinator, BC Power Operations Aluminium Rio Tinto
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<http://www.riotinto.com/bcworks><<http://www.riotinto.com/riotintoalcan>>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Willis, David \(Pacific\)](#); [Magnan, Alain](#); [Jenifer Bond](#); [Davis, Jennifer C FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Chapman, Connie FLNR:EX](#); [Abbey, Travis FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Wattie, Brad](#); [Andrusak, Greg FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [Lemon, Steve FLNR:EX](#)
Subject: Re: STMP Update
Date: August 6, 2019 6:42:48 PM

There is appears to be confusion on this decision.

I have asked Jennifer Bond, independent consultant who operates the temperature/flow model to clarify the decision point, and in future to provide clear data showing the flow and temperature which would result from a specific and single recommendation.

My understanding is that in order to stay within the flow target of 170 m3/s in the Nechako River at Cheslatta Falls, and below the 22 degree temperature target in the Nechako River at Finmire, no gate change (increase) is required.

Please confirm those targets mentioned above are still the targets Jennifer Bond should be working to.

For clarity; Jennifer's previous mention to increase discharge was in reference to the normal Summer Temperature Management Protocol. That protocol has been suspended by an Order issued by Comptroller of Water Rights. As such we need a confirmation that spillway discharge should not be increased today, given that the temperature target will be met without an increase. Or, spillway discharge should be increased if you wish to lower the temperature target to 20 degrees. Lowering the temperature would translate into an increase in flow of up to 283 m3/s.

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Willis, David (Pacific)" <David.Willis@dfo-mpo.gc.ca>
Date: 2019-08-06 6:27 PM (GMT-08:00)
To: "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>, Jenifer Bond <JBond@triton-env.com>, "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>, "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, Gord Sterritt <gord.sterritt@upperfraser.ca>, "Chapman, Connie FLNR:EX" <Connie.Chapman@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>,

"Wattie, Brad" <Brad.Wattie@dfo-mpo.gc.ca>, "Andrusak, Greg FLNR:EX" <Greg.Andrusak@gov.bc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>, "Lemon, Steve FLNR:EX" <Steve.Lemon@gov.bc.ca>
Subject: RE: STMP Update

We approve of the increase in flows if it is required to meet temperature obligations.

From: Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>
Sent: Tuesday, August 6, 2019 2:11 PM
To: Jenifer Bond <JBond@triton-env.com>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Justus Benckhuysen (justus.benckhuysen@riotinto.com) <justus.benckhuysen@riotinto.com>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>
Cc: Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>
Subject: Re: STMP Update

Thank you Jennifer. We acknowledge that you have to increase flows for temperature regulations. No objections. Please note that David Willis has taken over the role of the Big Bar Incident Command Environmental Unit Leader. As such, would you please forward these daily requests to Dave from now on.

Thank you.

Al

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: Jenifer Bond <JBond@triton-env.com>
Date: 2019-08-06 12:26 PM (GMT-08:00)
To: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>, "Magnan, Alain" <Alain.Magnan@dfo-mpo.gc.ca>, "Justus Benckhuysen (justus.benckhuysen@riotinto.com)" <justus.benckhuysen@riotinto.com>, "Antcliffe, Bonnie" <Bonnie.Antcliffe@dfo-mpo.gc.ca>, Gord Sterritt <gord.sterritt@upperfraser.ca>, "Chapman, Connie FLNR:EX" <Connie.Chapman@gov.bc.ca>, "Abbey, Travis FLNR:EX" <Travis.Abbey@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>, "Wattie, Brad" <Brad.Wattie@dfo-mpo.gc.ca>, "Andrusak, Greg FLNR:EX" <Greg.Andrusak@gov.bc.ca>, "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>, "Lemon, Steve FLNR:EX" <Steve.Lemon@gov.bc.ca>
Subject: STMP Update

Good afternoon.

As per today's model and decision record flows would be increased to 453.1 m³/s to prevent

water temperatures from exceeding 20°C.

The forecasted water temperatures indicate a max of 21.80°C over the next five days.

Flows are currently at 171 m³/s at NRBCF.

I will be sending another email shortly containing additional details and information on the observed and forecasted flows and water temperatures.

Thank you,
Jen

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
C 250.617.8732



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The information included in this email (and attachments) is intended for the named recipients only and may contain privileged and confidential information. If you have received this email in error, any use, copying or dissemination of its contents is prohibited. Please notify the sender immediately by return e-mail or telephone at the numbers listed above and destroy all copies of the communication.

Please consider the environment before printing this email.

From: [Chapman, Connie FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: Re: Is technical note available for review?
Date: August 7, 2019 7:55:52 AM

Looking into it. Will get back to you.

Sent from my iPhone

On Aug 7, 2019, at 7:53 AM, Benckhuysen, Justus (RTA)
<justus.benckhuysen@riotinto.com> wrote:

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

From: [Rahul Ray](#)
To: [Davis, Jennifer C FLNR:EX](#); [Chapman, Connie FLNR:EX](#); [Justus Benckhuysen](#); [Bohay, Trevor FLNR:EX](#)
Cc: [White, Ted T FLNR:EX](#); [Hynes, Colin GCPE:EX](#); [Rasmussen, Paul FLNR:EX](#)
Subject: RE: BC Press Release, conference call with stakeholders.
Date: August 7, 2019 8:44:05 AM

Good morning,

Thus far, I have received two comments/questions for the call today at 3 pm about the STMP adjustment on the Nechako:

Comment 1: Kevin Moutray, District of Vanderhoof: Glad to see there is finally some engagement of communities on this decision and how that will effect our watershed. What I would like to see from DFO/FLNRO is the risk benefit analysis they did to make this decision, timeline of decision making, communications strategy, and understanding of the correlation of increased temperature and mortality from gill infections etc. I would also like to understand how to obtain data from the temperature measurement station used for the STMP (not sure who the keeper of that station is).

Comment 2: Mike Robertson, Carrier Cheslatta First Nation: I have a problem with a decision to reduce or eliminate the Nechako STMP flows in order to reduce the flows at the Big Bar Slide channel. It is my guess the reduction of STMP flows would have minuscule diminishment of volume and velocity of flows at Big Bend. I'm aware that Skins Lake Spillway's mean annual flow contributes only 3% of the mean annual flow of the Fraser River at Hell's Gate. It is unacceptable to put the Nechako River fragile fish stocks at further risk all for the sake of a perceived major reduction of flows at Big Bar.

In order to fully understand this rationale, I need some facts before the call tomorrow.

1. What is the current flow in (m³/sec) of the Fraser River at the Big Bar Slide site with and without the STMP flows?
2. What is the distance from Cheslatta Falls to the Big Bar Slide site?

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP
Lead Facilitator and Senior Environmental Planner
t. 250.590.0072 | c. 250.893.3830
www.edynamics.com

EDI Environmental Dynamics Inc. | Down to Earth Biology

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-----Original Message-----

From: Rahul Ray <rray@edynamics.com>
Sent: August 6, 2019 5:02 PM
To: 'Davis, Jennifer C FLNR:EX' <Jennifer.C.Davis@gov.bc.ca>; 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>; 'Justus Benckhuysen' <justus.benckhuysen@riotinto.com>; 'Bohay, Trevor FLNR:EX' <Trevor.Bohay@gov.bc.ca>
Cc: 'White, Ted T FLNR:EX' <Ted.White@gov.bc.ca>; 'Hynes, Colin GCPE:EX' <Colin.Hynes@gov.bc.ca>; 'Rasmussen, Paul FLNR:EX' <Paul.Rasmussen@gov.bc.ca>
Subject: RE: BC Press Release, conference call with stakeholders.

Hello,

Rio Tinto Water Engagement Initiative (WEI) participants are submitting questions to me, ahead of the call tomorrow.

I will compile the questions I have and the ones I receive over night first thing in the morning and send them over.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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-----Original Message-----

From: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>
Sent: August 6, 2019 2:46 PM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Cc: Rahul Ray <rray@edynamics.com>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Hynes, Colin GCPE:EX <Colin.Hynes@gov.bc.ca>; Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>
Subject: Re: BC Press Release, conference call with stakeholders.

Hi Justus,

Sounds like a Wednesday call works better for you. I want to flag that Trevor Bohay has the BC lead for Wednesday and Steve Schell is back on Thursday. I am trying to take a few days off but if you need me I am only a phone call away. Trevor is excellent to work with.

As part of the emergency response we prepare the occasional technical one pager.

We have asked the team to fast track one together today, on water flow and how the Rio Tinto collaboration was requested and is helpful. It is not technically a "News Release". I have copied Colin who is coordinating that work at the Incident Command.

We will definitely circle around to explain the absolute gravity of the situation and why we asked you to help.

As of today we still have NO fish passing. Water flows over the next few days are critical for the early runs' passage.

So again, thank you.

J

Sent from my iPhone

On Aug 6, 2019, at 2:32 PM, Chapman, Connie FLNR:EX
<Connie.Chapman@gov.bc.ca<<mailto:Connie.Chapman@gov.bc.ca>>> wrote:

Hi Justus and Rahul,

We would like to move a head and set up a conference call this afternoon 4:30 pm with the stakeholders involved.

Agenda

1. Emergency Response at the Big Bar Slide – Jenn Davis
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/
Connie Chapman
3. Day to day process at the incident command – Jenn Davis
4. Questions.

Here are the call in details.

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)
English (United States)
Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)
English (United States)
Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)
English (United States)

Conference ID:~~s~~.17

Please let me know if this is possible and if you require any additional information.

Thank you for all of your help.

Cheers,
Connie

From: Benckhuysen, Justus (RTA)
<justus.benckhuysen@riotinto.com<<mailto:justus.benckhuysen@riotinto.com>>>
Sent: August 6, 2019 11:07 AM
To: Davis, Jennifer C FLNR:EX

<Jennifer.C.Davis@gov.bc.ca<<mailto:Jennifer.C.Davis@gov.bc.ca>>>
Cc: Chapman, Connie FLNR:EX
<Connie.Chapman@gov.bc.ca<<mailto:Connie.Chapman@gov.bc.ca>>>; Rahul Ray
<rray@edynamics.com<<mailto:rray@edynamics.com>>>
Subject: BC Press Release, conference call with stakeholders.

Hi Jennifer, Connie, and Rahul

This note is to follow up:

Press Release

To be issued by BC on the topic of Nechako River management and the Order received on 6 August.

Action: Connie please confirm with me via email that this is being prepared.
When done send press release to Justus and Rahul

Conference call

BC to coordinate a conference call for stakeholders involved in the Rio Tinto Water Engagement Initiative on Wednesday 7 August

Action: Justus to send Connie and Jennifer Rahul contact, Rahul copied on this email.

Action: Connie send Rahul Conference call in detail, and time, and draft agenda.

Action: Rahul send email to all WEI participants with BC call details.

Justus Benckhuysen

Nechako Operations Coordinator, BC Power Operations Aluminium Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

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justus.benckhuysen@riotinto.com<<mailto:justus.benckhuysen@riotinto.com>>
<http://www.riotinto.com/bcworks><<http://www.riotinto.com/riotintoalcan>>

From: [Rahul Ray](#)
To: [Rahul Ray](#)
Subject: Province of BC Order call today at 3 pm
Date: August 7, 2019 10:35:53 AM
Attachments: [image001.png](#)

Good morning,

I wanted to clarify any confusion about the intent of today's conference call. The call at 3 pm will be hosted by the Province of British Columbia. The intent is to have representatives from the Province of BC, Department of Fisheries and Oceans (DFO), and the Big Bar recovery team provide information about the Order issued on Saturday, August 3, related to flow and temperature management in the Nechako River.

This call is intended to provide information and enable you to ask questions of provincial and federal government representatives as to their rationale for their decision to suspend the Summer Temperature Management Program (STMP).

I thought it would be useful for participants in the Rio Tinto Water Engagement Initiative (WEI) to hear from provincial and federal government representatives on this important issue.

Please let me know if you have any questions.

If you will be joining the call at 3 pm today, please use the dial-in information below:

Agenda

1. Emergency Response at the Big Bar Slide – Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command – Trevor Bohay
4. Questions

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)	English (United States)
Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)	English (United States)
Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)	English (United States)

Conference ID: **s.17**

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

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From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: is Rio Tinto able to be on the call with DOV/RDBN?
Date: August 7, 2019 11:16:40 AM

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: ppt to DOV
Date: August 7, 2019 1:29:17 PM
Attachments: [DOV reservoir update 6 August 2019.pdf](#)

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

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Rio Tinto

**Nechako Reservoir Update
District of Vanderhoof**

6 August 2019

Andrew Czornohalan

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Page 235 of 382

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Page 236 of 382

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From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: This is not a change in licence
Date: August 7, 2019 3:33:00 PM

I will address that

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:34 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: This is not a change in licence

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: This is not a change in licence
Date: August 7, 2019 3:33:34 PM

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: This is not a change in licence
Date: August 7, 2019 3:33:34 PM

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:46:57 PM

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:46:57 PM

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:50:00 PM

Thanks for that. I will comment on it in a moment

I see the forecast is for cooler weather in the next few days. How will that influence that river temperatures?

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:47 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: temperature is being measured at finmore, flow at cheslatta

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: RE: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:52:30 PM

Water temperature is expected to drop in 3 days.

STMP looks at average temperature, DOV is looking at maximum daily.

Monitoring and model is using temperature at Finmore, decisions are made on finmore temperature.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: White, Ted T FLNR:EX [mailto:Ted.White@gov.bc.ca]
Sent: Wednesday, August 7, 2019 3:50 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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Sent: August 7, 2019 3:47 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: temperature is being measured at finmore, flow at cheslatta

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Nechako Operations Coordinator, BC Power Operations

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:53:00 PM

OK, good to know

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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Sent: Wednesday, August 7, 2019 3:50 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
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Sent: August 7, 2019 3:47 PM

To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>

Subject: temperature is being measured at finmore, flow at cheslatta

Justus Benckhuysen

Nechako Operations Coordinator, BC Power Operations

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:57:00 PM

I think with Paul closing the call I will address the temperature monitoring in the notes and response.

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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From: White, Ted T FLNR:EX [<mailto:Ted.White@gov.bc.ca>]
Sent: Wednesday, August 7, 2019 3:50 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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Ted White, Director
Water Management Branch

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To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: temperature is being measured at finmore, flow at cheslatta

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:58:40 PM

And wei is just a vehicle for communication,

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
Date: 2019-08-07 3:57 PM (GMT-08:00)
To: "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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Ted White, Director
Water Management Branch
778-698-3981

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Sent: August 7, 2019 3:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

Water temperature is expected to drop in 3 days.

STMP looks at average temperature, DOV is looking at maximum daily.

Monitoring and model is using temperature at Flnmore, decisions are made on finmore temperatrue.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351

justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: White, Ted T FLNR:EX [<mailto:Ted.White@gov.bc.ca>]
Sent: Wednesday, August 7, 2019 3:50 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

Thanks for that. I will comment on it in a moment

I see the forecast is for cooler weather in the next few days. How will that influence that river temperatures?

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:47 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: temperature is being measured at finmore, flow at cheslatta

Justus Benckhuysen
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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Benckhuysen, Justus \(RTA\)](#)
To: [White, Ted T FLNR:EX](#)
Subject: Re: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:58:40 PM

And wei is just a vehicle for communication,

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>
Date: 2019-08-07 3:57 PM (GMT-08:00)
To: "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

I think with Paul closing the call I will address the temperature monitoring in the notes and response.

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: temperature is being measured at finmore, flow at cheslatta
Date: August 7, 2019 3:59:00 PM

I had suggested that we could put the daily report on our website if you don't want to put it on yours

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 7, 2019 3:52 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: temperature is being measured at finmore, flow at cheslatta

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Ted White, Director
Water Management Branch

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Sent: August 7, 2019 3:47 PM
To: White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
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T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [Bohay, Trevor FLNR:EX](#)
To: [Willis, David \(Pacific\)](#); [Benckhuysen, Justus \(RTA\)](#); [Andrusak, Greg FLNR:EX](#); [Jenifer Bond](#); [Magnan, Alain](#); [Davis, Jennifer C FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Chapman, Connie FLNR:EX](#); [Abbey, Travis FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Wattie, Brad](#); [Lemon, Steve FLNR:EX](#)
Cc: [Rasmussen, Paul FLNR:EX](#)
Subject: RE: STMP Update - Aug. 7
Date: August 7, 2019 4:12:33 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Confidential:

Hello,

Please proceed with Option 1), remain at 170 cms, understanding that the model predicts a temperature peak of 22.11 C tomorrow.

Regards,

Trevor Bohay on behalf of JESC

From: Willis, David (Pacific) [mailto:David.Willis@dfo-mpo.gc.ca]
Sent: Wednesday, August 7, 2019 2:40 PM
To: Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Jenifer Bond; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Bohay, Trevor FLNR:EX; Lemon, Steve FLNR:EX
Subject: RE: STMP Update - Aug. 7

I support Option 1 at this time.

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: Wednesday, August 7, 2019 2:14 PM
To: Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Jenifer Bond <JBond@triton-env.com>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>
Subject: RE: STMP Update - Aug. 7

As per yesterday email exchange, we need absolute clarity on a specific decision.

What you want:

Option 1) stay at current discharge and allow temperature to exceed 22 degrees

Option 2) increase discharge and allow discharge to exceed 170 m3/s.

Regards,

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

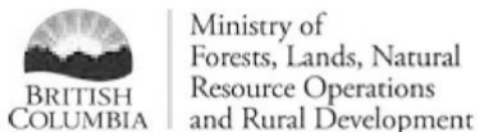
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Sent: Wednesday, August 7, 2019 2:07 PM
To: Jenifer Bond <JBond@triton-env.com>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>
Subject: RE: STMP Update - Aug. 7

All,

I have currently have no concerns at this time

Greg Andrusak, RPBio
Provincial Rivers Biologist
Fish and Aquatic Habitat Branch
Ministry of Forests, Lands and Natural Resource Operations and Rural Development (MFLNRORD)
PO Box 9391 Stn Prov Govt
Victoria, BC V8W 9M3

Office: (778) 698-9237
Email: : Greg.Andrusak@gov.bc.ca



From: Jenifer Bond <JBond@triton-env.com>
Sent: August 7, 2019 1:54 PM
To: Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Justus Benckhuysen (justus.benckhuysen@riotinto.com) <justus.benckhuysen@riotinto.com>; Antcliffe, Bonnie

<Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>

Subject: STMP Update - Aug. 7

Hello All.

Maintaining the SLS at the current discharge of 170 m³/s will result in a maximum water temperature of 22.11°C over the next three days as per the model output below.

Model Output - Spillway maintained at 170 m ³ /s				
Predicted Flows for the NRBCF		Water Temperature Forecast for the Nechako River at Finmore		
Date	Discharge (m ³ /s)	Date	Temperature °C	
07-Aug	173	07-Aug	21.6	
08-Aug	171	08-Aug	22.11	
09-Aug	170	09-Aug	21.5	
10-Aug	170	10-Aug	20.22	
11-Aug	170	11-Aug	19.79	

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 22.06°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF		Water Temperature Forecast for the		
Date	Discharge (m ³ /s)	Date	Temperature °C	
07-Aug	173	07-Aug	21.61	
08-Aug	190	08-Aug	22.06	
09-Aug	225	09-Aug	21.22	
10-Aug	228	10-Aug	19.76	
11-Aug	220	11-Aug	19.39	

I have attached a spreadsheet which outlines the daily recorded water temperatures at various locations, daily discharge from the WSC website and the predicted conditions from the model.

If you have further questions please let me know.
Thank you,

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
s.22



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Please consider the environment before printing this email.



Model Output - Spillway maintained at 170 m ³ /s			
Predicted Flows for the NRBCF		Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
07-Aug	173	07-Aug	21.6
08-Aug	171	08-Aug	22.11
09-Aug	170	09-Aug	21.5
10-Aug	170	10-Aug	20.22
11-Aug	170	11-Aug	19.79

Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF		Water Temperature Forecast for the		
Date	Discharge (m ³ /s)	Date	Temperature °C	
07-Aug	173	07-Aug	21.61	
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09-Aug	225	09-Aug	21.22	
10-Aug	228	10-Aug	19.76	
11-Aug	220	11-Aug	19.39	

From: [Rahul Ray](#)
To: [Rahul Ray](#)
Subject: Provincial Big Bar updates
Date: August 8, 2019 10:53:59 AM
Attachments: [image001.png](#)

Hello,

Thanks to all of you who were able to participate in the Province-led conference call yesterday about the Big Bar slide and Provincial order which affects flow releases from Nechako Reservoir, including the Summer Temperature Management Program (STMP).

The Province will be building an email distribution list to provide periodic updates on the Big Bar slide.

Please let me know **(today, if possible)** if you would like to be added to the Provincial distribution list to receive updates directly from provincial representatives.

People I heard on the phone yesterday request direct communication from the Province included:

- Mayor Jerry Thiessen. Can the following people please confirm you would also like direct contact from the Province?
 - Brian Frenkel
 - Wayne Salewski
 - Lori Egli
 - Curtis Helgesen
 - Kevin Moutray
- Mike Robertson
- David Luggi
- Jackie Thomas
- Dustin Snyder

If I don't hear from you, I will simply forward the updates I receive from the Province when I receive them.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>

Sent: August 6, 2019 3:30 PM

To: Rahul Ray <r-ray@edynamics.com>

Subject: RE: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello again,

For clarity, the call is at 3 pm tomorrow (Wednesday, August 7).

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)

English (United States)

Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)

English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)

English (United States)

Conference ID: **s.17**

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>

Sent: August 6, 2019 3:23 PM

To: Rahul Ray <r-ray@edynamics.com>

Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently "creating a constriction in the river preventing the migration of salmon".

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

Agenda

1. Emergency Response at the Big Bar Slide – Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command – Trevor Bohay
4. Questions

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)

English (United States)

Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)

English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)

English (United States)

Conference ID:~~s~~.17

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

www.edynamics.com



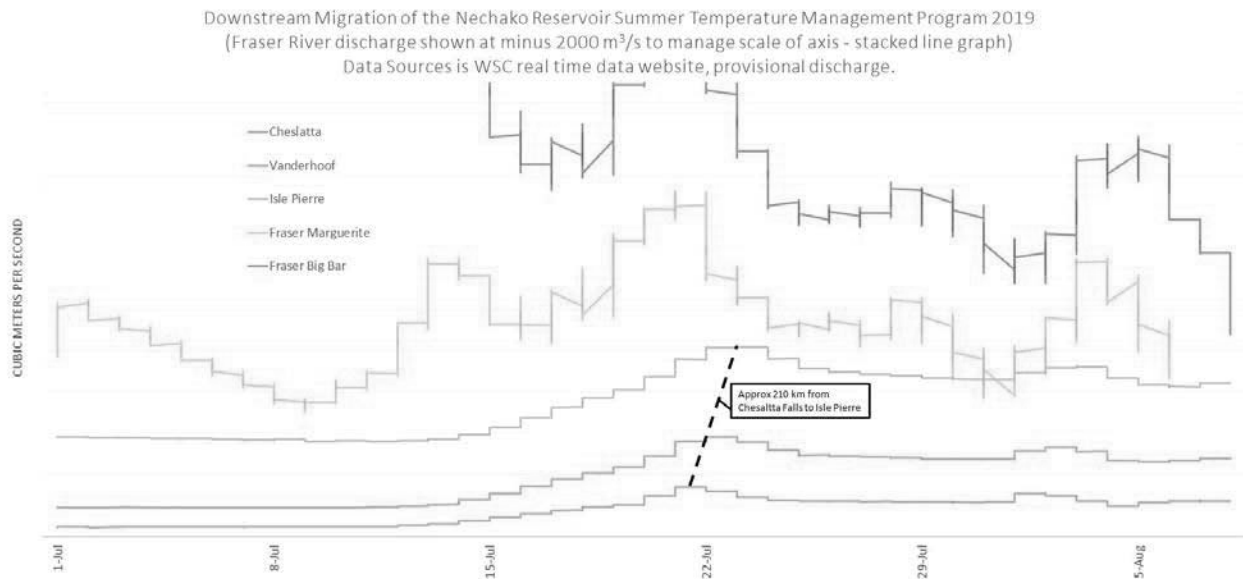
EDI Environmental Dynamics Inc. | Down to Earth Biology

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From: Benckhuysen, Justus (RTA)
To: Bohay, Trevor FLNR-EX; Willis, David (Pacific); Andrusak, Greg FLNR-EX; Jennifer Bond; Magnan, Alain; Davis, Jennifer C FLNR-EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR-EX; Abbey, Travis FLNR-EX; Schell, Steve E FLNR-EX; Wattie, Brad; Lemon, Steve FLNR-EX
Subject: STMP flow impact
Date: August 4, 2019 11:46:46 AM
Attachments: image007.png
image008.png
image009.png
image010.png

FVI, visual representation of flow in the Nechako River and Fraser River since 1 July 2019.



Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

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justus.benckhuysen@riotinto.com <http://www.riotinto.com/bowersds>

From: Bohay, Trevor FLNR-EX [mailto:Trevor.Bohay@gov.bc.ca]

Sent: Wednesday, August 7, 2019 4:13 PM

To: Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Andrusak, Greg FLNR-EX <Greg.Andrusak@gov.bc.ca>; Jennifer Bond <JBond@triton-env.com>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR-EX <jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR-EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR-EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR-EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>

Cc: Rasmussen, Paul FLNR-EX <Paul.Rasmussen@gov.bc.ca>

Subject: RE: STMP Update - Aug. 7

Confidential:

Hello,

Please proceed with Option 1), remain at 170 cms, understanding that the model predicts a temperature peak of 22.11 C tomorrow.

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Trevor Bohay on behalf of JESC

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Sent: Wednesday, August 7, 2019 2:40 PM

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Subject: RE: STMP Update - Aug. 7

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Sent: Wednesday, August 7, 2019 2:14 PM

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Subject: RE: STMP Update - Aug. 7

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What you want:

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Option 2) increase discharge and allow discharge to exceed 170 m³/s.

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Nechako Operations Coordinator, BC Power Operations
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Subject: RE: STMP Update - Aug. 7

All,

I have currently have no concerns at this time

Greg Andrusak, RPBio
Provincial Rivers Biologist
Fish and Aquatic Habitat Branch
Ministry of Forests, Lands and Natural Resource Operations and Rural Development (MFLNRORD)
PO Box 5501 Stn Prov Govt
Victoria, BC V8W 9M3

Office: (778) 698-8237
Email: Greg.Andrusak@gov.bc.ca



From: Jennifer Bond <JBond@triton-env.com>

Sent: August 7, 2019 1:54 PM

To: Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR-EX <jennifer.C.Davis@gov.bc.ca>; Justus Benckhuysen (justus.benckhuysen@riotinto.com) <justus.benckhuysen@riotinto.com>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR-EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR-EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR-EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Andrusak, Greg FLNR-EX <Greg.Andrusak@gov.bc.ca>; Bohay, Trevor FLNR-EX <Trevor.Bohay@gov.bc.ca>; Lemon, Steve FLNR-EX <Steve.Lemon@gov.bc.ca>

Subject: STMP Update - Aug. 7

Hello All,

Maintaining the SLS at the current discharge of 170 m³/s will result in a maximum water temperature of 22.11°C over the next three days as per the model output below.

Model Output - Spillway maintained at 170 m³/s

Predicted Flows for the NRBCF		Water Temperature Forecast for the Nechako River at Rimore	
Date	Discharge (m ³ /s)	Date	Temperature °C
07-Aug	173	07-Aug	21.6
08-Aug	171	08-Aug	22.11
09-Aug	170	09-Aug	21.5
10-Aug	170	10-Aug	20.22
11-Aug	170	11-Aug	19.79

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 22.06°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m³/s for one day

Predicted Flows for the NRBCF		Water Temperature Forecast for the Nechako River at Rimore	
Date	Discharge (m ³ /s)	Date	Temperature °C
07-Aug	173	07-Aug	21.61
08-Aug	190	08-Aug	22.06
09-Aug	225	09-Aug	21.22
10-Aug	228	10-Aug	19.76
11-Aug	220	11-Aug	19.39

I have attached a spreadsheet which outlines the daily recorded water temperatures at various locations, daily discharge from the WSC website and the predicted conditions from the model.

If you have further questions please let me know.

Thank you,

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
C 250.617.8732



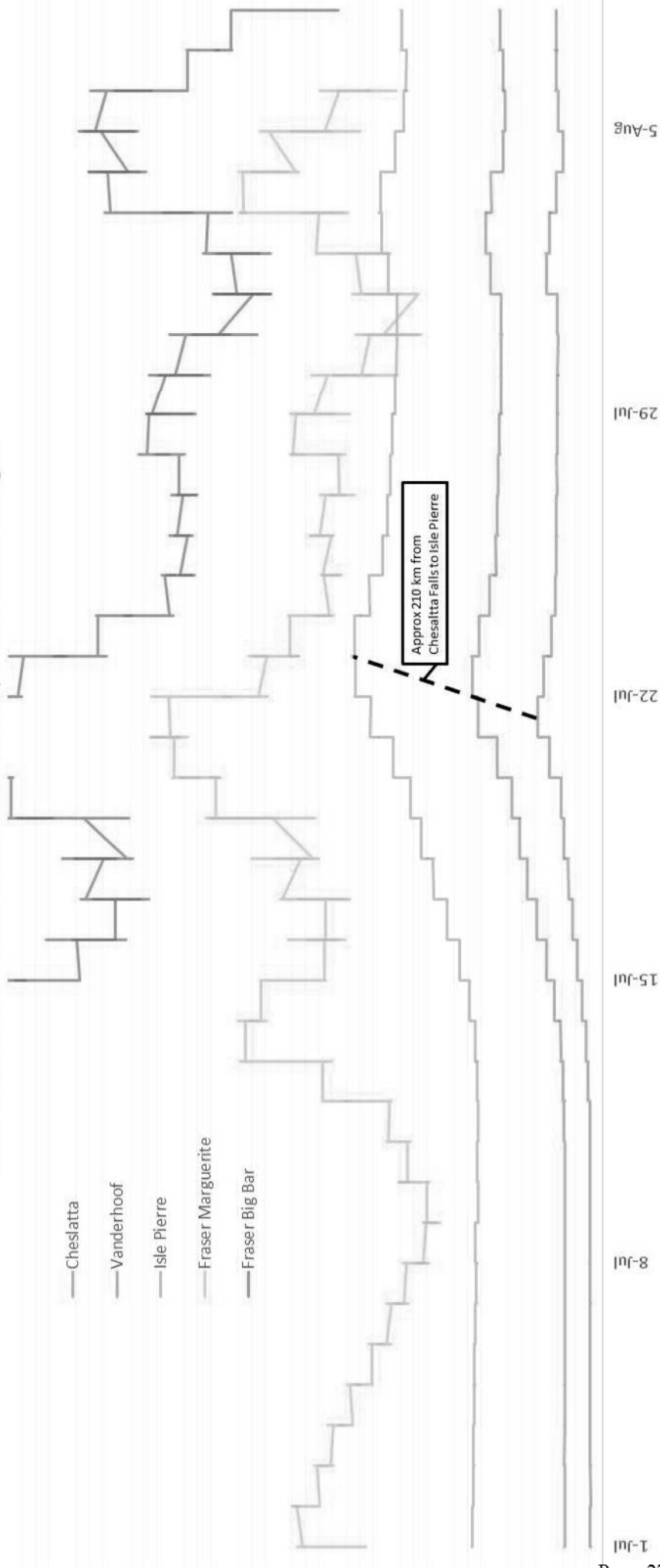
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Please consider the environment before printing this email.



Model Output - Spillway maintained at 170 m ³ /s			
Predicted Flows for the NRBCF		Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
07-Aug	173	07-Aug	21.6
08-Aug	171	08-Aug	22.11
09-Aug	170	09-Aug	21.5
10-Aug	170	10-Aug	20.22
11-Aug	170	11-Aug	19.79

Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF		Water Temperature Forecast for the		
Date	Discharge (m ³ /s)	Date	Temperature °C	
07-Aug	173	07-Aug	21.61	
08-Aug	190	08-Aug	22.06	
09-Aug	225	09-Aug	21.22	
10-Aug	228	10-Aug	19.76	
11-Aug	220	11-Aug	19.39	

Downstream Migration of the Nechako Reservoir Summer Temperature Management Program 2019
 (Fraser River discharge shown at minus 2000 m³/s to manage scale of axis - stacked line graph)
 Data Sources is WSC real time data website, provisional discharge.



From: [Bohay, Trevor FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Cc: [Chapman, Connie FLNR:EX](#); [Cadogan, Iris FLNR:EX](#); [Schell, Steve E FLNR:EX](#)
Subject: Action item-follow up call to WEI stakeholders tomorrow?
Date: August 8, 2019 1:19:52 PM

Our ADM has asked that we convene another stakeholder call tomorrow or Monday to address lingering questions and convey that for now flows will be increased.

Would we coordinate that through RTA's consultant; Rahul, or us?

Thoughts?

T

Trevor Bohay M.Sc., P.Geo.
Resource Manager - Authorizations
Thompson-Okanagan Region
Ministry of Forests, Lands, Natural Resource Operations and Rural Development
1259 Dalhousie Street
Kamloops, BC

Phone: 250 371-6284



From: [Benckhuysen, Justus \(RTA\)](#)
To: [Bohay, Trevor FLNR:EX](#)
Cc: [Chapman, Connie FLNR:EX](#); [Cadogan, Iris FLNR:EX](#); [Schell, Steve E FLNR:EX](#)
Subject: Re: Action item-follow up call to WEI stakeholders tomorrow?
Date: August 8, 2019 1:21:55 PM

Yes rahul

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "Bohay, Trevor FLNR:EX" <Trevor.Bohay@gov.bc.ca>
Date: 2019-08-08 1:20 PM (GMT-08:00)
To: "Benckhuysen, Justus (RTA)" <justus.benckhuysen@riotinto.com>
Cc: "Chapman, Connie FLNR:EX" <Connie.Chapman@gov.bc.ca>, "Cadogan, Iris FLNR:EX" <Iris.Cadogan@gov.bc.ca>, "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>
Subject: Action item-follow up call to WEI stakeholders tomorrow?

Our ADM has asked that we convene another stakeholder call tomorrow or Monday to address lingering questions and convey that for now flows will be increased.

Would we coordinate that through RTA's consultant; Rahul, or us?

Thoughts?

T

Trevor Bohay M.Sc., P.Geo.
Resource Manager - Authorizations
Thompson-Okanagan Region
Ministry of Forests, Lands, Natural Resource Operations and Rural Development
1259 Dalhousie Street
Kamloops, BC

Phone: 250 371-6284



From: [Rahul Ray](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: FW: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019
Date: August 8, 2019 1:50:04 PM
Attachments: [image001.png](#)

Hi s.22

I am forwarding your questions to a Province of BC representative. The Province of BC is coordinating the response to the landslide.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP
Lead Facilitator and Senior Environmental Planner
t. 250.590.0072 | c. 250.893.3830
www.edynamics.com



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From s.22

Sent: August 8, 2019 1:45 PM

To: 'Rahul Ray' <r-ray@edynamics.com>; 'NWSRI Coordinator' <info@nechakowhitesturgeon.org>

Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Thanks Rahul –

I look forward to reviewing the summary as soon as it is available.

In the meanwhile, can you please provide:

1. an estimate of average water volume contribution in early-mid August from the Nechako River (at the Fraser Confluence) to the mainstem Fraser River; and
2. an estimate of what the expected drop in volume will be at the rock slide site under the proposed flow reduction action (at the Nechako dam).

Best Regards,

s.22

From: Rahul Ray <r-ray@edynamics.com>

Sent: Friday, 9 August 2019 1:55 AM

To: s.22

NWSRI Coordinator <info@nechakowhitesturgeon.org>

Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Good morning s.22

Thanks for your email.

The call, led by the Province of BC, did happen yesterday, but wrapped up by 4 pm.

The Province is preparing a meeting summary. I can send it to you when it is ready if you want.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

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From s.22

Sent: August 7, 2019 5:10 PM

To: 'NWSRI Coordinator' <info@nechakowhitesturgeon.org>; rgray@edynamics.com

Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Thanks Andrea.

Greetings Rahul –

s.22 here – I received an invitation to join a conference call today but I was not able to do so until 4 pm.

Did the call happen? And if so, what were the outcomes?

Thanks,

s.22

From: NWSRI Coordinator <info@nechakowhitesturgeon.org>

Sent: Thursday, 8 August 2019 9:43 AM

To s.22

Subject: Re: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hi s.22

I did not call is myself, but you can follow up with Rahul to see if the time changed:
rray@edynamics.com

Andrea

E: info@nechakowhitesturgeon.org
W: www.nechakowhitesturgeon.org
PO Box 710, Vanderhoof, BC, V0J 3A0

On 2019-08-07 16:06, s.22

wrote:

Greetings Andrea –

I tried calling in at 4 pm but there was no one else on the line. Perhaps the meeting was over by then?

Did the meeting occur?

Thanks,

s.22

From: NWSRI Coordinator <info@nechakowhitesturgeon.org>

Sent: Thursday, 8 August 2019 6:28 AM

To: Brian Toth <s.22>; Cale Babey <babey@unbc.ca>; Christina Ciesielski <cciesielski@cstc.bc.ca>; Cory Williamson <s.22>; Erin Gertzen <erin.gertzen@dfo-mpo.gc.ca>; Greg Andrusak <Greg.Andrusak@gov.bc.ca>; Ian Spendlow <ian.spendlow@gov.bc.ca>; Jeffrey Beardsall <s.22>; Justus Benckhuysen <justus.benckhuysen@riotinto.com>; Lee Williston <Lee.Williston@gov.bc.ca>; Mike Manky <Mike.Manky@gofishbc.com>; Mike Ramsay <Mike.Ramsay@gov.bc.ca>; Nikolaus Gantner <nikolaus.gantner@gov.bc.ca>; NWSRI Coordinator <info@nechakowhitesturgeon.org>; Ray Pillipow <Ray.Pillipow@gov.bc.ca>; Simon Gauthier-Fauteux <s.22>; Steve McAdam <steve.mcadam@gov.bc.ca>; Trevor Davies <trevor.davies@gov.bc.ca> <s.22>; Wayne Salewski <s.22>; Zsolt Sary <Zsolt.Sary@gov.bc.ca>

Subject: Fwd: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

FYI

From: Rahul Ray <rray@edynamics.com>

Sent: August-06-19 3:22 PM

To: Rahul Ray

Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday,

August 7, 2019

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently "creating a constriction in the river preventing the migration of salmon".

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

Agenda

1. Emergency Response at the Big Bar Slide - Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command - Trevor Bohay
4. Questions

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)
(United States)

English

Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)
English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)
(United States)

English

Conference ID: ^{s.17}

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP
Lead Facilitator and Senior Environmental Planner
t. 250.590.0072 | c. 250.893.3830
www.edynamics.com

[awoWmNY]<<http://www.edynamics.com/>>

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From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: FW: aug 8th gate movement.
Date: August 8, 2019 4:31:58 PM
Attachments: [aug 8 2019 increase gate move.doc](#)

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Burkitt, Jeff (RTA)
Sent: Thursday, August 8, 2019 2:56 PM
To: Bedard, Marc (RTA) <marc.bedard@riotinto.com>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>; Dobbin, Kevin (RTA) <kevin.dobbin@riotinto.com>; dwarburton@triton-env.com; Ian Spendlow <Ian.Spendlow@gov.bc.ca>; Jbond@triton-env.com; Paquin, Jean (RTA) <jean.paquin@riotinto.com>; Long, Mike (RTA) <mike.long@riotinto.com>; Smyth, Debbie (RTA) <debbie.smyth@riotinto.com>; Stuart sinclair <Stuart.Sinclair@kesgwut.com>; ted white <Ted.White@gov.bc.ca>; Theodore.mlynowski <thoedore.mlynowski@canada.ca>; Turcotte, Alexandre (RTA) <Alexandre.Turcotte@riotinto.com>
Subject: aug 8th gate movement.

See attached notification for changes to flow through skins lake spillway.

Jeff Burkitt
Supervisor Power Operations

Rio Tinto
1 Smeltersite Road, PO Box 1800
Kitimat, British Columbia, Canada
V8C 2H2
T +1 (250) 639.8410 F +1 (250) 639.8487
E jeff.burkitt@Riotinto.com
Cell (250)639 6440

Notice

**Increase of water discharge from Skins Lake
Spillway at the head of Skins lake and the
Cheslatta River , the Nechacko Reservoir**

**On Thursday , August 8, 2019, at 16:00 discharge
from the Skins lake spill way will be increased from
present level of 170 m³/s to 453.1 m³/s.**

**There will be a sudden increase of water flow in the
Cheslatta, river immediately south of the spillway.**

**The increase in water discharge is being done as
part of the STMP cooling flow**

From: Benckhuysen, Justus (RTA)
To: Chapman, Connie FLNR:EX
Subject: FW: GATE CHANGE
Date: August 8, 2019 4:52:23 PM
Attachments: [image001.png](#)
[GATE CHANGE 12.pdf](#)

As per the request from Incident Command, spillway discharge has been increased to 453.1 m³/s today.

The table below indicates the forecast temperature and flow provided by Triton Environmental.

Option 2.

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 21.76°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore		
Date	Discharge (m ³ /s)	Date	Temperature °C	
08-Aug	170	08-Aug	21.76	
09-Aug	190	09-Aug	21.24	
10-Aug	224	10-Aug	19.99	
11-Aug	228	11-Aug	19.64	
12-Aug	220	12-Aug	20.1	

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Ken and Leah Hanson [mailto:^{s.22}]
Sent: Thursday, August 8, 2019 4:19 PM
To: Turcotte, Alexandre (RTA) <Alexandre.Turcotte@riotinto.com>; Burkitt, Jeff (RTA) <jeff.burkitt@riotinto.com>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Jbond@triton-env.com; Stuart Sinclair <Stuart.Sinclair@avison.ca>
Subject: GATE CHANGE

Today August 8 2019 a adjustment was made at Skins Lake Spillway Gates 1 and 2.

Gates 1 and 2 were raised to 2.97 metres.

Res Elev. 2792.91.

Gates 1 and 2 were raised to 2.97 metres / Discharge 453.1 m³/s.

Completion time 16:15 hrs.

Ken & Leah Hanson

SLS Attendants

Kesgwut Resource Management Ltd.

22573 Ootsa Lake Road East

Burns Lake, BC

V0J 1E4

Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)		Date	Temperature °C
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10-Aug	224		10-Aug	19.99
11-Aug	228		11-Aug	19.64
12-Aug	220		12-Aug	20.1

Page 285 of 382

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From: s.22
To: [Chapman, Connie FLNR:EX](#)
Cc: "Rahul Ray"
Subject: RE: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019
Date: August 8, 2019 8:16:59 PM

Thanks Connie -
s.22

-----Original Message-----

From: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Sent: Friday, 9 August 2019 1:15 PM
To: s.22
Cc: Rahul Ray <r-ray@edynamics.com>
Subject: Re: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hi s.22

The province and DFO requested RTA to revert back to the STMP flows today. Flows were increased and water temperatures are forecasted to be at or below 20C by Saturday. I will make sure you are included on the email of the action items from the call. I hope to get it out first thing tomorrow.

Cheers,
Connie

Sent from my iPhone

On Aug 8, 2019, at 7:15 PM, s.22
s.22

> wrote:

Thanks Rahul. I look forward to receiving the summary as discussed.

Hi Connie – I look forward to your responses to the below queries. I am not looking for super-detailed information, just the summary information that would be available RE water input (Nechako) and the calculated effect that a forced reduction (dam withholding) will have at the rock slide site (water elevation).

Also, if available, please provide the considerations and assessments produced RE the effects/impacts a water reduction will have on White Sturgeon (especially larvae and juveniles) both in the Nechako River and the Fraser River mainstem (all locations downstream of the Nechako confluence).

Best Regards,
s.22

From: Rahul Ray <r-ray@edynamics.com<<mailto:r-ray@edynamics.com>>>
Sent: Friday, 9 August 2019 6:50 AM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca<<mailto:Connie.Chapman@gov.bc.ca>>>;
s.22

Subject: FW: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hi s.22

I am forwarding your questions to a Province of BC representative. The Province of BC is coordinating the response to the landslide.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner t. 250.590.0072 | c. 250.893.3830 www.edynamics.com

[awoWmNY]<<http://www.edynamics.com/>>

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From: s.22
s.22

Sent: August 8, 2019 1:45 PM

To: 'Rahul Ray' <rray@edynamics.com<<mailto:rray@edynamics.com>>>; 'NWSRI Coordinator'

<info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>>

Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Thanks Rahul –

I look forward to reviewing the summary as soon as it is available.

In the meanwhile, can you please provide:

1. an estimate of average water volume contribution in early-mid August from the Nechako River (at the Fraser Confluence) to the mainstem Fraser River; and
2. an estimate of what the expected drop in volume will be at the rock slide site under the proposed flow reduction action (at the Nechako dam).

Best Regards,
s.22

From: Rahul Ray <rray@edynamics.com<<mailto:rray@edynamics.com>>>

Sent: Friday, 9 August 2019 1:55 AM

To: s.22 >; NWSRI Coordinator

<info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>>

Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Good morning s.22

Thanks for your email.

The call, led by the Province of BC, did happen yesterday, but wrapped up by 4 pm.

The Province is preparing a meeting summary. I can send it to you when it is ready if you want.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner t. 250.590.0072 | c. 250.893.3830 www.edynamics.com

[awoWmNY]<<http://www.edynamics.com/>>
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From: s.22
Sent: August 7, 2019 5:10 PM
To: 'NWSRI Coordinator' <info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>>; rray@edynamics.com<<mailto:rray@edynamics.com>>
Subject: RE: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Thanks Andrea.

Greetings Rahul –
s.22 here – I received an invitation to join a conference call today but I was not able to do so until 4 pm. Did the call happen? And if so, what were the outcomes?
Thanks,
s.22

From: NWSRI Coordinator <info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>>
Sent: Thursday, 8 August 2019 9:43 AM
To: s.22
Subject: Re: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hi s.22

I did not call is myself, but you can follow up with Rahul to see if the time changed:
rray@edynamics.com<<mailto:rray@edynamics.com>>

Andrea

E: info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>
W: www.nechakowhitesturgeon.org<<http://www.nechakowhitesturgeon.org>>
PO Box 710, Vanderhoof, BC, V0J 3A0

On 2019-08-07 16:06: s.22 wrote:
Greetings Andrea –
I tried calling in at 4 pm but there was no one else on the line. Perhaps the meeting was over by then?
Did the meeting occur?
Thanks,
s.22

From: NWSRI Coordinator <info@nechakowhitesturgeon.org<<mailto:info@nechakowhitesturgeon.org>>>
Sent: Thursday, 8 August 2019 6:28 AM
To: Brian Toth s.22 >; Cale Babey <babey@unbc.ca<<mailto:babey@unbc.ca>>>; Christina Ciesielski <cciesielski@cstc.bc.ca<<mailto:cciesielski@cstc.bc.ca>>>; Cory Williamson s.22 >; Erin Gertzen <erin.gertzen@dfo-mpo.gc.ca>>; Greg Andrusak

<Greg.Andrusak@gov.bc.ca<mailto:Greg.Andrusak@gov.bc.ca>>; Ian Spendlow
 <ian.spendlow@gov.bc.ca<mailto:ian.spendlow@gov.bc.ca>>; Jeffrey Beardsall
 s.22 >; Justus Benckhuysen
 <justus.benckhuysen@riotinto.com<mailto:justus.benckhuysen@riotinto.com>>; Lee Williston
 <Lee.Williston@gov.bc.ca<mailto:Lee.Williston@gov.bc.ca>>; Mike Manky
 <Mike.Manky@gofishbc.com<mailto:Mike.Manky@gofishbc.com>>; Mike Ramsay
 <Mike.Ramsay@gov.bc.ca<mailto:Mike.Ramsay@gov.bc.ca>>; Nikolaus Gantner
 <nikolaus.gantner@gov.bc.ca<mailto:nikolaus.gantner@gov.bc.ca>>; NWSRI Coordinator
 <info@nechakowhitesturgeon.org<mailto:info@nechakowhitesturgeon.org>>; Ray Pillipow
 <Ray.Pillipow@gov.bc.ca<mailto:Ray.Pillipow@gov.bc.ca>>; Simon Gauthier-Fauteux
 s.22 >; Steve McAdam
 <steve.mcadam@gov.bc.ca<mailto:steve.mcadam@gov.bc.ca>>; Trevor Davies
 <trevor.davies@gov.bc.ca<mailto:trevor.davies@gov.bc.ca>>s.22
 s.22 >; Wayne Salewski
 s.22 ; Zsolt Sary
 <Zsolt.Sary@gov.bc.ca<mailto:Zsolt.Sary@gov.bc.ca>>
 Subject: Fwd: Fw: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

FYI

From: Rahul Ray <rray@edynamics.com<mailto:rray@edynamics.com>>
 Sent: August-06-19 3:22 PM
 To: Rahul Ray
 Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently "creating a constriction in the river preventing the migration of salmon".

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

Agenda

1. Emergency Response at the Big Bar Slide - Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command - Trevor Bohay
4. Questions

Call in details:
 Join by phone

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Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)	English (United States)

Conference ID s.17

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner t. 250.590.0072 | c. 250.893.3830

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[awoWmNY]<<http://www.edynamics.com/>>

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From: [Rahul Ray](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: RE: Provincial Big Bar updates
Date: August 9, 2019 8:37:58 AM
Attachments: [image001.png](#)
Importance: High

Please add the following:

- Brian Frenkel <Brian.Frenkel@avison.ca>; (District of Vanderhoof, Councillor)
- Wayne Salewski s.22 ; (Member of the public)
- Lori Egli <LoriEgli@district.vanderhoof.ca>; (District of Vanderhoof)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- Andrew Czornohalan (Andrew.Czornohalan@riotinto.com) Rio Tinto BC Works Acting General Manager
- Kevin Moutray s.22 (District of Vanderhoof Councillor)

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <rrey@edynamics.com>
Sent: August 9, 2019 8:24 AM
To: 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>
Subject: RE: Provincial Big Bar updates

Good morning,

Three more additions to the Province of BC distribution list:

- s.22 s.22 (Member of the public)
- Andrew Czornohalan (Andrew.Czornohalan@riotinto.com) Rio Tinto BC Works Acting General Manager
- Kevin Moutray s.22 (District of Vanderhoof Councillor)

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>
Sent: August 8, 2019 4:35 PM
To: 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>
Subject: RE: Provincial Big Bar updates

Hello,

Updated list who would like direct communication from the Province of BC on the Big Bar slide.

Again, in addition to First Nations.

- Mayor Jerry Thiessen (mayor@district.vanderhoof.ca) (District of Vanderhoof, Mayor)
- Brian Frenkel <Brian.Frenkel@avison.ca>; (District of Vanderhoof, Councillor)
- Wayne Salewski s.22 (Member of the public)
- Lori Egli <LoriEgli@district.vanderhoof.ca>; (District of Vanderhoof)
- Curtis Helgesen curtis.helgesen@rdbn.bc.ca (RDBN CAO)
- Mike Robertson (mrobertson@cheslatta.com) (Cheslatta Carrier Nation)
- David Luggi (dluggi@netbistro.com) Former Chief CSTC
- Jackie Thomas (Jackie.thomas@saikuz.com) Former chief Saik'uz First Nation
- Dustin Snyder s.22 (Spruce City Wildlife Association)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- Jerry Petersen (Jerry.Petersen@rdbn.bc.ca) (RDBN Director)
- Lory Derksen (Lory.Derksen@leg.bc.ca) (MLA John Rustad's office)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- Curtis Helgesen (curtis.helgesen@rdbn.bc.ca) (RDBN CAO)
- s.22 (info@nechako-retreat.ca) (Member of the public)
- Rodney Holland (rjholland@fraserlake.ca) (Village of Fraser Lake CAO)

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>
Sent: August 8, 2019 3:00 PM
To: 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>
Subject: RE: Provincial Big Bar updates

Sorry. More descriptions of who people area.

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

From: Rahul Ray <r-ray@edynamics.com>
Sent: August 8, 2019 2:51 PM
To: 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>
Subject: FW: Provincial Big Bar updates

Hi Connie,

Please continue to actively engage with Indigenous communities as per the BC mandate. As part of the Rio Tinto Water Engagement Initiative (WEI), we have been attempting to work with numerous First Nations. I provided an update to Dave Francis on July 19, 2019.

I understand the District of Vanderhoof would like their own meeting. I suggest you connect with Mayor Thiessen directly.

The following people from the Rio Tinto Water Engagement Initiative (WEI) participant list have requested being added to the Provincial Big Bar update list thus far:

- Mayor Jerry Thiessen (mayor@district.vanderhoof.ca) (District of Vanderhoof, Mayor)
 - Brian Frenkel <Brian.Frenkel@avison.ca>; (District of Vanderhoof, Councillor)
 - Wayne Salewski s.22 ; (Member of the public)
 - Lori Egli <LoriEgli@district.vanderhoof.ca>; (District of Vanderhoof)
 - Curtis Helgesen curtis.helgesen@rdbn.bc.ca (RDBN CAO)
- Mike Robertson (mrobertson@cheslatta.com) (Cheslatta Carrier Nation)
- David Luggi (dluggi@netbistro.com) Former Chief CSTC
- Jackie Thomas (Jackie.thomas@saikuz.com) Former chief Saik'uz First Nation
- Dustin Snyder s.22) (Spruce City Wildlife Association)
- s.22 s.22) (Member of the public)
- s.22 s.22) (Member of the public)
- Jerry Petersen (Jerry.Petersen@rdbn.bc.ca) (RDBN Director)
- Lory Derksen (Lory.Derksen@leg.bc.ca) (MLA John Rustad's office)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- s.22 s.22 (Member of the public)
- Curtis Helgesen (curtis.helgesen@rdbn.bc.ca) (RDBN CAO)

Thanks,

Rahul

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From: Rahul Ray <r-ray@edynamics.com>

Sent: August 8, 2019 10:54 AM

To: Rahul Ray <r-ray@edynamics.com>

Subject: Provincial Big Bar updates

Hello,

Thanks to all of you who were able to participate in the Province-led conference call yesterday about the Big Bar slide and Provincial order which affects flow releases from Nechako Reservoir, including the Summer Temperature Management Program (STMP).

The Province will be building an email distribution list to provide periodic updates on the Big Bar slide.

Please let me know **(today, if possible)** if you would like to be added to the Provincial distribution list to receive updates directly from provincial representatives.

People I heard on the phone yesterday request direct communication from the Province included:

- Mayor Jerry Thiessen. Can the following people please confirm you would also like direct contact from the Province?
 - Brian Frenkel
 - Wayne Salewski
 - Lori Egli
 - Curtis Helgesen
 - Kevin Moutray
- Mike Robertson
- David Luggi
- Jackie Thomas
- Dustin Snyder

If I don't hear from you, I will simply forward the updates I receive from the Province when I receive them.

Thanks,

Rahul

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From: Rahul Ray <r-ray@edynamics.com>

Sent: August 6, 2019 3:30 PM

To: Rahul Ray <r-ray@edynamics.com>

Subject: RE: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello again,

For clarity, the call is at 3 pm tomorrow (Wednesday, August 7).

Call in details:

Join by phone

Local - Victoria: +1 (250) 952-9304,,7223438# (BC, Canada)

English (United States)

Local - Vancouver: +1 (604) 398-9304,,7223438# (BC, Canada)

English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)

English (United States)

Conference ID: **s.17**

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Rahul Ray <r-ray@edynamics.com>

Sent: August 6, 2019 3:23 PM

To: Rahul Ray <r-ray@edynamics.com>

Subject: Province of BC order: STMP flow, conference call tomorrow: 3 pm, Wednesday, August 7, 2019

Hello WEI participants,

As many of you are aware, a landslide has occurred in the vicinity of Big Bar. The slide is currently "creating a constriction in the river preventing the migration of salmon".

The Province of British Columbia issued the attached order on Saturday, August 3. This order affects flow releases associated with the Nechako Reservoir Summer Temperature Management Program (STMP).

I know you have many questions and concerns. Province of BC representatives will be holding a conference call tomorrow to field your questions.

Province of BC representatives will lead the call. They have outlined a draft agenda below.

Agenda

1. Emergency Response at the Big Bar Slide – Trevor Bohay
2. Order issued to RTA by the Comptroller of Water Rights- Ted White/ Connie Chapman
3. Day to day process at the incident command – Trevor Bohay
4. Questions

Call in details:

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English (United States)

Toll-Free: +1 (888) 952-9304,,7223438# (BC, Canada)

English (United States)

Conference ID **s.17**

I hope you can join the discussion.

Thanks,

Rahul

Rahul Ray, MRM, MCIP, RPP

Lead Facilitator and Senior Environmental Planner

t. 250.590.0072 | c. 250.893.3830

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From: [Rahul Ray](#)
To: [Chapman, Connie FLNR:EX](#)
Cc: [Benckhuysen, Justus \(RTA\)](#)
Subject: FW: Big Bar update
Date: August 9, 2019 9:47:56 AM
Attachments: [Big Bar Landslide Meeting - Action Items.docx](#)

Hi Connie,

Thanks for sending out the action items.

Can you please write me a new email with some context of how the actions were generated? From a call on...

I will then forward the email on to the Water Engagement Initiative (WEI) participants.

Can you please include your title and email signature?

I just want to make sure this is all formal and there is a clear distinction between the WEI and the actions of the Province on the Big Bar slide.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 9, 2019 9:14 AM
To: Rahul Ray <r-ray@edynamics.com>
Subject: FW: Big Bar update

Please send this out to WEI participants

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Chapman, Connie FLNR:EX [mailto:Connie.Chapman@gov.bc.ca]

Sent: Friday, August 9, 2019 8:49 AM

To: Brian.Frenkel@avison.ca, s.22

Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>

Subject: FW: Big Bar update

From: Chapman, Connie FLNR:EX

Sent: August 9, 2019 8:43 AM

To: Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; 'mayor@district.vanderhoof.ca' <mayor@district.vanderhoof.ca>; s.22
s.22 ; 'council2@district.vanderhoof.ca' <council2@district.vanderhoof.ca>; 'council4@district.vanderhoof.ca' <council4@district.vanderhoof.ca>; 'john.murphy@hubinternational.com' <john.murphy@hubinternational.com>; 'LoriEgli@district.vanderhoof.ca' <LoriEgli@district.vanderhoof.ca>; 'jackie.thomas@saikuz.com' <jackie.thomas@saikuz.com>; 'mrobertson@cheslatta.com' <mrobertson@cheslatta.com>; 'dluggi@netbistro.com' <dluggi@netbistro.com>; 'jennifer_griffith@aboriginal-law.com' <jennifer_griffith@aboriginal-law.com>; 'priscilla.mueller@saikuz.com' <priscilla.mueller@saikuz.com>; 'lnooski@nadleh.ca' <lnooski@nadleh.ca>; 'curtis.helgesen@rdbn.bc.ca' <curtis.helgesen@rdbn.bc.ca>; s.22
s.22 ; 'Jerry.Petersen@rdbn.bc.ca' <Jerry.Petersen@rdbn.bc.ca>; 'Jerry.Petersen@rdbn.bc.ca'; Derksen, Lory D LASS:EX <Lory.Derksen@leg.bc.ca>; s.22
s.22 ; 'info@nechako-retreat.ca' <info@nechako-retreat.ca>; 'info@nechako-retreat.ca'; 'rijholland@fraserlake.ca' <rijholland@fraserlake.ca>; Bonnie Antcliffe <Bonnie.Antcliffe@dfo-mpo.gc.ca>

Subject: RE: Big Bar update

Please see attached the action items and response from the August 7, 2019 meeting.

-----Original Appointment-----

From: Rasmussen, Paul FLNR:EX

Sent: August 8, 2019 8:23 PM

To: Rasmussen, Paul FLNR:EX; Chapman, Connie FLNR:EX; Bohay, Trevor FLNR:EX; White, Ted T FLNR:EX; Davis, Jennifer C FLNR:EX; Schell, Steve E FLNR:EX; 'mayor@district.vanderhoof.ca'; s.22 ; 'council2@district.vanderhoof.ca'; 'council4@district.vanderhoof.ca'; 'john.murphy@hubinternational.com'; 'LoriEgli@district.vanderhoof.ca'; 'jackie.thomas@saikuz.com'; 'mrobertson@cheslatta.com'; 'dluggi@netbistro.com';

'jennifer_griffith@aboriginal-law.com'; 'priscilla.mueller@saikuz.com'; 'Inooski@nadleh.ca';
'curtis.helgesen@rdbn.bc.ca'; s.22

s.22 'Jerry.Petersen@rdbn.bc.ca'; Derksen, Lory D LASS:EX;

s.22 'info@nechako-retreat.ca'; 'rjholland@fraserlake.ca'

Subject: Big Bar update

When: August 9, 2019 10:00 AM-10:30 AM (UTC-07:00) Mountain Time (US & Canada).

Where: Online Meeting

Join online meeting

<https://unite.gov.bc.ca/gov/meet/paul.rasmussen/CJDQP3CY>

Join by Phone

Local - Victoria: +1 (250) 952-9304

Local - Vancouver: +1 (604) 398-9304

Toll-Free: +1 (888) 952-9304

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Conference ID: s.17

[Forgot your dial-in PIN?](#) | [First online meeting?](#)

Big Bar Landslide Meeting - Action Items

- **FLNR** to provide technical response to Cheslatta (Mike Robertson) question on the relative magnitude of flow reduction at the Big Barr slide that can be achieved by reducing spillway release flows.
 - FLNR (Trevor Bohay) commented that spillway reductions would constitute less than 10% of flow at Big Bar slide.
 - **Response:** The benefit of maintaining the flow releases at ~170 cubic metres per second was to support maintaining stable flows at the Big Bar Landslide site. This was to assist staff at the site trying to implement a temporary fish ladder and other mitigation measures. Engineers in the Incident Command center advised that by maintaining flow releases from the spillway at ~170 cubic metres per second that the stage of the river would remain stable and may even provide a stage reduction.
- **FLNR** to provide technical response on the risk analysis for fish in the Nechako and fish at the Big Bar Landslide.
 - **Response:** Prior to observing salmon upstream of the slide (no passage), an attempt at mitigating flows at the slide site was attempted to allow for site conditions to improve. At that time the benefits out-weighed risk to fish populations in Nechako. The Province had limited concerns related to White sturgeon at that time. Following the confirmation of radio tracked fish/salmon to the Stuart/Nechako its DFO deemed that reinstating STMP was a higher priority than mitigating flows at slide
- **FLNR** (Ted White) to review and correct hydrometric station referenced in Aug 3, 2019 Order for water temperature and flow management.
 - Vanderhoof (Mayor Gerry Thiessen) raised concerns regarding a 5 day lag between spillway release and downstream temperature difference observed at the referenced station.
 - **Response:** The Comptroller of Water Rights will issue an amendment to the order correcting the hydrometric station referenced to the correct compliance point.
- **FLNR** and **Saik'uz** to explore increasing Saik'uz involvement in monitoring of Big Barr site
 - Saik'uz (Jackie Thomas) expressed interest in monitoring fish, particularly juvenile chinook).
- **FLNR** and **DFO** to determine if daily flow and flow release reports can be provided.
 - Cheslatta requested daily temperature report and projected 4-5 day forecast.
 - Saik'uz requested ongoing data reports on fish and fish passage numbers.
 - **Response:** The province is looking into the possibility of providing daily temperatures for when temperatures are above 20°C. Once flows revert back to the STMP flows and temperatures are reach 20°C reporting will cease.

- **DFO** (Bonnie Antcliffe) to confirm contact for Chinook management for Spruce City Wildlife Association (Dustin Snyder) to provide emergency management support for salmonids.
- **Response:** Spruce City Wildlife Association (SCWA) has been approved for the addition of two Upper Fraser Spring 5-2 Chinook Stocks to their 2019 production plan. Details are being worked out between SCWA and the DFO Salmonid Enhancement Program (SEP). The DFO contact is:
 Jason Mahoney, Section Head
 Planning and Assessment Unit | Planification et évaluation de la mise en valeur
 Salmonid Enhancement Program | Programme de mise en valeur des salmonidés
 Ecosystem Management Branch | Gestion des écosystèmes
 Fisheries and Oceans Canada | Pêches et Océans Canada
 200 - 401 Burrard St, Vancouver BC V6C 3S4 | 401, rue Burrard, bur. 200,
 Vancouver CB V6C 3S4
 Office: 604-666-5017
 Cell: 604-348-6316
- **FLNR** to determine process for direct communication on emergency management, as requested by Vanderhoof.
 - **Response:** The province will follow up with Vanderhoof at a later date to explore the request.
- **RTA's** Water Engagement Initiative team (Rahul Ray) to share contact list with provincial government for emergency management communication.
 - **Response:** Rahul Ray requested the Water Engagement Initiatives team self identify who would like to have direct communication with the province. The province has been provided a contact list, which they will use for the remainder of this emergency management response.
- **FLNR** to continue daily assessments of water temperature and flows to determine when/ if curtailment of STMP flows can cease.
 - **Response:** As required by the Order under the *Water Sustainability Act* issued by the Comptroller of Water Rights on August 3, 2019. RTA is required to balance the needs of fish passage at Big Bar Slide and resident in the Nechako and review flows daily and adjusted with input from DFO and FLNRORD. The province is actively monitoring the flows and water temperature in the Nechako and Fraser River to ensure compliance of the order is met by RTA and that the needs for fish passage at the Big Bar Slide and the resident fish of the Nachako are balance. The province is committed to balancing the needs of both systems and if flows need to be increased on the Nechako the province will require RTA to release STMP flows as per status quo.

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: RE: Correct gauging station
Date: August 9, 2019 11:37:28 AM

There is no WSC station there, but it is correct to state that

- 1) flow will be monitored at WSC station at Cheslatta falls
- 2) Temperature will be monitored at Finmore, immediately upstream of Stuart River confluence. The site that is normally used to monitor river temperature as part of the Summer Temperature Management Program.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Chapman, Connie FLNR:EX [mailto:Connie.Chapman@gov.bc.ca]
Sent: Friday, August 9, 2019 11:27 AM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: Correct gauging station

Hi Justus,

Could you provide me with the name of the correct gauging station that should have been put in the order. Is it just called Finmore?

We will be considering an amendment to the order to clarify that compliance point.

Thanks,
Connie

From: Chapman, Connie FLNR:EX
To: Benckhuysen, Justus (RTA)
Subject: RE: Information Bulletin
Date: August 9, 2019 1:46:00 PM

Thank you too Justus. If for some reason you need anything please don't hesitate to call.

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 9, 2019 1:46 PM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Subject: RE: Information Bulletin

Thank you

Have a good weekend.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Chapman, Connie FLNR:EX [<mailto:Connie.Chapman@gov.bc.ca>]
Sent: Friday, August 9, 2019 1:44 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Cc: Rahul Ray <r-ray@edynamics.com>
Subject: Information Bulletin

Hi Justus,

This information bulletin was just released by the province (https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/embc/big-bar-landslide-2019/19_71w20ay_water_flow_august_9_2019.pdf) and can be found on the Big Bar Landslide website under information Bulletins <https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/emergency-response-and-recovery/incident-summaries/big-bar-landslide-incident>.

Thanks,
Connie

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Jenifer Bond](#); [Bohay, Trevor FLNR:EX](#); [Willis, David \(Pacific\)](#); [Andrusak, Greg FLNR:EX](#); [Magnan, Alain](#); [Davis, Jennifer C FLNR:EX](#); [Antcliffe, Bonnie](#); [Gord Sterritt](#); [Chapman, Connie FLNR:EX](#); [Abbey, Travis FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Wattie, Brad](#); [Lemon, Steve FLNR:EX](#)
Cc: [Rasmussen, Paul FLNR:EX](#)
Subject: RE: STMP Update - Aug. 8
Date: August 9, 2019 1:49:33 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Thanks Jen

Please request gate change as per usual STMP protocol.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Jenifer Bond [mailto:JBond@triton-env.com]
Sent: Friday, August 9, 2019 1:45 PM
To: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>
Cc: Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>
Subject: RE: STMP Update - Aug. 8

Attached is the update for today.

As per the STMP protocol and decision record, flows at the SLS will be decreased today to 14.2 m³/s due to a cooling trend.

09-Aug				
Model Output - Spillway decreased to 14.2 m ³ /s				
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)		Date	Temperature °C
09-Aug	182		09-Aug	20.57
10-Aug	196		10-Aug	20.24
11-Aug	182		11-Aug	19.66
12-Aug	179		12-Aug	19.31
13-Aug	178		13-Aug	19.23

If the cooling trend continues over the next few days flows will be increased to 170 m³/s tomorrow to maintain water levels at 170 m³/s at the NRBCF.

I have attached the updated spreadsheet with water temperature and flow data.

Thank you,
Jen

From: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>

Sent: August 8, 2019 12:49 PM

To: Jenifer Bond <JBond@triton-env.com>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterrett@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>

Cc: Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>

Subject: RE: STMP Update - Aug. 8

As per our daily operating procedure, the Environmental Unit has assessed the temperature model provided and recommends that Rio Tinto augment flows to those of the STMP (453.1 cms) today and to the flows the model indicates for STMP going forward, but continue to provide daily modelling results in the event that further curtailment is warranted until the ORDER expires. At this juncture, follow the STMP unless you hear contrary from a member of the JESC.

Thanks for your assistance,

Regards,

Trevor Bohay on behalf of the JESC

From: Jenifer Bond [mailto:JBond@triton-env.com]

Sent: Thursday, August 8, 2019 11:24 AM

To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX

Subject: STMP Update - Aug. 8

Hello All.

Option 1.

Maintaining the SLS at the current discharge of 170 m³/s will result in a maximum mean daily water temperature of 21.76°C over the next three days as per the model output below.

Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
08-Aug	171	08-Aug	21.76
09-Aug	170	09-Aug	21.27
10-Aug	170	10-Aug	20.18
11-Aug	170	11-Aug	19.83
12-Aug	170	12-Aug	20.23

Yesterday's maximum water temperature at the Nechako River at Finmore was 22.2°C at 5:00pm.

Option 2.

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 21.76°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m ³ /s for one day			
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
08-Aug	170	08-Aug	21.76
09-Aug	190	09-Aug	21.24
10-Aug	224	10-Aug	19.99
11-Aug	228	11-Aug	19.64
12-Aug	220	12-Aug	20.1

I have attached a spreadsheet which outlines the daily recorded water temperatures at various locations, daily discharge from the WSC website and the predicted conditions from the model.

If you have further questions please let me know.
Thank you,

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
C 250.617.8732



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The information included in this email (and attachments) is intended for the named recipients only and may contain privileged and confidential information. If you have received this email in error, any use, copying or dissemination of its contents is prohibited. Please notify the sender immediately by return e-mail or telephone at the numbers listed above and destroy all copies of the communication.

Please consider the environment before printing this email.

09-Aug					
Model Output - Spillway decreased to 14.2 m3/s					
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Date	Discharge (m ³ /s)		Date	Temperature °C	
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12-Aug	179		12-Aug	19.31	
13-Aug	178		13-Aug	19.23	

Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
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09-Aug	170	09-Aug	21.27
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Model Output - Spillway increased to 453.1 m ³ /s for one day				
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
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11-Aug	228		11-Aug	19.64
12-Aug	220		12-Aug	20.1

From: Benckhuysen, Justus (RTA)
To: Chapman, Connie FLNR:EX
Subject: FW: response to question re flows before order
Date: August 9, 2019 4:03:39 PM

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Benckhuysen, Justus (RTA)
Sent: Friday, August 9, 2019 3:38 PM
To: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Subject: RE: response to question re flows before order

I suggest: small addition

The STMP involves spillway discharge between 14.2 m3/s and 453.1 m3/s.

Discharge was at 14.2 m3/s prior to issuance of the Order on 3 August, as per normal STMP protocol. Spillway discharge remained at 14.2 m3/s until Rio Tinto was requested to increase discharge to 340 m3/s on 4 August, and requested to achieve a flow of 170 m3/s at Cheslatta Falls. At that time the water temperatures forecast indicated a peak daily average of 21.65 degrees in the **Nechako River at Finmore**".

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Benckhuysen, Justus (RTA)
Sent: Friday, August 9, 2019 3:35 PM
To: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>

Subject: RE: response to question re flows before order

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: Bohay, Trevor FLNR:EX [<mailto:Trevor.Bohay@gov.bc.ca>]
Sent: Friday, August 9, 2019 3:17 PM
To: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: response to question re flows before order

Hi Justus,

Of course the WEI members are analysing every nuance of the flows prior to the Order.

I was asked: The flows at Cheslatta falls dropped on the 2nd, but the Order didn't come out until the 3rd.

Trevor Bohay M.Sc., P.Geo.
Resource Manager - Authorizations
Thompson-Okanagan Region
Ministry of Forests, Lands, Natural Resource Operations and Rural Development
1259 Dalhousie Street
Kamloops, BC

Phone: 250 371-6284



From: [Chapman, Connie FLNR:EX](#)
To: [Bohay, Trevor FLNR:EX](#); [Rasmussen, Paul FLNR:EX](#); [White, Ted T FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Andrusak, Greg FLNR:EX](#)
Cc: [Leong, Doris FLNR:EX](#)
Subject: Action Item from RTA Stakeholder call
Date: August 9, 2019 4:24:00 PM
Attachments: [2019-08-09 Big Bar Landslide Meeting Action Items.docx](#)

Attached are the action items and responses captured in todays call with the RTA stakeholders regarding the Big Bar Slide and the order issued to RTA.

Please let me know if I have missed anything or if a response has been missed. Otherwise I will send this out first thing next week or sooner.

Thank you to Doris who helped capture the action items during the last two calls.

Thanks,
Connie



Big Bar Landslide Meeting- August 9, 2019 at 9:00am

Action Items Captured by the Province:

FLNR will not request additional flow reductions until temperatures remain below 20°C. However, additional curtailment is highly unlikely given that flows are forecasted to drop around Aug 11. Order will stay in place until it expires on Sep 1 to allow for emergency management flexibility.

FLNR (Trevor Bohay) to work with independent consultant (Triton) to provide daily temperature and flow reports from Aug 2 (date of Order) through to present, until temperatures return and remain below 20°C.

Response: Trevor Bohay, FLNR, sent an email on Friday August 9, 2019 at 1:20 providing daily temperature readings from August 3, 2019 to August 9, 2019 at 10 am. The province has committed to providing temperature readings until water temperatures return to 20C as flows have returned under the Summer Temperature Management Program.

FLNR (Trevor Bohay) to confirm days and durations of flow releases and provide chart of all flows since Order was issued.

- RTA was requested to maintain flows at 170cms on Aug 5, 6 and 7.
- Cheslatta (Mike Robertson) notes that flows were under 210cms on Aug 2 and decreased linearly to 150cms on Aug 5.

Response: RTA was issued the Water Sustainability Act Order on August 3, 2019 by the Comptroller of Water Rights. On August 3, 2019 discharge was at 14.2 m³/s prior to the issuance of the order, as per normal TSMP protocol. Spillway discharge remained at 124.2 m³/s until Rio Tinto was requested to increase discharge to 340 m³/s on August 4, 2019 and requested to achieve a flow of 170 m³/s at Cheslatta Falls. August 5, 6, 7 discharge from the spillway was requested to maintain to achieve a flow of 170 m³/s at Cheslatta Falls.

FLNR to confirm for Jerry Peterson the locations of temperature measurements and what additional information is available and can be provided.

- Current reports and modelling are based on temperature probes at Finmoore.

Response: The Comptroller of Water Rights issued a letter to Rio Tinto on August 9, 2019 amending the order to identify the correct compliance point for temperature monitoring. The order now reads:

"2. From August 3 to August 20, 2019 the licensee is to operate the Skins Lake Spillway to provide flows at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) and water temperatures at Finmoore (upstream of the Stuart River and Nechako River confluence) that balance the needs of:

- Flow required to enable fish passage at the location of the Big Bar Slide on the Fraser River;
- Water temperature and flow in the Nechako River required for cooling purpose to protect Chinook and Sockeye Salmon;
- Water temperature for Sturgeon and other resident fish."



FLNR will continue to explore opportunities to improve fish passage on the Fraser River at the Big Bar Landslide given unusually high flows and rainfall expected.

FLNR to ensure direct communication with chiefs on future urgent matters to fully inform communities and collaborate on decisions, as envisioned in the Carrier Sekani First Nations G2G agreement.

All First Nations can contact **FLNR** (Trevor Bohay) if interested in opportunities to engage further in Big Bar Landslide response.

FLNR to schedule follow-up call with Vanderhoof (Gerry Thiessen) next week (Aug 12-14) regarding concerns with lack of local input on emergency decisions and decision-making affecting Nechako River.

Response: The Province will follow up with Mayor Gerry Thiessen of Vanderhoof to establish a meeting date and time.

Denis Abelson to provide technical questions regarding genetic stock for early Stuarts to FLNR to forward to DFO.

Response: The Province will forward the question to DFO once received.

From: [Chapman, Connie FLNR:EX](#)
To: [Rahul Ray](#)
Cc: [Benckhuysen, Justus \(RTA\)](#); [Bohay, Trevor FLNR:EX](#); [Schell, Steve E FLNR:EX](#)
Subject: RE: Big Bar update
Date: August 9, 2019 4:51:00 PM
Attachments: [Big Bar Landslide Meeting - Action Items.pdf](#)

Hi Rahul,

Please find attached the action items from the August 7, 2019, 3pm, conference call that was initiated and held by the province regarding the Big Bar Landslide and the Order issued to RTA, for which the Rio Tinto Water Engagement Initiatives team members were invited to. If you could please distribute to the group it would be appreciated. For questions regarding the Big Bar Landslide they can be directed to Steve.Schell@gov.bc.ca.

Thank you,
Connie

Connie Chapman, M.Sc., P.Ag. | *A/Manager Water Allocation & Business Unit*
Water Management Branch
Ministry of Forest, Lands, Natural Resource Operations and Rural Development
2957 Jutland Road, Victoria, BC
Office: 778 698 7332
Email: Connie.Chapman@gov.bc.ca

From: Rahul Ray <r-ray@edynamics.com>
Sent: August 9, 2019 9:48 AM
To: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Subject: FW: Big Bar update

Hi Connie,

Thanks for sending out the action items.

Can you please write me a new email with some context of how the actions were generated? From a call on...

I will then forward the email on to the Water Engagement Initiative (WEI) participants.

Can you please include your title and email signature?

I just want to make sure this is all formal and there is a clear distinction between the WEI and the

actions of the Province on the Big Bar slide.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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Big Bar Landslide Meeting- August 7, 2019 at 3pm

Action Items Captured by the Province:

- **FLNR** to provide technical response to Cheslatta (Mike Robertson) question on the relative magnitude of flow reduction at the Big Barr slide that can be achieved by reducing spillway release flows.
 - FLNR (Trevor Bohay) commented that spillway reductions would constitute less than 10% of flow at Big Bar slide.
- **Response:** The benefit of maintaining the flow releases at ~170 cubic metres per second was to support maintaining stable flows at the Big Bar Landslide site. This was to assist staff at the site trying to implement a temporary fish ladder and other mitigation measures. Engineers in the Incident Command center advised that by maintaining flow releases from the spillway at ~170 cubic metres per second that the stage of the river would remain stable and may even provide a stage reduction.
- **FLNR** to provide technical response on the risk analysis for fish in the Nechako and fish at the Big Bar Landslide.
 - **Response:** Prior to observing salmon upstream of the slide (no passage), an attempt at mitigating flows at the slide site was attempted to allow for site conditions to improve. At that time the benefits out-weighed risk to fish populations in Nechako. The Province had limited concerns related to White sturgeon at that time. Following the confirmation of radio tracked fish/salmon to the Stuart/Nechako its DFO deemed that reinstating STMP was a higher priority than mitigating flows at slide
- **FLNR** (Ted White) to review and correct hydrometric station referenced in Aug 3, 2019 Order for water temperature and flow management.
 - Vanderhoof (Mayor Gerry Thiessen) raised concerns regarding a 5 day lag between spillway release and downstream temperature difference observed at the referenced station.
 - **Response:** The Comptroller of Water Rights will issue an amendment to the order correcting the hydrometric station referenced to the correct compliance point.
- **FLNR** and **Saik'uz** to explore increasing Saik'uz involvement in monitoring of Big Barr site
 - Saik'uz (Jackie Thomas) expressed interest in monitoring fish, particularly juvenile chinook).
- **FLNR** and **DFO** to determine if daily flow and flow release reports can be provided.
 - Cheslatta requested daily temperature report and projected 4-5 day forecast.
 - Saik'uz requested ongoing data reports on fish and fish passage numbers.



- **Response:** The province is looking into the possibility of providing daily temperatures for when temperatures are above 20°C. Once flows revert back to the STMP flows and temperatures are reach 20°C reporting will cease.
- **DFO** (Bonnie Antcliffe) to confirm contact for Chinook management for Spruce City Wildlife Association (Dustin Snyder) to provide emergency management support for salmonids.
- **Response:** Spruce City Wildlife Association (SCWA) has been approved for the addition of two Upper Fraser Spring 5-2 Chinook Stocks to their 2019 production plan. Details are being worked out between SCWA and the DFO Salmonid Enhancement Program (SEP). The DFO contact is:
Jason Mahoney, Section Head
Planning and Assessment Unit | Planification et évaluation de la mise en valeur
Salmonid Enhancement Program | Programme de mise en valeur des salmonidés
Ecosystem Management Branch | Gestion des écosystèmes
Fisheries and Oceans Canada | Pêches et Océans Canada
200 - 401 Burrard St, Vancouver BC V6C 3S4 | 401, rue Burrard, bur. 200,
Vancouver CB V6C 3S4
Office: 604-666-5017
Cell: 604-348-6316
- **FLNR** to determine process for direct communication on emergency management, as requested by Vanderhoof.
 - **Response:** The province will follow up with Vanderhoof at a later date to explore the request.
- **RTA's** Water Engagement Initiative team (Rahul Ray) to share contact list with provincial government for emergency management communication.
 - **Response:** Rahul Ray requested the Water Engagement Initiatives team self identify who would like to have direct communication with the province. The province has been provided a contact list, which they will use for the remainder of this emergency management response.
- **FLNR** to continue daily assessments of water temperature and flows to determine when/ if curtailment of STMP flows can cease.
 - **Response:** As required by the Order under the *Water Sustainability Act* issued by the Comptroller of Water Rights on August 3, 2019. RTA is required to balance the needs of fish passage at Big Bar Slide and resident in the Nechako and review flows daily and adjusted with input from DFO and FLNRORD. The province is actively monitoring the flows and water temperature in the Nechako and Fraser River to ensure compliance of the order is met by RTA and that the needs for fish passage at the Big Bar Slide and the



resident fish of the Nachako are balance. The province is committed to balancing the needs of both systems and if flows need to be increased on the Nechako the province will require RTA to release STMP flows as per status quo.

From: [Rahul Ray](#)
To: [Rahul Ray](#)
Subject: Big Bar update: information for WEI participants
Date: August 9, 2019 5:01:26 PM
Attachments: [Big Bar Landslide Meeting - Action Items.pdf](#)

Hello,

Please find attached the action items from the August 7, 2019 conference call hosted by the Province of BC about the Big Bar Landslide.

Apologies if you are receiving this from multiple sources.

Thanks,

Rahul

Rahul Ray | EDI Environmental Dynamics Inc. | t. 250.590.0072 c. 250.893.3830

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From: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Sent: August 9, 2019 4:52 PM
To: Rahul Ray <r-ray@edynamics.com>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>
Subject: RE: Big Bar update

Hi Rahul,

Please find attached the action items from the August 7, 2019, 3pm, conference call that was initiated and held by the province regarding the Big Bar Landslide and the Order issued to RTA, for which the Rio Tinto Water Engagement Initiatives team members were invited to. If you could please distribute to the group it would be appreciated. For questions regarding the Big Bar Landslide they can be directed to Steve.Schell@gov.bc.ca.

Thank you,
Connie

Connie Chapman, M.Sc., P.Ag. | *A/Manager Water Allocation & Business Unit*
Water Management Branch
Ministry of Forest, Lands, Natural Resource Operations and Rural Development
2957 Jutland Road, Victoria, BC
Office: 778 698 7332
Email: Connie.Chapman@gov.bc.ca



Big Bar Landslide Meeting- August 7, 2019 at 3pm

Action Items Captured by the Province:

- **FLNR** to provide technical response to Cheslatta (Mike Robertson) question on the relative magnitude of flow reduction at the Big Barr slide that can be achieved by reducing spillway release flows.
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 - Saik'uz (Jackie Thomas) expressed interest in monitoring fish, particularly juvenile chinook).
- **FLNR** and **DFO** to determine if daily flow and flow release reports can be provided.
 - Cheslatta requested daily temperature report and projected 4-5 day forecast.
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- **Response:** The province is looking into the possibility of providing daily temperatures for when temperatures are above 20°C. Once flows revert back to the STMP flows and temperatures are reach 20°C reporting will cease.
- **DFO** (Bonnie Antcliffe) to confirm contact for Chinook management for Spruce City Wildlife Association (Dustin Snyder) to provide emergency management support for salmonids.
- **Response:** Spruce City Wildlife Association (SCWA) has been approved for the addition of two Upper Fraser Spring 5-2 Chinook Stocks to their 2019 production plan. Details are being worked out between SCWA and the DFO Salmonid Enhancement Program (SEP). The DFO contact is:
Jason Mahoney, Section Head
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Salmonid Enhancement Program | Programme de mise en valeur des salmonidés
Ecosystem Management Branch | Gestion des écosystèmes
Fisheries and Oceans Canada | Pêches et Océans Canada
200 - 401 Burrard St, Vancouver BC V6C 3S4 | 401, rue Burrard, bur. 200,
Vancouver CB V6C 3S4
Office: 604-666-5017
Cell: 604-348-6316
- **FLNR** to determine process for direct communication on emergency management, as requested by Vanderhoof.
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 - **Response:** Rahul Ray requested the Water Engagement Initiatives team self identify who would like to have direct communication with the province. The province has been provided a contact list, which they will use for the remainder of this emergency management response.
- **FLNR** to continue daily assessments of water temperature and flows to determine when/ if curtailment of STMP flows can cease.
 - **Response:** As required by the Order under the *Water Sustainability Act* issued by the Comptroller of Water Rights on August 3, 2019. RTA is required to balance the needs of fish passage at Big Bar Slide and resident in the Nechako and review flows daily and adjusted with input from DFO and FLNRORD. The province is actively monitoring the flows and water temperature in the Nechako and Fraser River to ensure compliance of the order is met by RTA and that the needs for fish passage at the Big Bar Slide and the



resident fish of the Nachako are balance. The province is committed to balancing the needs of both systems and if flows need to be increased on the Nechako the province will require RTA to release STMP flows as per status quo.

From: Jenifer Bond
To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX
Cc: Rasmussen, Paul FLNR:EX
Subject: STMP Update - Aug. 10
Date: August 10, 2019 12:47:17 PM
Attachments: [image003.png](#)
[image004.png](#)
[image006.png](#)
[Flow_Temp_daily_update.xlsx](#)

Attached is the update for today.

As per the STMP protocol and decision record, flows at the SLS will be increased today to 170 m³/s to prevent flows from dropping below 170 m³/s at the NRBCF.

10-Aug			
Model Output - Spillway increased to 170 m ³ /s			
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
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11-Aug	183	11-Aug	20.2
12-Aug	180	12-Aug	19.64
13-Aug	178	13-Aug	19.19
14-Aug	177	14-Aug	19.07

If you have any questions please let me know.

Thank you,
Jen

From: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
Sent: August 8, 2019 12:49 PM
To: Jenifer Bond <JBond@triton-env.com>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>
Cc: Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>
Subject: RE: STMP Update - Aug. 8

As per our daily operating procedure, the Environmental Unit has assessed the temperature model provided and recommends that Rio Tinto augment flows to those of the STMP (453.1 cms) today and to the flows the model indicates for STMP going forward, but continue to provide daily modelling results in the event that further curtailment is warranted until the ORDER expires. At this juncture, follow the STMP unless you hear contrary from a member of the JESC.

Thanks for your assistance,

Regards,

Trevor Bohay on behalf of the JESC

From: Jenifer Bond [<mailto:JBond@triton-env.com>]

Sent: Thursday, August 8, 2019 11:24 AM

To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX

Subject: STMP Update - Aug. 8

Hello All.

Option 1.

Maintaining the SLS at the current discharge of 170 m³/s will result in a maximum mean daily water temperature of 21.76°C over the next three days as per the model output below.

Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
08-Aug	171	08-Aug	21.76
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10-Aug	170	10-Aug	20.18
11-Aug	170	11-Aug	19.83
12-Aug	170	12-Aug	20.23

Yesterday's maximum water temperature at the Nechako River at Finmore was 22.2°C at 5:00pm.

Option 2.

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 21.76°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m3/s for one day				
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12-Aug	220		12-Aug	20.1

I have attached a spreadsheet which outlines the daily recorded water temperatures at various locations, daily discharge from the WSC website and the predicted conditions from the model.

If you have further questions please let me know.
Thank you,

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
C 250.617.8732



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Please consider the environment before printing this email.

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10-Aug					
Model Output - Spillway increased to 170 m ³ /s					
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Date	Discharge (m ³ /s)		Date	Temperature °C	
10-Aug	197		10-Aug	21.13	
11-Aug	183		11-Aug	20.2	
12-Aug	180		12-Aug	19.64	
13-Aug	178		13-Aug	19.19	
14-Aug	177		14-Aug	19.07	

Date	Daily Discharge (m ³ /s)					
	SLS Release	Nechako River Below Cheslatta Falls	Vanderhoof	Nautley	Isle Pierre	Stuart River
20-Jul	453	160	184	36	381	191
21-Jul	453 to 14	204	196	35	389	190
22-Jul	14	238	235	35	404	190
23-Jul	14 to 170	211	271	35	439	187
24-Jul	170	211	271	35	457	189
25-Jul	170	184	262	36	437	181
26-Jul	170	176	236	34	413	176
27-Jul	170	171	221	33	404	176
28-Jul	170	172	218	34	399	176
29-Jul	170	170	206	33	395	172
30-Jul	170	168	212	33	389	169
31-Jul	170 to 453	167	210	32	386	167
01-Aug	453 to 14	166	209	31	385	166
02-Aug	14	175	209	31	387	166
03-Aug	14	209	211	31	394	161
04-Aug	14 to 340	192	241	31	408	159
05-Aug	340 to 170	167	238	30	396	156
06-Aug	170	170	193	28	369	155
07-Aug	170	173	204	27	359	152
08-Aug	170 to 453	172	208	26	366	151
09-Aug	453 to 14	182	207	25	364	150
10-Aug	14 to 170	208	208	25	362	148

Recorded Mean Daily Water Temperature

Date	Nechako River			Nautley
	Cheslatta Falls (°C)	Fort Fraser (°C)	above Stuart River (°C)	Fort Fraser (°C)
31-Jul	17.2	18.0	18.3	18.1
01-Aug	16.9	17.6	17.6	17.5
02-Aug	16.7	17.2	17.2	17.2
03-Aug	17.1	17.7	17.7	18.0
04-Aug	17.3	18.4	18.3	19.2
05-Aug	17.7	19.1	19.5	20.1
06-Aug	18.2	19.6	20.5	21.9
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10-Aug

Model Output - Spillway increased to 170 m³/s

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From: [Czornohalan, Andrew \(TI\)](#)
To: [Chapman, Connie FLNR:EX](#)
Cc: [Benckhuysen, Justus \(RTA\)](#); [Davis, Jennifer C FLNR:EX](#); [Bonnie.Antcliffe@dfo-mpo.gc.ca](#); [White, Ted T FLNR:EX](#)
Subject: RE: Suspension of Summer Temperature Management Program for 2019
Date: August 11, 2019 10:48:43 AM

Thanks Connie,

I can conform receipt of the letter.

Andrew Czornohalan

T: +1 (250) 639 8202 M: +1 (250) 639 6280

From: Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>
Sent: Friday, August 9, 2019 3:33 PM
To: Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>
Cc: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Bonnie.Antcliffe@dfo-mpo.gc.ca; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: RE: Suspension of Summer Temperature Management Program for 2019

Hello Andrew,

Please find attached a letter from Ted White amending the WSA Section 93 order issued on August 3, 2019, to provide the correct compliance location for monitoring water temperatures. Recognizing the order is still in effect until the end of the month, even though flows have returned to STMP.

If you have any questions please feel free to contact me.

Thank you,
Connie

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To: [Chapman, Connie FLNR:EX](#)
Cc: [Benckhuysen, Justus \(RTA\)](#); [Davis, Jennifer C FLNR:EX](#); [Bonnie.Antcliffe@dfo-mpo.gc.ca](#); [White, Ted T FLNR:EX](#)
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I can confirm receipt of the letter.

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If you have any questions please feel free to contact me.

Thank you,
Connie



August 9, 2019

File: 0179602

Mr. Andrew Czornohalan
Operations Director – Power & Services
Rio Tinto Aluminium, British Columbia Works
1 Smeltersite Road, Box 1800,
Kitimat, B.C., V8C 2H2, Canada

Via Email: andrew.czornohalan@riotinto.com

Dear Mr. Czornohalan:

Re: Suspension of Summer Temperature Management Program for August 2019 – Order Amendment

A *Water Sustainability Act* Section 93 Order was issued on August 3, 2019 for the suspension of the Summer Temperature Management Program (STMP).

The direction provided in Clause 2 incorrectly states the monitoring location for water temperature. Water temperature is to be monitored at Finmoore, upstream of the Stuart River and Nechako River confluence, according to the standard monitoring practices of the STMP.

Therefore, I amend Clause 2 of the directions as follows:

2. From August 3 to August 20, 2019 the licensee is to operate the Skins Lake Spillway to provide flows at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) and water temperatures at Finmoore (upstream of the Stuart River and Nechako River confluence) that balance the needs of:
 - Flow required to enable fish passage at the location of the Big Bar Slide on the Fraser River;
 - Water temperature and flow in the Nechako River required for cooling purpose to protect Chinook and Sockeye Salmon;
 - Water temperature for Sturgeon and other resident fish.





This amendment is effective August 9, 2019.

Please contact Connie Chapman at 778.698.7332 or Connie.Chapman@gov.bc.ca if you have any questions.

Yours truly,

Ted White
Comptroller of Water Rights

Cc:

Justus Benckhuysen, Nechako Operations Coordinator, BC Power Operations
Bonnie Antcliffe, Associate Regional Director General Fisheries and Oceans Canada
Jennifer Davis, R.P.Bio. Provincial Director Fish and Aquatic Habitat, FLNRORD
Connie Chapman, Acting Manager Water Allocation and Business Unit, FLNRORD



From: Jenifer Bond
To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX
Cc: Rasmussen, Paul FLNR:EX
Subject: STMP Update - Aug. 11
Date: August 11, 2019 12:53:20 PM
Attachments: image003.png
image004.png
image006.png
image007.png
Flow Temp daily update.xlsx

The SLS will be maintained at 170 m³/s as per STMP protocol and decision record.

Spreadsheet is attached with temperature and flow data.

Thank you,
Jen

11-Aug			
Model Output - Spillway maintained at 170 m3/s			
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore
Date	Discharge (m³/s)	Date	Temperature °C
11-Aug	182	11-Aug	19.16
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From: Jenifer Bond
Sent: August 10, 2019 12:47 PM
To: 'Bohay, Trevor FLNR:EX' <Trevor.Bohay@gov.bc.ca>; 'Willis, David (Pacific)' <David.Willis@dfo-mpo.gc.ca>; 'Benckhuysen, Justus (RTA)' <justus.benckhuysen@riotinto.com>; 'Andrusak, Greg FLNR:EX' <Greg.Andrusak@gov.bc.ca>; 'Magnan, Alain' <Alain.Magnan@dfo-mpo.gc.ca>; 'Davis, Jennifer C FLNR:EX' <Jennifer.C.Davis@gov.bc.ca>; 'Antcliffe, Bonnie' <Bonnie.Antcliffe@dfo-mpo.gc.ca>; 'Gord Sterritt' <gord.sterritt@upperfraser.ca>; 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>; 'Abbey, Travis FLNR:EX' <Travis.Abbey@gov.bc.ca>; 'Schell, Steve E FLNR:EX' <Steve.Schell@gov.bc.ca>; 'Wattie, Brad' <Brad.Wattie@dfo-mpo.gc.ca>; 'Lemon, Steve FLNR:EX' <Steve.Lemon@gov.bc.ca>
Cc: 'Rasmussen, Paul FLNR:EX' <Paul.Rasmussen@gov.bc.ca>
Subject: STMP Update - Aug. 10

Attached is the update for today.

As per the STMP protocol and decision record, flows at the SLS will be increased today to 170 m³/s to prevent flows from dropping below 170 m³/s at the NRBCF.

10-Aug			
Model Output - Spillway increased to 170 m ³ /s			
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Subject: RE: STMP Update - Aug. 8

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Recorded Mean Daily Water Temperature

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07-Aug	18.7	19.9	21.2	21.2
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09-Aug	18.7	20.3	21.5	21.7
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11-Aug

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Date	Temperature °C
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13-Aug	18.77
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15-Aug	19.44

From: Chapman, Connie FLNR:EX
To: mayor@district.vanderhoof.ca s.22
Brian.Frenkel@avison.ca;
council2@district.vanderhoof.ca; council4@district.vanderhoof.ca; john.murphy@hubinternational.com;
LoriEgli@district.vanderhoof.ca; jackie.thomas@saikuz.com; mrobertson@cheslatta.com; dluggi@netbistro.com;
jennifer_griffith@aboriginal-law.com; priscilla.mueller@saikuz.com; Inooski@nadleh.ca;
curtis.helgesen@rdbn.bc.ca; s.22
Jerry.Petersen@rdbn.bc.ca; Derksen, Lory D LASS:EX s.22
s.22
s.22
info@nechako-retreat.ca; rjholland@fraserlake.ca;
[Benckhuysen, Justus \(RTA\); Rahul Ray](mailto:Benckhuysen, Justus (RTA); Rahul Ray);
[Czornohalan, Andrew \(TI\)](mailto:Czornohalan, Andrew (TI))
Cc: Rasmussen, Paul FLNR:EX; XT:Antcliffe, Bonnie Fisheries and Oceans Canada EAO:IN; Bohay, Trevor FLNR:EX;
Schell, Steve E FLNR:EX; White, Ted T FLNR:EX
Subject: Action Items from August 9, 2019 Conference Call
Date: August 12, 2019 9:07:00 AM
Attachments: [2019-08-09 Big Bar Landslide Meeting Action Items.pdf](#)

Good morning,

Please find attached the action items from the August 9, 2019, 9:00am conference call lead by the Province regarding the Big Bar Landslide on the Fraser River and Rio Tinto STMP operations.

Cheers,
Connie

Connie Chapman, M.Sc., P.Ag. | *A/Manager Water Allocation & Business Unit*
Water Management Branch
Ministry of Forest, Lands, Natural Resource Operations and Rural Development
2957 Jutland Road, Victoria, BC
Office: 778 698 7332
Email: Connie.Chapman@gov.bc.ca



Big Bar Landslide Meeting- August 9, 2019 at 9:00am

Action Items Captured by the Province:

FLNR will not request additional flow reductions until temperatures remain below 20°C. However, additional curtailment is highly unlikely given that flows are forecasted to drop around Aug 11. Order will stay in place until it expires on Sep 1 to allow for emergency management flexibility.

FLNR (Trevor Bohay) to work with independent consultant (Triton) to provide daily temperature and flow reports from Aug 2 (date of Order) through to present, until temperatures return and remain below 20°C.

Response: Trevor Bohay, FLNR, sent an email on Friday August 9, 2019 at 1:20 providing daily temperature readings from August 3, 2019 to August 9, 2019 at 10 am. Another email was sent to stakeholders on Sunday August 11 with temperature readings at Finmoore until August 11 at 8 am. Temperatures below 20C were attained on August 10 at 9 pm. The province has committed to providing temperature readings until water temperatures return to 20C, at which time the Province considers the Summer Temperature Management Program to be running as usual, accordingly, no further temperature readings will be supplied.

FLNR (Trevor Bohay) to confirm days and durations of flow releases since Order was issued.

- RTA was requested to maintain flows at 170cms on Aug 5, 6 and 7.
- Cheslatta (Mike Robertson) notes that flows were under 210cms on Aug 2 and decreased linearly to 150cms on Aug 5.

Response: RTA was issued the Water Sustainability Act Order on August 3, 2019 by the Comptroller of Water Rights. On August 3, 2019 discharge was at 14.2 m3/s prior to the issuance of the order, as per normal STMP protocol. Spillway discharge remained at 14.2 m3/s until Rio Tinto was requested to increase discharge to 340 m3/s on August 4, 2019 and requested to achieve a flow of 170 m3/s at Cheslatta Falls. August 5, 6, 7 discharge from the spillway was requested to maintain to achieve a flow of 170 m3/s at Cheslatta Falls. On August 8, the province requested that RTA resume the STMP.

FLNR to confirm for Jerry Peterson the locations of temperature measurements and what additional information is available and can be provided.

- Current reports and modelling are based on temperature probes at Finmore.

Response: The Comptroller of Water Rights issued a letter to Rio Tinto on August 9, 2019 amending the order to identify the correct compliance point for temperature monitoring. The order now reads:

“2. From August 3 to August 20, 2019 the licensee is to operate the Skins Lake Spillway to provide flows at Cheslatta Falls (Water Survey of Canada hydrometric gauge 08JA017) and water temperatures at Finmoore (upstream of the Stuart River and Nechako River confluence) that balance the needs of:

- Flow required to enable fish passage at the location of the Big Bar Slide on the Fraser River;



- Water temperature and flow in the Nechako River required for cooling purpose to protect Chinook and Sockeye Salmon;
- Water temperature for Sturgeon and other resident fish.”

FLNR will continue to explore opportunities to improve fish passage on the Fraser River at the Big Bar Landslide given unusually high flows and rainfall expected.

All First Nations can contact **FLNR** (Trevor Bohay) if interested in opportunities to engage further in Big Bar Landslide response.

FLNR to schedule follow-up call with Vanderhoof (Gerry Thiessen) next week (Aug 12-14) regarding concerns with lack of local input on emergency decisions and decision-making affecting Nechako River.

Response: The Province will follow up with Mayor Gerry Thiessen of Vanderhoof to establish a meeting date and time.

Denis Abelson to provide technical questions regarding genetic stock for early Stuarts to FLNR to forward to DFO.

Response: The Province will forward the question to DFO once received.

From: Jenifer Bond
To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX
Cc: Rasmussen, Paul FLNR:EX
Subject: STMP Update - Aug. 12
Date: August 12, 2019 12:10:58 PM
Attachments: image011.png
image012.png
image003.png
image004.png
image005.png
Flow_Temp_daily update.xlsx

Hello All.

The SLS will be maintained at 170 m³/s as per STMP protocol and decision record.

Spreadsheet is attached with temperature and flow data.

Thank you,
Jen

12-Aug				
Model Output - Spillway maintained at 170 m ³ /s				
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore		
Date	Discharge (m ³ /s)	Date	Temperature °C	
12-Aug	180	12-Aug	18.77	
13-Aug	178	13-Aug	19.16	
14-Aug	177	14-Aug	19.4	
15-Aug	176	15-Aug	19.18	
16-Aug	175	16-Aug	18.92	

From: Jenifer Bond
Sent: August 11, 2019 12:53 PM
To: 'Bohay, Trevor FLNR:EX' <Trevor.Bohay@gov.bc.ca>; 'Willis, David (Pacific)' <David.Willis@dfo-mpo.gc.ca>; 'Benckhuysen, Justus (RTA)' <justus.benckhuysen@riotinto.com>; 'Andrusak, Greg FLNR:EX' <Greg.Andrusak@gov.bc.ca>; 'Magnan, Alain' <Alain.Magnan@dfo-mpo.gc.ca>; 'Davis, Jennifer C FLNR:EX' <Jennifer.C.Davis@gov.bc.ca>; 'Antcliffe, Bonnie' <Bonnie.Antcliffe@dfo-mpo.gc.ca>; 'Gord Sterritt' <gord.sterritt@upperfraser.ca>; 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>; 'Abbey, Travis FLNR:EX' <Travis.Abbey@gov.bc.ca>; 'Schell, Steve E FLNR:EX' <Steve.Schell@gov.bc.ca>; 'Wattie, Brad' <Brad.Wattie@dfo-mpo.gc.ca>; 'Lemon, Steve FLNR:EX' <Steve.Lemon@gov.bc.ca>
Cc: 'Rasmussen, Paul FLNR:EX' <Paul.Rasmussen@gov.bc.ca>
Subject: STMP Update - Aug. 11

The SLS will be maintained at 170 m³/s as per STMP protocol and decision record.

Spreadsheet is attached with temperature and flow data.

Thank you,
Jen

11-Aug			
Model Output - Spillway maintained at 170 m ³ /s			
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
11-Aug	182	11-Aug	19.16
12-Aug	180	12-Aug	18.51
13-Aug	178	13-Aug	18.77
14-Aug	177	14-Aug	19.42
15-Aug	176	15-Aug	19.44

From: Jenifer Bond

Sent: August 10, 2019 12:47 PM

To: 'Bohay, Trevor FLNR:EX' <Trevor.Bohay@gov.bc.ca>; 'Willis, David (Pacific)' <David.Willis@dfo-mpo.gc.ca>; 'Benckhuysen, Justus (RTA)' <justus.benckhuysen@riotinto.com>; 'Andrusak, Greg FLNR:EX' <Greg.Andrusak@gov.bc.ca>; 'Magnan, Alain' <Alain.Magnan@dfo-mpo.gc.ca>; 'Davis, Jennifer C FLNR:EX' <Jennifer.C.Davis@gov.bc.ca>; 'Antcliffe, Bonnie' <Bonnie.Antcliffe@dfo-mpo.gc.ca>; 'Gord Sterritt' <gord.sterritt@upperfraser.ca>; 'Chapman, Connie FLNR:EX' <Connie.Chapman@gov.bc.ca>; 'Abbey, Travis FLNR:EX' <Travis.Abbey@gov.bc.ca>; 'Schell, Steve E FLNR:EX' <Steve.Schell@gov.bc.ca>; 'Wattie, Brad' <Brad.Wattie@dfo-mpo.gc.ca>; 'Lemon, Steve FLNR:EX' <Steve.Lemon@gov.bc.ca>

Cc: 'Rasmussen, Paul FLNR:EX' <Paul.Rasmussen@gov.bc.ca>

Subject: STMP Update - Aug. 10

Attached is the update for today.

As per the STMP protocol and decision record, flows at the SLS will be increased today to 170 m³/s to prevent flows from dropping below 170 m³/s at the NRBCF.

10-Aug				
Model Output - Spillway increased to 170 m ³ /s				
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)		Date	Temperature °C
10-Aug	197		10-Aug	21.13
11-Aug	183		11-Aug	20.2
12-Aug	180		12-Aug	19.64
13-Aug	178		13-Aug	19.19
14-Aug	177		14-Aug	19.07

If you have any questions please let me know.

Thank you,
Jen

From: Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>

Sent: August 8, 2019 12:49 PM

To: Jenifer Bond <JBond@triton-env.com>; Willis, David (Pacific) <David.Willis@dfo-mpo.gc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Andrusak, Greg FLNR:EX <Greg.Andrusak@gov.bc.ca>; Magnan, Alain <Alain.Magnan@dfo-mpo.gc.ca>; Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Antcliffe, Bonnie <Bonnie.Antcliffe@dfo-mpo.gc.ca>; Gord Sterritt <gord.sterritt@upperfraser.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; Abbey, Travis FLNR:EX <Travis.Abbey@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>; Wattie, Brad <Brad.Wattie@dfo-mpo.gc.ca>; Lemon, Steve FLNR:EX <Steve.Lemon@gov.bc.ca>

Cc: Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>

Subject: RE: STMP Update - Aug. 8

As per our daily operating procedure, the Environmental Unit has assessed the temperature model provided and recommends that Rio Tinto augment flows to those of the STMP (453.1 cms) today and to the flows the model indicates for STMP going forward, but continue to provide daily modelling results in the event that further curtailment is warranted until the ORDER expires. At this juncture, follow the STMP unless you hear contrary from a member of the JESC.

Thanks for your assistance,

Regards,

Trevor Bohay on behalf of the JESC

From: Jenifer Bond [<mailto:JBond@triton-env.com>]

Sent: Thursday, August 8, 2019 11:24 AM

To: Bohay, Trevor FLNR:EX; Willis, David (Pacific); Benckhuysen, Justus (RTA); Andrusak, Greg FLNR:EX; Magnan, Alain; Davis, Jennifer C FLNR:EX; Antcliffe, Bonnie; Gord Sterritt; Chapman, Connie FLNR:EX; Abbey, Travis FLNR:EX; Schell, Steve E FLNR:EX; Wattie, Brad; Lemon, Steve FLNR:EX
Subject: STMP Update - Aug. 8

Hello All.

Option 1.

Maintaining the SLS at the current discharge of 170 m³/s will result in a maximum mean daily water temperature of 21.76°C over the next three days as per the model output below.

Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
08-Aug	171	08-Aug	21.76
09-Aug	170	09-Aug	21.27
10-Aug	170	10-Aug	20.18
11-Aug	170	11-Aug	19.83
12-Aug	170	12-Aug	20.23

Yesterday's maximum water temperature at the Nechako River at Finmore was 22.2°C at 5:00pm.

Option 2.

Increasing the SLS to 453.1 m³/s starting today would result in a maximum water temperature of 21.76°C over the next three days as per the model output below.

Model Output - Spillway increased to 453.1 m3/s for one day			
Predicted Flows for the NRBCF		Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Discharge (m ³ /s)	Date	Temperature °C
08-Aug	170	08-Aug	21.76
09-Aug	190	09-Aug	21.24
10-Aug	224	10-Aug	19.99
11-Aug	228	11-Aug	19.64
12-Aug	220	12-Aug	20.1

I have attached a spreadsheet which outlines the daily recorded water temperatures at various locations, daily discharge from the WSC website and the predicted conditions from the model.

If you have further questions please let me know.
 Thank you,

Jen Bond
Triton Environmental Consultants Ltd.

T 250.562.9155 ext. 108
C 250.617.8732



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Date	Discharge (m ³ /s)	Date	Temperature °C
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10-Aug	170	10-Aug	20.18
11-Aug	170	11-Aug	19.83
12-Aug	170	12-Aug	20.23

Model Output - Spillway increased to 453.1 m ³ /s for one day				
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Date	Discharge (m ³ /s)		Date	Temperature °C
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09-Aug	190		09-Aug	21.24
10-Aug	224		10-Aug	19.99
11-Aug	228		11-Aug	19.64
12-Aug	220		12-Aug	20.1

12-Aug					
Model Output - Spillway maintained at 170 m ³ /s					
Predicted Flows for the NRBCF			Mean Daily Water Temperature Forecast for the Nechako River at Finmore		
Date	Discharge (m ³ /s)		Date	Temperature °C	
12-Aug	180		12-Aug	18.77	
13-Aug	178		13-Aug	19.16	
14-Aug	177		14-Aug	19.4	
15-Aug	176		15-Aug	19.18	
16-Aug	175		16-Aug	18.92	

11-Aug					
Model Output - Spillway maintained at 170 m ³ /s					
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Date	Discharge (m ³ /s)		Date	Temperature °C	
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12-Aug	180		12-Aug	18.51	
13-Aug	178		13-Aug	18.77	
14-Aug	177		14-Aug	19.42	
15-Aug	176		15-Aug	19.44	

10-Aug					
Model Output - Spillway increased to 170 m ³ /s					
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Date	Discharge (m ³ /s)		Date	Temperature °C	
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11-Aug	183		11-Aug	20.2	
12-Aug	180		12-Aug	19.64	
13-Aug	178		13-Aug	19.19	
14-Aug	177		14-Aug	19.07	

Date	Daily Discharge (m ³ /s)					
	SLS Release	Nechako River Below Cheslatta Falls	Vanderhoof	Nautley	Isle Pierre	Stuart River
20-Jul	453	160	184	36	381	191
21-Jul	453 to 14	204	196	35	389	190
22-Jul	14	238	235	35	404	190
23-Jul	14 to 170	211	271	35	439	187
24-Jul	170	211	271	35	457	189
25-Jul	170	184	262	36	437	181
26-Jul	170	176	236	34	413	176
27-Jul	170	171	221	33	404	176
28-Jul	170	172	218	34	399	176
29-Jul	170	170	206	33	395	172
30-Jul	170	168	212	33	389	169
31-Jul	170 to 453	167	210	32	386	167
01-Aug	453 to 14	166	209	31	385	166
02-Aug	14	175	209	31	387	166
03-Aug	14	209	211	31	394	161
04-Aug	14 to 340	192	241	31	408	159
05-Aug	340 to 170	167	238	30	396	156
06-Aug	170	170	193	28	369	155
07-Aug	170	173	204	27	359	152
08-Aug	170 to 453	172	208	26	366	151
09-Aug	453 to 14	182	207	25	364	150
10-Aug	14 to 170	208	208	25	362	148
11-Aug	170	188	243	25	368	145
12-Aug	170	183	227	25	384	144

Recorded Mean Daily Water Temperature

Date	Nechako River			Nautley
	Cheslatta Falls (°C)	Fort Fraser (°C)	above Stuart River (°C)	Fort Fraser (°C)
31-Jul	17.2	18.0	18.3	18.1
01-Aug	16.9	17.6	17.6	17.5
02-Aug	16.7	17.2	17.2	17.2
03-Aug	17.1	17.7	17.7	18.0
04-Aug	17.3	18.4	18.3	19.2
05-Aug	17.7	19.1	19.5	20.1
06-Aug	18.2	19.6	20.5	21.9
07-Aug	18.7	19.9	21.2	21.2
08-Aug	19.0	20.3	21.5	21.7
09-Aug	18.7	20.3	21.5	21.7
10-Aug	18.4	18.8	20.0	17.4
11-Aug	18.1	19.3	19.1	18.6

12-Aug

Model Output - Spillway maintained at 170 m³/s

Predicted Flows for the NRBCF	
Date	Discharge (m ³ /s)
12-Aug	180
13-Aug	178
14-Aug	177
15-Aug	176
16-Aug	175

Mean Daily Water Temperature Forecast for the Nechako River at Finmore	
Date	Temperature °C
12-Aug	18.77
13-Aug	19.16
14-Aug	19.4
15-Aug	19.18
16-Aug	18.92

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: data discrepancies
Date: August 12, 2019 3:07:06 PM
Attachments: [image001.png](#)

Hi Connie

FYI

The IC team reported real time temperature data at Finmore .

The STMP model uses daily average temperature for making decisions

As such: according to the model, the highest temperature (daily average) was 21.9 degrees (table below) but the maximum recorded will be higher (22.3 degrees)

This nuance was not captured in the Order, and not communicated to stakeholders.

Recorded Mean Daily Water Temperature				
	Nechako River			Nautley
	Cheslatta	Fort	above	Fort
	Falls	Fraser	Stuart River	Fraser
Date	(°C)	(°C)	(°C)	(°C)
31-Jul	17.2	18.0	18.3	18.1
1-Aug	16.9	17.6	17.6	17.5
2-Aug	16.7	17.2	17.2	17.2
3-Aug	17.1	17.7	17.7	18.0
4-Aug	17.3	18.4	18.3	19.2
5-Aug	17.7	19.1	19.5	20.1
6-Aug	18.2	19.6	20.5	21.9
7-Aug	18.7	19.9	21.2	21.2
8-Aug	19.0	20.3	21.5	21.7
9-Aug	18.7	20.3	21.5	21.7
10-Aug	18.4	18.8	20.0	17.4
11-Aug	18.1	19.3	19.1	18.6

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium

Rio Tinto

158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

Recorded Mean Daily Water Temperature						
Date	Nechako River			Nautley		
	Cheslatta	Fort	above	Fort	Fraser	Fort
	Falls (°C)	Fraser (°C)	Stuart River (°C)		Fraser (°C)	
31-Jul	17.2	18.0	18.3		18.1	
1-Aug	16.9	17.6	17.6		17.5	
2-Aug	16.7	17.2	17.2		17.2	
3-Aug	17.1	17.7	17.7		18.0	
4-Aug	17.3	18.4	18.3		19.2	
5-Aug	17.7	19.1	19.5		20.1	
6-Aug	18.2	19.6	20.5		21.9	
7-Aug	18.7	19.9	21.2		21.2	
8-Aug	19.0	20.3	21.5		21.7	
9-Aug	18.7	20.3	21.5		21.7	
10-Aug	18.4	18.8	20.0		17.4	
11-Aug	18.1	19.3	19.1		18.6	

From: [Benckhuysen, Justus \(RTA\)](#)
To: [Bohay, Trevor FLNR:EX](#); [Chapman, Connie FLNR:EX](#)
Cc: [Antcliffe, Bonnie](#); [Davis, Jennifer C FLNR:EX](#); [Rasmussen, Paul FLNR:EX](#)
Subject: District of Vanderhoof, heads up.
Date: August 12, 2019 6:21:09 PM

Just finished council presentation.

Please note that dov council are looking for a very detailed accounting of emails, decisions, who said what, to who when, etc.

They also want more rationale on why and was it worth the risk.

Also looking for proof of nechako impacts, who was monitoring. Where is dfo in all of this?
Etc.

Their position is that they prevented a dead river by objecting to the plan of 22 degrees.

Regards.

Justus Benckhuysen
Rio Tinto
Nechako Operations Coordinator

Sent from my Bell Samsung device over Canada's largest network.

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: RE: FYI - Rio Tinto info for DOV
Date: August 15, 2019 10:53:00 AM

Hi Justus,

Thank you for this email. I see you have tried to call a few times. I will call you before noon.

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 15, 2019 10:32 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: FYI - Rio Tinto info for DOV

FYI

Rio Tinto is sharing a version of the attached info with DOV.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

From: [White, Ted T FLNR:EX](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: FW: FYI - Rio Tinto info for DOV
Date: August 15, 2019 3:08:00 PM
Attachments: [BigBar timeline.docx](#)

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 15, 2019 10:32 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>
Subject: FYI - Rio Tinto info for DOV

FYI

Rio Tinto is sharing a version of the attached info with DOV.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

Management of Spillway discharge.

Under normal operating procedures, Rio Tinto manages Spillway discharge following two different processes.

- 1) During times of flood mitigation and reservoir management for public safety: Rio Tinto makes decisions independently, and informs regulators and stakeholders.
- 2) Decisions related to meeting Rio Tinto obligations for spillway discharge as per Water License and related legal agreements: an independent consultant directs spillway discharge decisions. During the Summer Temperature Management Program (STMP), spillway management decisions from 10 July to August 20 are generated by a computer model based on 5-day weather forecasts, as specified in the Rio Tinto license. The model is operated by an independent consultant following the protocols specified in the legal agreement.
- 3) Water temperature data used in the model is collected by the independent consultant at two locations from the Water Survey of Canada website (Nechako River below Cheslatta Falls and the Nautley River) and temperature probes installed at two locations by the independent consultant (Nechako River at Fort Fraser and at Finmore (near the Stuart River confluence).

Spillway discharge management is focussed on managing water temperatures. The data shows that from the time a release is initiated to the time a full peak flow is achieved at Vanderhoof is ~5 days. However, in order to limit the peak flow at Vanderhoof SLS discharge is reduced after a few days, since Murray and Cheslatta lakes are full by that time. Thus the rate of change in flow at Vanderhoof decreases over the last couple of days before the peak is reached. The rate of change in water level in the Nechako River and Fraser River is also influenced by the on how much spillway discharge is increased. A large increase in discharge for a long period of time translates into a more rapid increase in water level downstream. A decrease in spillway discharge generally takes a longer period of time to impact water level downstream.

Order to Suspend STMP

On 3 August 2019 Rio Tinto received an Order from the BC Comptroller of Water Rights to suspend the STMP which Rio Tinto is otherwise obligated to implement. The Order states that Rio Tinto is to manage spillway discharge as per input from DFO and BC. In this situation, each day the Independent consultant operates the STMP computer model with discharge and flow targets put forward by DFO & BC. DFO/BC team confirms the spillway discharge they prefer, and then the independent consultant instructs Rio Tinto.

The Order was issued due to an emergency event, to support migrating salmon through to their spawning grounds. The request is on behalf of both the Province and the Department of Fisheries and Oceans.

Timeline of events

23 July: SLS discharge to 170 m³/s, STMP model indicates water temperature and flow targets met.

29 July: BC call Rio Tinto to understand STMP, explain that spillway discharge of 453.1 m³/s does not reach Nechako River, STMP maximum discharge in the Nechako River is about 300 m³/s (actual target of 283 m³/s). BC discounts flow management as option for facilitating fish passage at Big Bar. Rio Tinto provides information on flow to Big Bar IC.

31 July: SLS discharge to 453.1 m³/s, STMP model indicates water temperature and flow targets met. Rio Tinto provides flow information to Big Bar IC.

1 August, PM: Big Bar IC team call with NFCP, asks if SLS discharge can remain lower. NFCP states this is outside of NFCP mandate. Rio Tinto states it does not have authority to end STMP protocol unless ordered by Controller of Water Rights. Rio Tinto will determine if spillway discharge can be lowered, but will not violate the STMP protocol. Big Bar will consider technical options and risks of altering flow management.

1 August, PM: SLS discharge to 14.2 m³/s, STMP model indicates water temperature and flow targets met. Rio Tinto sends Big Bar IC flow information.

2 August PM: Rio Tinto is informed that Big Bar Incident Command will requesting a variance to STMP flows.

2 August, PM: STMP model indicates water temperature 20 degree target met but risk of reaching 166 m³/s vs normal STMP minimum of 170 m³/s at Cheslatta falls. Independent consultant informs Rio Tinto that discharge will need to be increased tomorrow.

2 August, PM: BC (IC), Rio Tinto & Comptroller – is it even possible to stop operating the STMP? Rio Tinto states it cannot violate STMP protocol, would need to be ordered. Discuss need for rationale and conditions of an Order. Rio Tinto requests that BC contact local government & First Nations. Rio Tinto expresses concern over risks to resident fish.

3 August, PM: Rio Tinto receives Order to suspend STMP.

3 August, PM: Rio Tinto to BC/DFO – Rio Tinto has received an Order to suspend the STMP and to manage spillway discharge as per instructions from DFO/BC Big Bar Incident Command. There is currently a risk of flow dropping below 170 m³/s at Cheslatta Falls, Rio Tinto needs instructions from Big Bar IC.

4 August: Rio Tinto sends public notice of the Order through Flow Facts distribution.

4 August: Rio Tinto receives instruction to increase SLS discharge to 340 m³/s, as per Big Bar IC request.

5 August: Rio Tinto receives instruction to reduce SLS discharge to 170 m³/s, as per Big Bar IC request.

6 August: Rio Tinto receives instruction to maintain 170 m³/s discharge, as per Big Bar IC request.

7 August: Rio Tinto receives instruction to maintain 170 m³/s discharge, as per Big Bar IC request.

8 August: Rio Tinto receives instruction from Big Bar Incident Command to revert to STMP protocol – Order remains in place.

8 August: Rio Tinto receives instruction to increase discharge to 453.1 m³/s, as per STMP protocol.

9 August: Rio Tinto receives instruction to decrease discharge to 14.2 m³/s, as per STMP protocol.

10 August: Rio Tinto receives instruction to increase discharge to 170 m³/s, as per STMP protocol.

11 August: Rio Tinto receives instruction to maintain discharge at 170 m³/s, as per STMP protocol.

12 August: Rio Tinto receives instruction to maintain discharge at 170 m³/s, as per STMP protocol.

13 August: Rio Tinto receives instruction to increase discharge to 453.1 m³/s, as per STMP protocol.

14 August: Rio Tinto receives instruction to decrease discharge to 14.2 m³/s, as per STMP protocol.

Observed Nechako River water temperature and discharge

Table 1: Recorded average daily water temperatures

	Nechako River			Nautley
	Cheslatta	Fort	above	Fort
	Falls	Fraser	Stuart River	Fraser
Date	(°C)	(°C)	(°C)	(°C)
31-Jul	17.2	18.0	18.3	18.1
01-Aug	16.9	17.6	17.6	17.5
02-Aug	16.7	17.2	17.2	17.2
03-Aug	17.1	17.7	17.7	18.0
04-Aug	17.3	18.4	18.3	19.2
05-Aug	17.7	19.1	19.5	20.1
06-Aug	18.2	19.6	20.5	21.9
07-Aug	18.7	19.9	21.2	21.2
08-Aug	19.0	20.3	21.5	21.7
09-Aug	18.7	20.3	21.5	21.7
10-Aug	18.4	18.8	20.0	17.4
11-Aug	18.1	19.3	19.1	18.6
12-Aug	18.3	19.1	19.2	18.7
13-Aug	18.1	19.1	19.4	20.0

Table 2: Recorded flow at Water Survey Stations

Date	Daily Discharge (m ³ /s)					
	SLS Release	Nechako River Below Cheslatta Falls	Vanderhoof	Nautley	Isle Pierre	Stuart River
20-Jul	453	160	184	36	381	191
21-Jul	453 to 14	204	196	35	389	190
22-Jul	14	238	235	35	404	190
23-Jul	14 to 170	211	271	35	439	187
24-Jul	170	184	271	35	457	189
25-Jul	170	176	262	36	437	181
26-Jul	170	176	221	34	413	176
27-Jul	170	171	218	33	404	176
28-Jul	170	172	205	34	399	176
29-Jul	170	170	212	33	395	172
30-Jul	170	168	209	33	389	169
31-Jul	170 to 453	167	210	32	386	167
01-Aug	453 to 14	179	209	31	385	166
02-Aug	14	209	209	31	387	166
03-Aug	14	186	241	31	394	161
04-Aug	14 to 340	167	238	30	408	159
05-Aug	340 to 170	148	216	28	396	156
06-Aug	170	170	193	28	369	155
07-Aug	170	173	204	27	359	152
08-Aug	170 to 453	172	208	26	366	151
09-Aug	453 to 14	182	207	25	364	150
10-Aug	14 to 170	208	208	25	362	148
11-Aug	170	188	234	25	368	145
12-Aug	170	183	227	25	384	144
13-Aug	170 to 453	181	217	24	374	140
14-Aug	453 to 14	186	212	24.2	362	139

From: [White, Ted T FLNR:EX](#)
To: [Chapman, Connie FLNR:EX](#)
Subject: FW: Information related to Order to suspend STMP.
Date: August 16, 2019 3:49:00 PM
Attachments: [Rio Tinto to DOV Suspension STMP.pdf](#)

Ted White, Director
Water Management Branch
778-698-3981

From: Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>
Sent: August 16, 2019 3:31 PM
To: Kendra Kinsley (deputy@district.vanderhoof.ca) <deputy@district.vanderhoof.ca>; s.22
s.22 ; Gerry Thiessen <mayor@district.vanderhoof.ca>; kyoung@sd91.bc.ca;
John Murphy <john.murphy@hubinternational.com>; Spencer Siemens
<council4@district.vanderhoof.ca>; Councillor Lauze <council2@district.vanderhoof.ca>; Lori Egli
<LoriEgli@district.vanderhoof.ca>
Cc: Czornohalan, Andrew (TI) <Andrew.Czornohalan@riotinto.com>; De Kay, Danielle (RTA)
<Danielle.DeKay@riotinto.com>; White, Ted T FLNR:EX <Ted.White@gov.bc.ca>; Davis, Jennifer C
FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Rahul Ray <rarray@edynamics.com>
Subject: Information related to Order to suspend STMP.

On behalf of Andrew Czornohalan, please find attached additional information about the Order to suspend the STMP.

Regards,

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

Mayor & Council
District of Vanderhoof
160 Connaught Street, PO Box 900
Vanderhoof, BC V0J 3A0

16 August 2019

Dear Mayor and Council.

Re Order to Suspend the Summer Temperature Management Program.

Attached below is information related to suspension of the Summer Temperature Management Program (STMP), as per your request at the council meeting on Monday, 12 August 2019.

During the STMP Rio Tinto increases discharge into the Nechako River to minimize the frequency of average daily water temperature exceeding 20 degrees in the Nechako River at Finmore. On 3 August 2019 Rio Tinto received an Order from the BC Comptroller of Water Rights to suspend the STMP.

The Order was issued due to an emergency event in the Fraser River at Big Bar. A landslide has created an obstacle to salmon migration. Salmon are not able to swim upstream, including the salmon of the Nechako watershed that the STMP is intended to protect. My understanding is that the reduced flows from the Nechako would facilitate instream works at the Big Bar landslide area and possibly salmon passage through the slide area.

The Nechako Fisheries Conservation Program (NFCP) oversees water management in the Nechako River. The NFCP was approached by the Big Bar Incident Command about curtailing discharge from the Nechako Reservoir. The NFCP, which is chaired by an Independent member and has members from DFO, BC and Rio Tinto, declined to approve a curtailment in flow on the basis that doing so was not in the NFCP mandate.

It is also my understanding that experts from BC, Department of Fisheries and Oceans (DFO), Upper Fraser Fisheries Conservation Alliance (which represents 30 First Nations & First Nations organizations), and Carrier Sekani Tribal Council (which represents 7 First Nations) all endorsed the Order to require Rio Tinto to temporarily suspend the STMP. Upon receiving formal notice that an Order was being considered, Rio Tinto requested that local government & First Nations in the Nechako Region be informed. Rio Tinto expressed concern over risks to resident fish, but also accepted that those risks and risks to a salmon run which is relied upon by many British Columbians and thousands of First Nation families would be balanced appropriately by regulatory authorities.

With regard to the sources of data used to make spillway management decisions, water temperature data used in the STMP model is collected by an independent consultant at two locations from the Water Survey of Canada website (Nechako River below Cheslatta Falls and Nautley River) and temperature probes installed at two locations by the independent consultant (Nechako River at Fort Fraser and at Finmore, near the Stuart River confluence). The data from

Water Survey of Canada sites is publically available. However, data from the temperature probes installed by the independent consultant are not currently available to Rio Tinto or the public in real-time. The feasibility of establishing public access to this data will be investigated as part of Rio Tinto's Water Engagement Initiative.

Lastly, Rio Tinto has made a request to the Province of BC to provide a status update of the Big Bar Incident and decision to issue the Order at the Rio Tinto Water Engagement Initiative meeting on 22 August.

If you require any further clarification or information, please contact me.

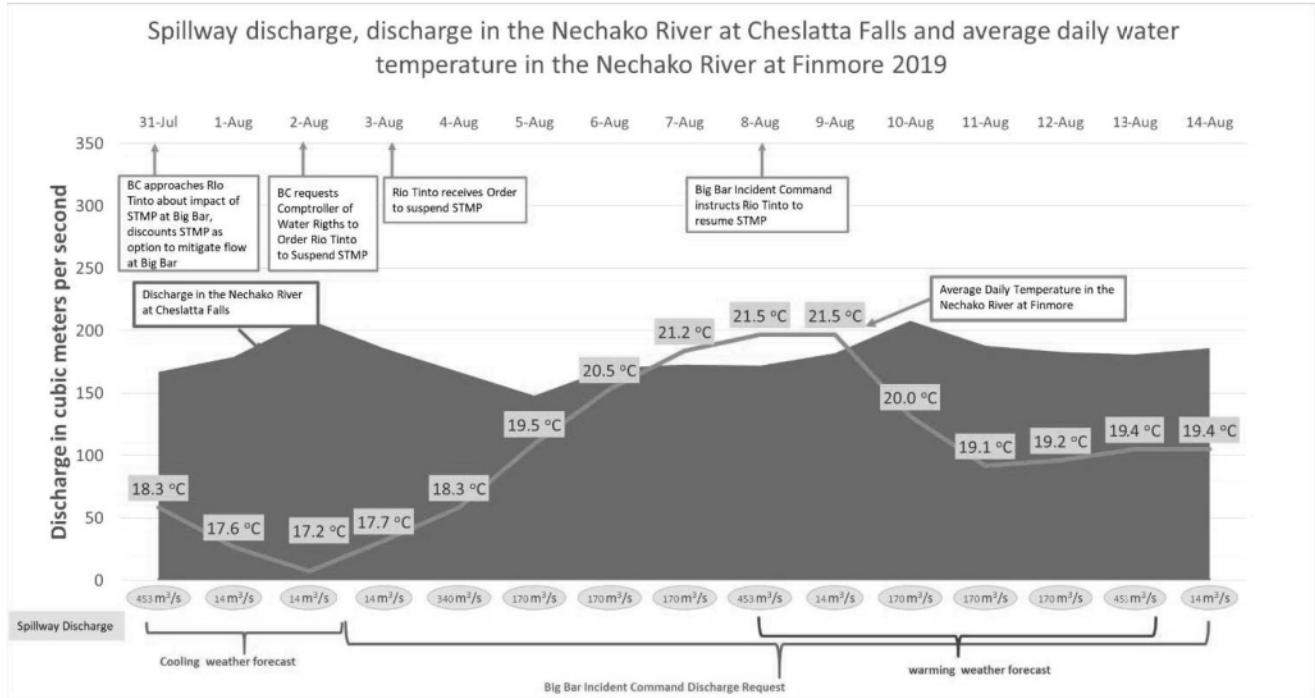
Regards,



Andrew Czornohalan
Acting General Manager

Cc Justus Benckhuysen, Nechako Operations Coordinator
Danielle DeKay, Community & Communications Advisor
Ted White, Director & Comptroller of Water Rights
Jennifer Davis, Director, Fish & Aquatic Habitat Branch
Water Engagement Initiative participants

Figure 1. Timeline of flow and temperature in the Nechako River.



Additional water temperature and flow data for reference.

Table 1. Water temperature

Recorded Mean Daily Water Temperature			
	Nechako River		
	Cheslatta Falls	Fort Fraser	Finmore
Date	(°C)	(°C)	(°C)
31-Jul	17.2	18.0	18.3
1-Aug	16.9	17.6	17.6
2-Aug	16.7	17.2	17.2
3-Aug	17.1	17.7	17.7
4-Aug	17.3	18.4	18.3
5-Aug	17.7	19.1	19.5
6-Aug	18.2	19.6	20.5
7-Aug	18.7	19.9	21.2
8-Aug	19.0	20.3	21.5
9-Aug	18.7	20.3	21.5
10-Aug	18.4	18.8	20.0
11-Aug	18.1	19.3	19.1
12-Aug	18.3	19.1	19.2
13-Aug	18.1	19.1	19.4
14-Aug	18.2	19.1	19.4

Table 2. Water Discharge

Date	Daily Discharge (m³/s)					
	SLS Release	Nechako River Below Cheslatta Falls	Vanderhoof	Nautley	Isle Pierre	Stuart River
20-Jul	453	160	184	36	381	191
21-Jul	453 to 14	204	196	35	389	190
22-Jul	14	238	235	35	404	190
23-Jul	14 to 170	211	271	35	439	187
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26-Jul	170	176	221	34	413	176
27-Jul	170	171	218	33	404	176
28-Jul	170	172	205	34	399	176
29-Jul	170	170	212	33	395	172
30-Jul	170	168	209	33	389	169
31-Jul	170 to 453	167	210	32	386	167
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2-Aug	14	209	209	31	387	166
3-Aug	14	186	241	31	394	161
4-Aug	14 to 340	167	238	30	408	159
5-Aug	340 to 170	148	216	28	396	156
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8-Aug	170 to 453	172	208	26	366	151
9-Aug	453 to 14	182	207	25	364	150
10-Aug	14 to 170	208	208	25	362	148
11-Aug	170	188	234	25	368	145
12-Aug	170	183	227	25	384	144
13-Aug	170 to 453	181	217	24	374	140
14-Aug	453 to 14	186	212	24.2	362	139
15-Aug	14	211	206	23.7	356	137

Timeline of events

29 July

- BC call Rio Tinto to understand STMP, explain that spillway discharge of 453.1 m³/s does not reach Nechako River, STMP maximum discharge in the Nechako River is 283 m³/s. BC discounts flow management as option for facilitating fish passage at Big Bar. Rio Tinto provides information on flow to Big Bar Incident Command.

1 August

- Big Bar IC technical team call Nechako Fisheries Conservation Program (NFCP), ask if SLS discharge can remain lower. NFCP states this is outside of NFCP mandate. Rio Tinto states it does not have authority to end STMP protocol unless ordered by Controller of Water Rights. Rio Tinto will determine if spillway discharge can be lowered, but will not violate the STMP protocol. Big Bar IC will consider potential benefits and risks of altering flow management.
- SLS discharge to 14.2 m³/s, STMP model indicates water temperature and flow targets met. Rio Tinto sends Big Bar IC flow information.

2 August

- STMP model indicates water temperature 20 degree target met but risk of reaching 166 m³/s vs normal STMP minimum of 170 m³/s at Cheslatta falls. Independent consultant informs Rio Tinto that discharge will need to be increased on 3 August.
- BC, Rio Tinto & Comptroller – is it even possible to stop operating the STMP? Rio Tinto states it cannot violate STMP protocol, would need to be ordered. Discuss need for rationale and conditions of an Order. Rio Tinto requests that BC contact local government & First Nations. Rio Tinto expresses concern over risks to resident fish.

3 August

- Rio Tinto receives Order from Comptroller of Water Rights to suspend STMP.
- Rio Tinto to BC/DFO – Rio Tinto has received an Order to suspend the STMP and to manage spillway discharge as per instructions from DFO/BC Big Bar Incident Command. There is currently a risk of flow dropping below 170 m³/s at Cheslatta Falls, Rio Tinto needs instructions from Big Bar IC.

4 August

- Rio Tinto sends public notice of the Order through Flow Facts distribution.
- Rio Tinto receives instruction to increase SLS discharge to 340 m³/s, as per Big Bar IC request.

5 August

- Rio Tinto receives instruction to reduce SLS discharge to 170 m³/s, as per Big Bar IC request.

6 August

- Rio Tinto receives instruction to maintain 170 m³/s discharge, as per Big Bar IC request.

7 August

- Rio Tinto receives instruction to maintain 170 m³/s discharge, as per Big Bar IC request.

8 August

- Rio Tinto receives instruction from Big Bar Incident Command to revert to STMP protocol – Order remains in place until 1 September.

From: [White, Ted T FLNR:EX](#)
To: [Benckhuysen, Justus \(RTA\)](#)
Subject: Your message
Date: August 20, 2019 11:41:00 AM

Hi Justus,

I am free after 3:00 today for a call. If that doesn't work I can be available at 2:00.

Thank you,

Ted White

Director

Water Management Branch

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

PO Box 9340 Stn Prov Govt Victoria BC V8W 9M1

Phone 778 698-3981

Fax (250) 356 0605

From: [Davis, Jennifer C FLNR:EX](#)
To: [Justus Benckhuysen \(justus.benckhuysen@riotinto.com\)](#); [White, Ted T FLNR:EX](#); [Jacklin, James FLNR:EX](#)
Cc: [Schell, Steve E FLNR:EX](#)
Subject: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:49:54 AM

Hi – we have a massive operation in play downstream where the big bar rockslide occurred. I understand Rio Tinto will be releasing water as per the agreement to support Early Stuart sockeye spawning.... But can we adjust things a bit?

We have most of the ES Sockeye stuck behind the rocks, and more water might actually make our operations to get them passing harder.

Can we connect the Rio Tinto technical people to our Incident Command Environmental team??

J

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development

4th Floor, 2975 Jutland Road, Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca

From: Benckhuysen, Justus (RTA)
To: White, Ted T FLNR:EX; Davis, Jennifer C FLNR:EX; Jacklin, James FLNR:EX
Cc: Schell, Steve E FLNR:EX
Subject: RE: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide
Date: July 29, 2019 10:53:24 AM

Lets discuss.

Justus Benckhuysen
Nechako Operations Coordinator, BC Power Operations
Aluminium
Rio Tinto
158 West Stewart Street,
PO Box 25 Vanderhoof, BC V0J 3A0, Canada

T: +1 (250) 639-8904 M: +1 (250) 567 0351
justus.benckhuysen@riotinto.com <http://www.riotinto.com/bcworks>

-----Original Message-----

From: White, Ted T FLNR:EX [<mailto:Ted.White@gov.bc.ca>]
Sent: Monday, July 29, 2019 10:52 AM
To: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>; Benckhuysen, Justus (RTA) <justus.benckhuysen@riotinto.com>; Jacklin, James FLNR:EX <James.Jacklin@gov.bc.ca>
Cc: Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>
Subject: Re: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide

Hi Jenn,

Please set up a call for us to discuss.

Thank you,

Ted White
Director, Water Management Branch
778-698-3981

----- Original message -----

From: "Davis, Jennifer C FLNR:EX" <Jennifer.C.Davis@gov.bc.ca>
Date: 2019-07-29 10:49 AM (GMT-08:00)
To: "Justus Benckhuysen (justus.benckhuysen@riotinto.com)" <justus.benckhuysen@riotinto.com>, "White, Ted T FLNR:EX" <Ted.White@gov.bc.ca>, "Jacklin, James FLNR:EX" <James.Jacklin@gov.bc.ca>
Cc: "Schell, Steve E FLNR:EX" <Steve.Schell@gov.bc.ca>
Subject: (URGENT) Rio Tinto - Water & Early Stuart Sockeye. Issue downstream at rockslide

Hi - we have a massive operation in play downstream where the big bar rockslide occurred. I understand Rio Tinto will be releasing water as per the agreement to support Early Stuart sockeye spawning.... But can we adjust things a bit?

We have most of the ES Sockeye stuck behind the rocks, and more water might actually make our operations to get them passing harder.

Can we connect the Rio Tinto technical people to our Incident Command Environmental team??

J

JENNIFER DAVIS

Fish and Aquatic Habitat Branch, Resource Stewardship Division

Ministry of Forests, Lands, Natural Resource Operations and Rural Development 4th Floor, 2975 Jutland Road,
Victoria, BC

Tel: 778-974-2336

e-mail: Jennifer.C.Davis@gov.bc.ca<<mailto:Jennifer.C.Davis@gov.bc.ca>>

From: [Rex, John F FLNR:EX](#)
To: [Hoekstra, Kevin FLNR:EX](#); [Read, Stafford A FLNR:EX](#); [Pillipow, Ray FLNR:EX](#); [Jacklin, James FLNR:EX](#)
Subject: Fraser Salmon and RMT
Date: July 31, 2019 11:01:45 AM

Good Morning,

Hope all is well with everyone this morning. Thought I would send out this short note for your records and also input.

Issue:

- Rio Tinto and Fraser River Slide/Salmon

If this issue comes up again, here is some background. Earlier this week there was some concern being expressed about Rio Tinto releases from the dam and downstream efforts to put in a fish ladder to enable salmon to move upstream of the Big Bar slide. Jennifer Davis made contact in hopes of having James work with RTA to hold back releases. During a call with Justus from RTA he explained that releases have been increased as of July 11th and with travel time those increased flows would already be observed at the site. The flow volume (~160cms) is 5-7% of discharge at the Big Bar site so influence of decreasing flow would be marginal and due to travel time would not be observed at the location for > 1 week. The real-time hydrograph (temperature too if interested) can be found here:

https://wateroffice.ec.gc.ca/report/real_time_e.html?stn=08MD013&mode=Graph&startDate=2019-07-24&endDate=2019-07-31&prm1=46&y1Max=&y1Min=&prm2=47&y2Max=&y2Min=

RMT Action Items:

- Joint RMT is scheduled for October 22-23. Greg is also wanting to provide space for 3-5 emerging leaders to attend the session and would like candidate names by this Thursday - tomorrow. If you have someone on your team you would like to identify please send Greg or you can send to me and I can submit the candidates from our teams.
- Kristy Ciruna was in to speak about budget forecasting and some of the challenges. She is looking to have a half-day session in the fall but wants to have a session targeted to our collective concerns. So, outside of the organizational issue surrounding budget timing if you have any specific questions/issues around budgeting and forecasts you would like to have addressed please forward them to Kristy.
- Leader in You – sessions will be held in November and Gretchen is looking for staff to come speak about leadership at all levels so if you or someone on your team would be good to speak on a leadership topic such as innovation, policy, business, or other please follow-up with staff and Gretchen.

If any other issues arise I will be sure to send you a summary as matter of record. Enjoy the day ahead!

Cheers,

John

From: [Gerry Thiessen](#)
To: [Rasmussen, Paul FLNR:EX](#)
Cc: [Brian Frenkel](#); [Wayne Salewski](#); [Lori Egli](#); [Curtis Helgesen](#); [rray@edynamics.com](#); [Jacklin, James FLNR:EX](#); [Chapman, Connie FLNR:EX](#); [O'Donoghue, Eamon G FLNR:EX](#); [Schell, Steve E FLNR:EX](#); [Davis, Jennifer C FLNR:EX](#); [Bohay, Trevor FLNR:EX](#); [Cadogan, Iris FLNR:EX](#); [Gerry Thiessen](#)
Subject: Re: Hi. Technical briefing.
Date: August 7, 2019 8:12:51 AM

Sure, That would be good. My phone number is ^{s.22}. Just talking to Laury Petersen. He says he knows you.

Gerry Thiessen
Mayor
District of Vanderhoof

> On Aug 7, 2019, at 7:37 AM, Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca> wrote:
>
> Good morning Mayor Thiessen. I am the Assistant Deputy Minister responsible for the work being done on the Big Bar slide, on the Fraser River.
>
> I understand you've had a chance to talk to Eamon recently about this subject (I spoke to Eamon last night), and the questions you have are valid and (I'm pretty sure) can be answered.
>
> I would like to line up a call between us, and perhaps a few others that you would like to invite along. I'd bring along some biological / hydrological experts from our end. I'm thinking dialogue might help allay concerns folks may have on this subject. We can also talk about how we'll monitor effectiveness and adapt to results too.
>
> Are you interested? If so, please let me know and we'll get that going ASAP. There is some urgency to decision making out there, so I'm also willing to have separate discussions if that is necessary. If you are interested, I'll ask my assistant (Iris Cadogan) to line up a conference call for us.
>
> My cell phone number is 250 608 1077.
>
> Thank you for your consideration Mayor Thiessen.
>
> Sincerely,
>
> Paul
>
>
> Paul Rasmussen
> Assistant Deputy Minister
> South Area Operations
> Ministry of Forests, Lands, Natural Resource Operations and Rural Development
>
>
>
>
> -----Original Message-----
> From: Davis, Jennifer C FLNR:EX
> Sent: August 6, 2019 7:59 PM
> To: Gerry Thiessen <mayor@district.vanderhoof.ca>; Bohay, Trevor FLNR:EX <Trevor.Bohay@gov.bc.ca>
> Cc: Brian Frenkel <Brian.Frenkel@avison.ca>; Wayne Salewski <^{s.22}>; Lori Egli <LoriEgli@district.vanderhoof.ca>; Curtis Helgesen <curtis.helgesen@rdbn.bc.ca>; rray@edynamics.com <rray@edynamics.com>; Rasmussen, Paul FLNR:EX <Paul.Rasmussen@gov.bc.ca>; Jacklin, James FLNR:EX <James.Jacklin@gov.bc.ca>; Chapman, Connie FLNR:EX <Connie.Chapman@gov.bc.ca>; O'Donoghue, Eamon G

FLNR:EX <Eamon.ODonoghue@gov.bc.ca>; Schell, Steve E FLNR:EX <Steve.Schell@gov.bc.ca>

> Subject: Re: Hi. Technical briefing.

>

> Hi Gerry. Maybe a council-specific check in would help? Answer everyone's questions in a smaller group?

>

> This is an emergency action for the survival of this years Fraser salmon. It is not part of any normal operations nor is it part of Rio tinto's engagement process for the mid-long term determination of water management.

>

> Any increase in water flows, as were scheduled for sockeye migration, were assessed as negatively impacting the ability to open passage for those same fish.

>

> This action is based on a request from the two incident commanders - from bc (myself) and from DFO (Bonnie Antcliffe). Staff more junior in either organization would not have been aware of this, nor had the request come to Rio tinto until after the morning meeting you reference.

>

> We ensured there was a joint priority on both salmon survival and sturgeon survival in the immediate term, and also focus efforts to support other critically endangered fish.

>

> These are extraordinary and time sensitive circumstances. I hope this background helps a bit until we can arrange a deeper conversation.

>

> I have copied Trevor Bohay and Steve Schell on this note so you have their contact information. They are taking the lead for the next few days. I understand ADM Paul Rasmussen was reaching out to you again as well.

>

> Sincerely,

> Jenn

>

> Sent from my iPhone

>

>> On Aug 6, 2019, at 2:55 PM, Gerry Thiessen <mayor@district.vanderhoof.ca> wrote:

>>

>>

>> No, I think the RT stakeholders is not the place, I'm not sure the District of Vanderhoof council or the board of the Regional District are finding any value in being involved in the stakeholders meeting.

>>

>> We would appreciate a timeline on how the decision was made, what the benefits to the salmon are, considering the delay in water levels to the Fraser Canyon, who was involved in the decision on the Nechako, was Dave Francis the Provincial person on the engagement, what are the expected temperatures in the Nechako? These are some of the questions I'm being asked at both board levels.

>>

>> We were asked to be involved in an engagement process on the Nechako, we asked this exact question at our last meeting, this is nothing what we had envisioned. Some of us from council and the RD will meet tomorrow afternoon and it would be good to have this information. Gerry

>>

>> -----Original Message-----

>> From: Davis, Jennifer C FLNR:EX <Jennifer.C.Davis@gov.bc.ca>

>> Sent: August 6, 2019 2:29 PM

>> To: Gerry Thiessen <mayor@district.vanderhoof.ca>; Brian Frenkel <Brian.Frenkel@avison.ca>; Wayne Salewski <salewski@telus.net>

>> Subject: Hi. Technical briefing.

>>

>> Hi - a few folks want me to provide some technical background on the big bar issue. I believe the target group would be the Rio tinto stakeholders?

>>

>> Wanted to give you a heads up....

>>

>> Will let you know when I know more.

>>

>> J

>>

>> Sent from my iPhone