RioTinto

Rio Tinto Update

Water Engagement Initiative November 24th, 2021



Operations Update

- Return to work in progress
- Planning the re-start
 - Building the culture of the future
 - Preparing the pots & the plant
 - Catching up and getting in front of maintenance
 - Executing projects
 - Detailed and integrated planning
- Logistics and Transport Challenges
- T2.....



Tl'ughus has broken through!

Cutterhead of the tunnel boring machine shortly after it broke into the stub tunnel



Project team inspecting the cutterhead after the breakthrough

Part of the T2 tunnel with rings installed by the tunnel boring machine



Kemano T2 Project: What's next?

- Remove the TBM from the tunnel
- Put in the Horetzky plug to block the passage
- Refurbish the tunnel that was bored in the 1990's
 - Cleaning of the rock
 - Rock bolting
 - Shotcrete spraying
- Fill the tunnel with water second half of 2022



RioTinto

Reservior Operations

Observed Precipitation, Inflows vs Historical

7-day cumulative rainfall 16.5 Inflow (m³/s) \bigcirc 100.9 75.8 0.8

Nechako Reservoir Inflow, Observed and Forecast



Historical Reservoir Elevation



7 Day Weather Forecast

Maps	Cumulative rainfall	✓ 7 days ✓ Reload	Back to Maps		Next 7 Davs						
	40 40 40 40 40 40 40 40 40 40	20-00-00-00-00-00-00-00-00-00-00-00-00-0	50 48- 46- 44-		Tue 11/23 A mix of sun and clouds	Wed 11/24 Light snow	Thu 11/25 A mix of sun and clouds	Fri 11/26 A mix of sun and clouds	Sat 11/27 Light snow	Sun 11/28 A mix of sun and clouds	Mon 11/29 Cloudy with sunny breaks
		30 30 0	42 40- 38+		÷	Ą	÷	÷	Ą	Ś	\$
		20	36-		0 °	1 °	6 °	1 °	1 °	4 °	2°
and the second	10 10	20 20	34- 32-	Feels like	-4	-3	3	-3	-2	1	-1
	~5		30 28- 28- 26-	Night	-6°	0°	-2°	-4°	0°	0°	0°
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		22 - 22 -	POP	30 %	80 %	40 %	30 %	70 %	40 %	30 %
	_10		20-	Wind (km/h)	15 s	17 se	15 s	15 sw	10 se	12 s	12 s
all all a	~	10	16-	Wind gust (km/h)	23	26	23	23	15	18	18
LINN (R) STATE PARTY		10	12-10-	Hrs Of Sun	3 h	0 h	3 h	4 h	0 h	3 h	2 h
	-		6- 4-	24 Hr Rain	-	~1 mm	-	-	-	-	-
	10		2-	24 Hr Snow	<1 cm	$\sim 5 \text{ cm}$	-	-	~1 cm	-	<1 cm

### **Spillway Management – Looking to Winter**

- SLS discharge currently 40 m³/s, and is expected to be maintained at 40 m³/s all winter;
- Recent spills combined with dry weather have significantly reduced the expected winter spills
- Working through the Smelter load and re-start scenarios
- Detailed review of the 2020 / 2021 Freeze-up Observations Report with NHC
- Ice Jam risk and winter flow protocols
- Impact to the Murray Cheslatta system
- Review of fisheries data and technical team feedback
- Spring Freshet flood risk; Murray Cheslatta System and Vanderhoof



### **Forecast – Vanderhoof Flows**



### **Reservoir Level Projection**

 Inflow projections are used to estimate reservoir levels over time considering current hydrology and historically observed additional snow and rain.





# Feedback & Reflections