



RioTinto

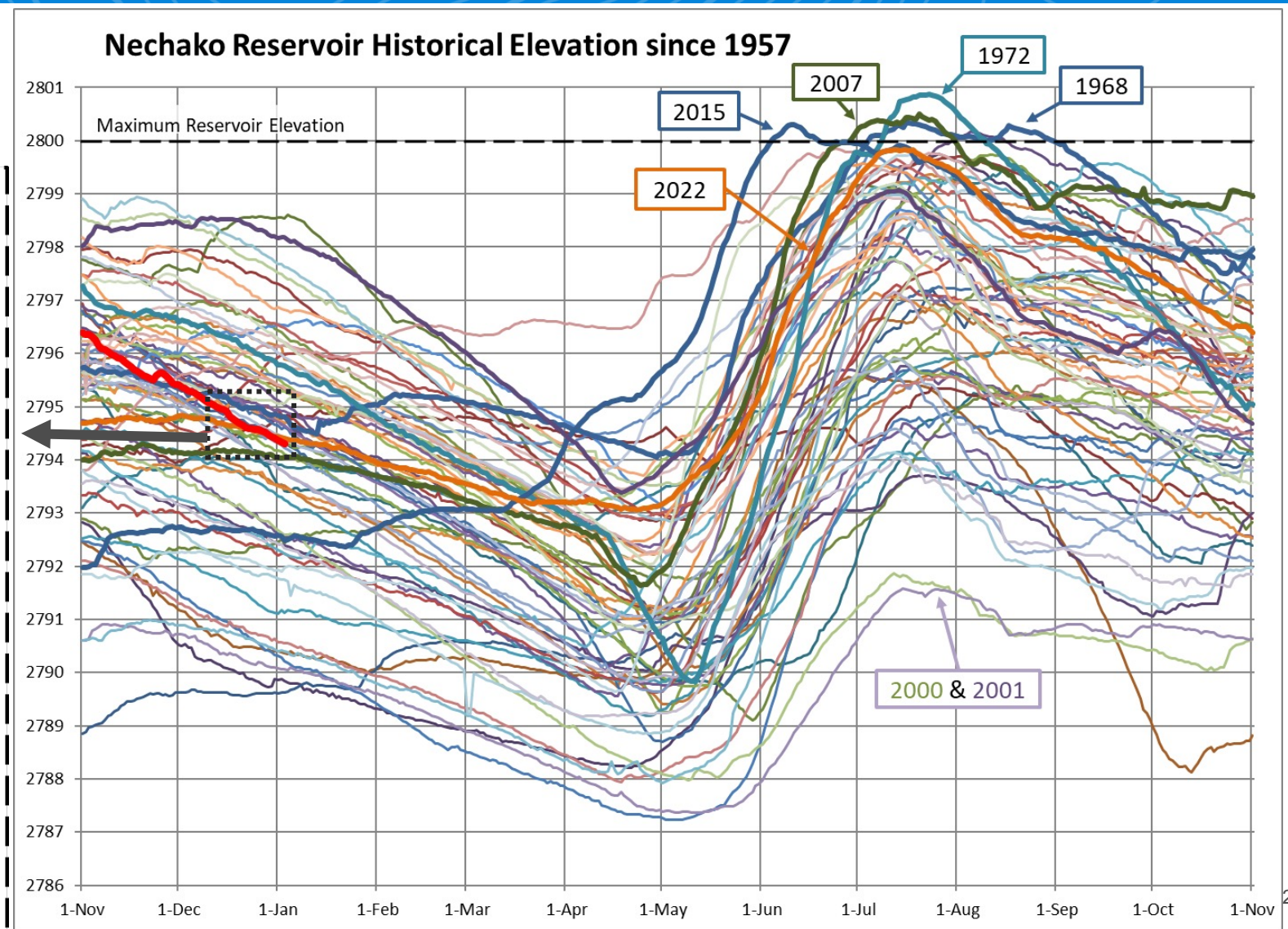
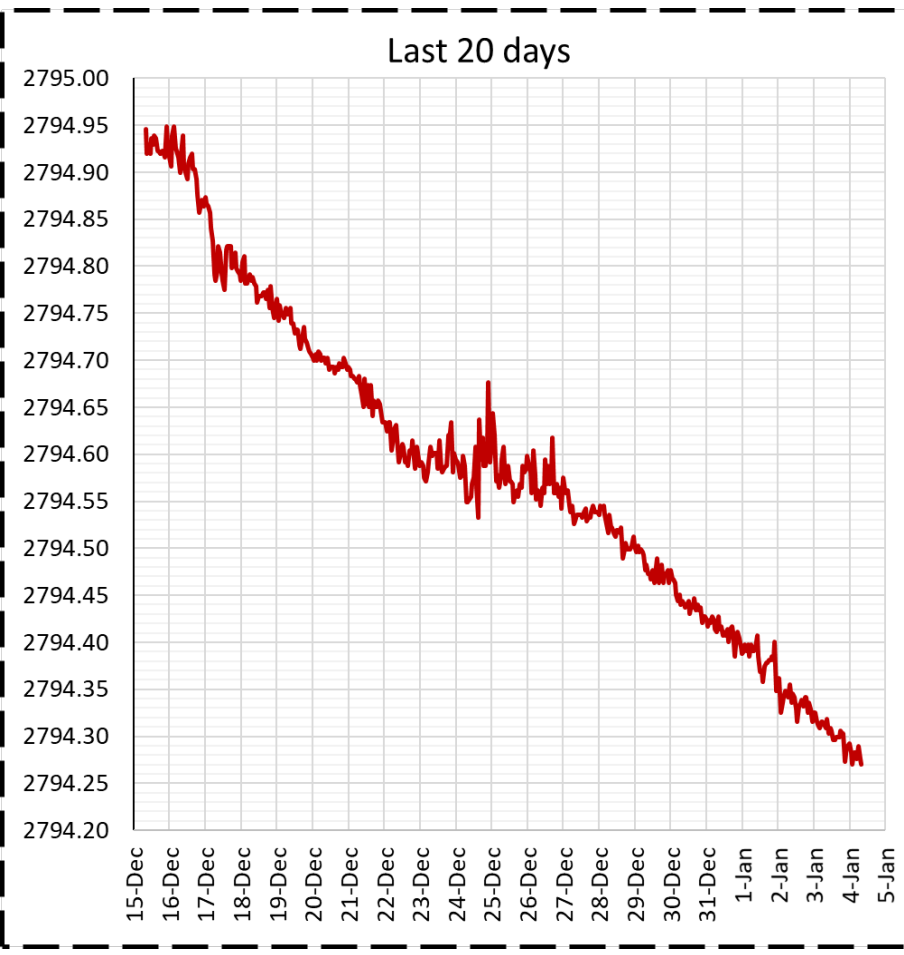
Nechako Reservoir / River / Freshet Information Sharing – Community Leaders

4 January 2023

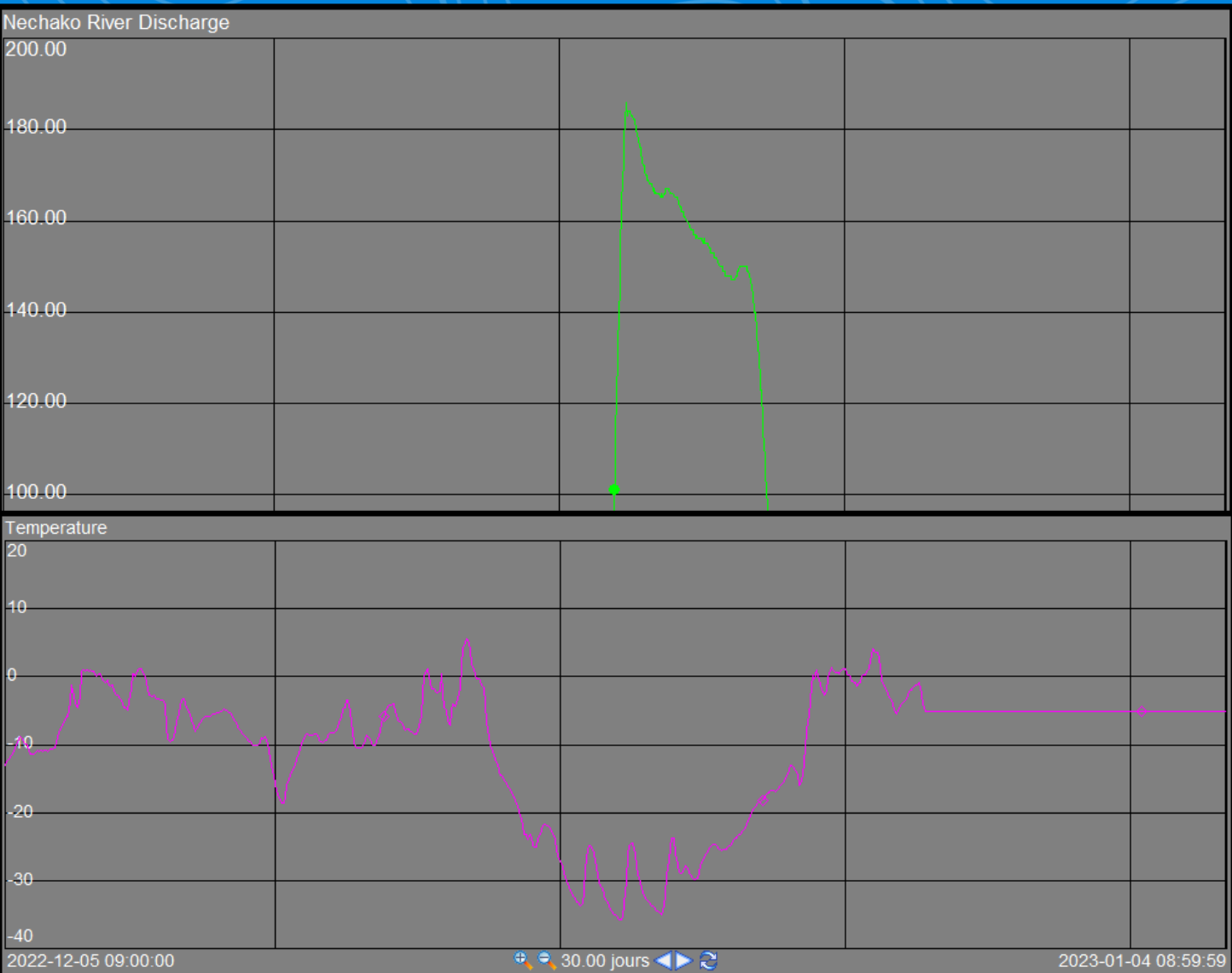
Prepared by Andrew Czornohalan & Simon Matte

Reservoir Elevation - Last 20 days

Current reservoir level:
2794.27 ft



Flows - Last 30 days

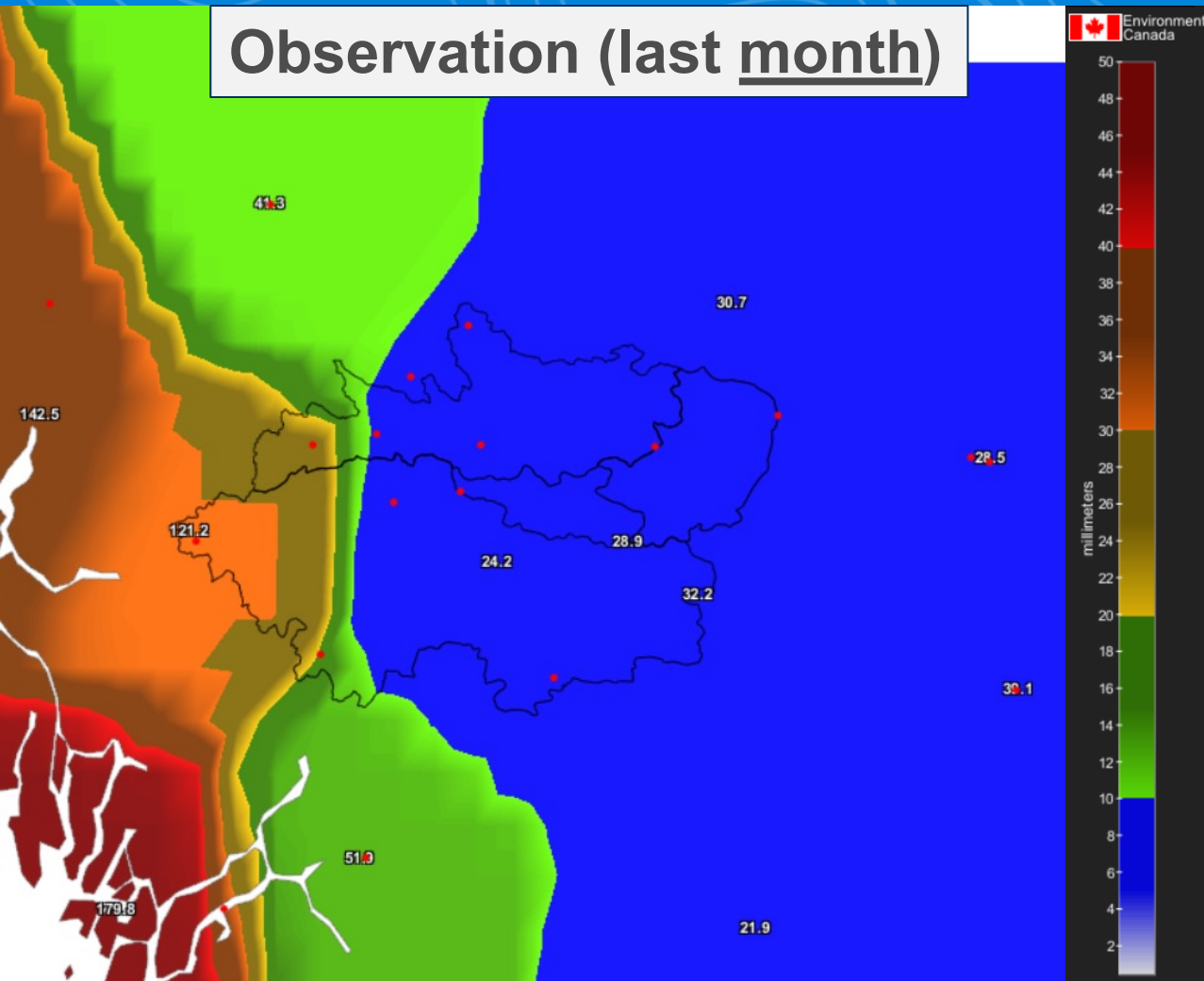


Current values (m³/s)	
Vanderhoof	42*
Skins Lake	33
Cheslatta Falls	27*
Nautley	6
Stellako	4

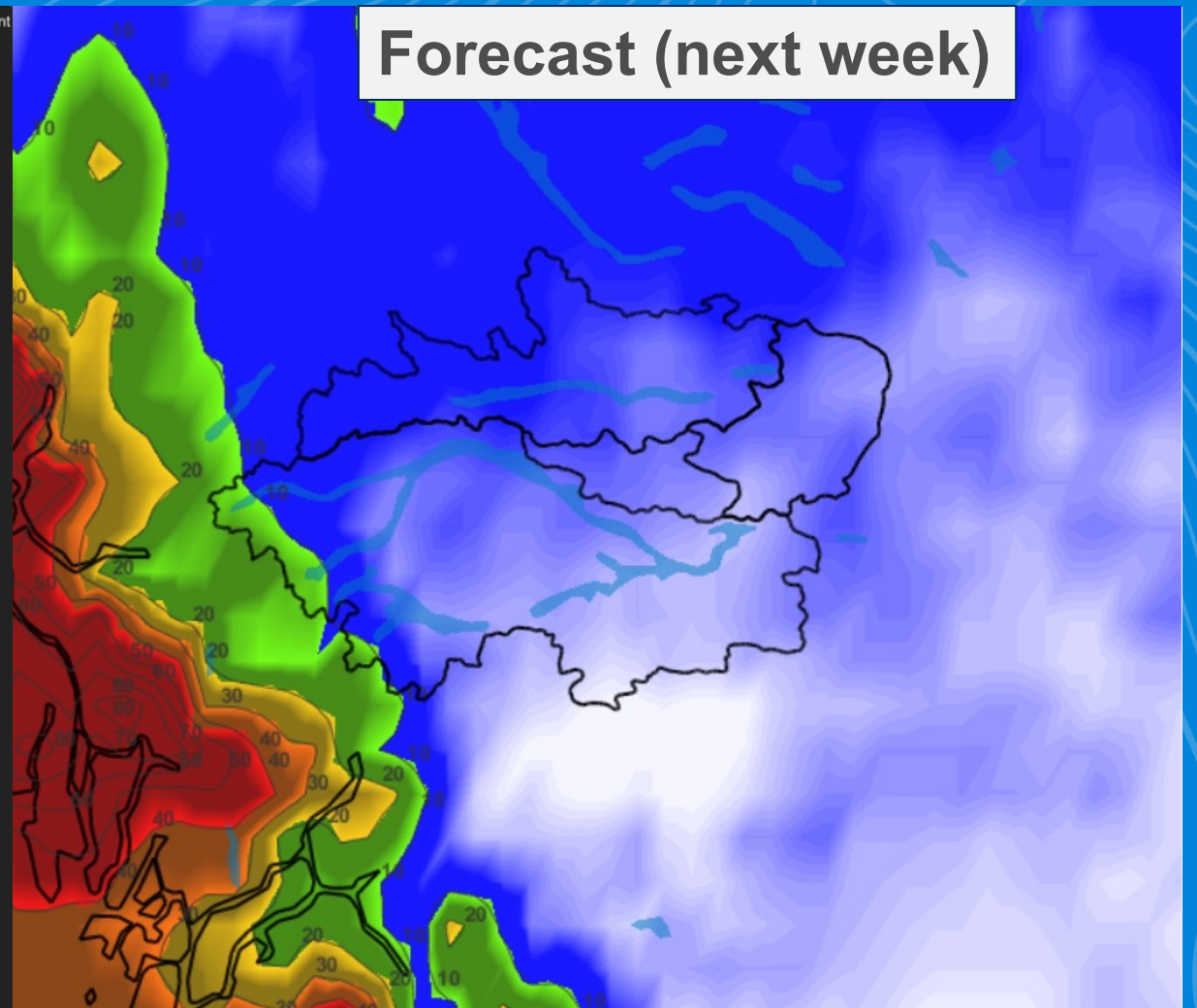
*Provisional values due to ice effects

Past & Future cumulative precipitation

Observation (last month)



Forecast (next week)

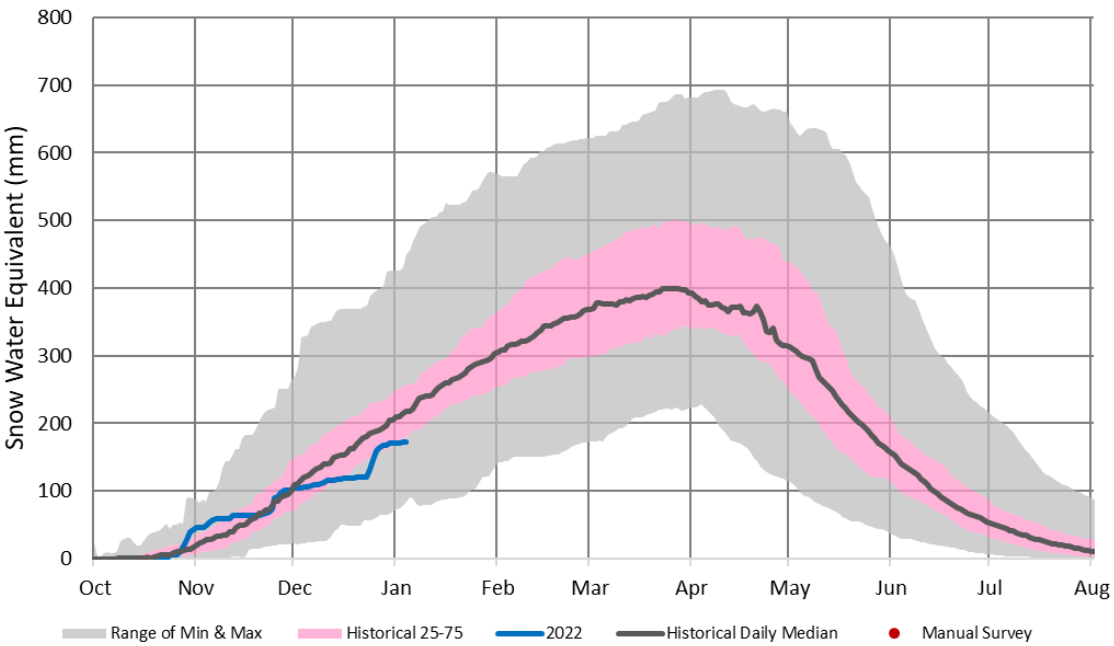


Nechako Reservoir watershed area-average = 67 mm

Nechako Reservoir watershed area-average = ~5 mm

Current Snowpack

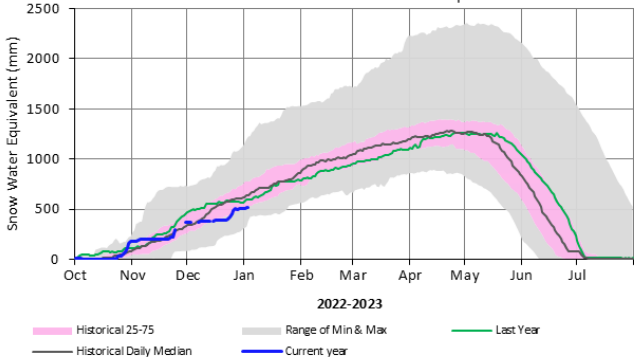
Nechako Reservoir Snowpack



173 mm (75% LTA; 53rd/64)

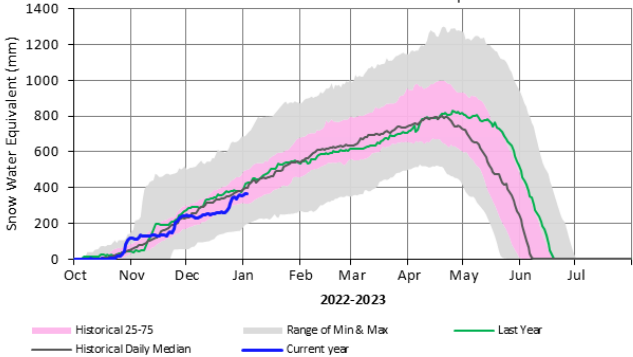
Tahtsa Lake

Automated Snow Weather Station Graph



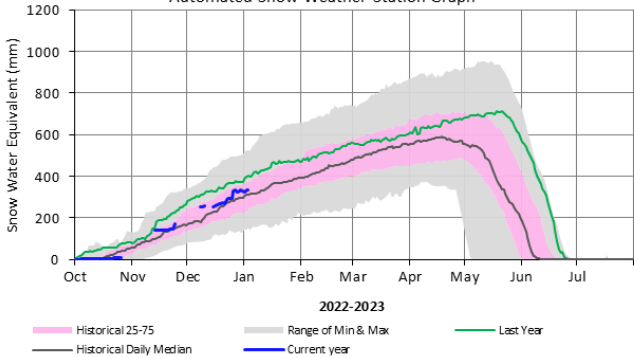
Mount Pondosy

Automated Snow Weather Station Graph



Mount Wells

Automated Snow Weather Station Graph

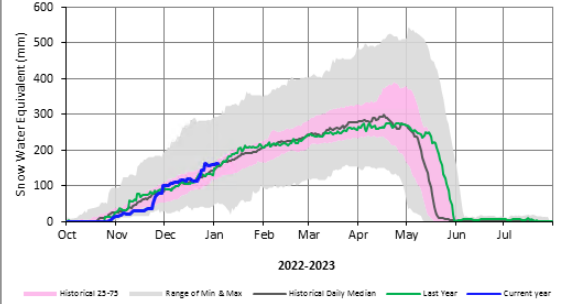


Station	Current Value (mm)	LTA* (mm)	%LTA*	Percentile Rank*
Tahtsa Lake	518	667	78%	21%
Mount Pondosy	365	408	90%	38%
Mount Wells	332	312	106%	62%

* (1992-2022)

Lu Lake

Automated Snow Weather Station Graph



Station	Current Value	%LTA*
Lu Lake	161	108%

Weather Forecast



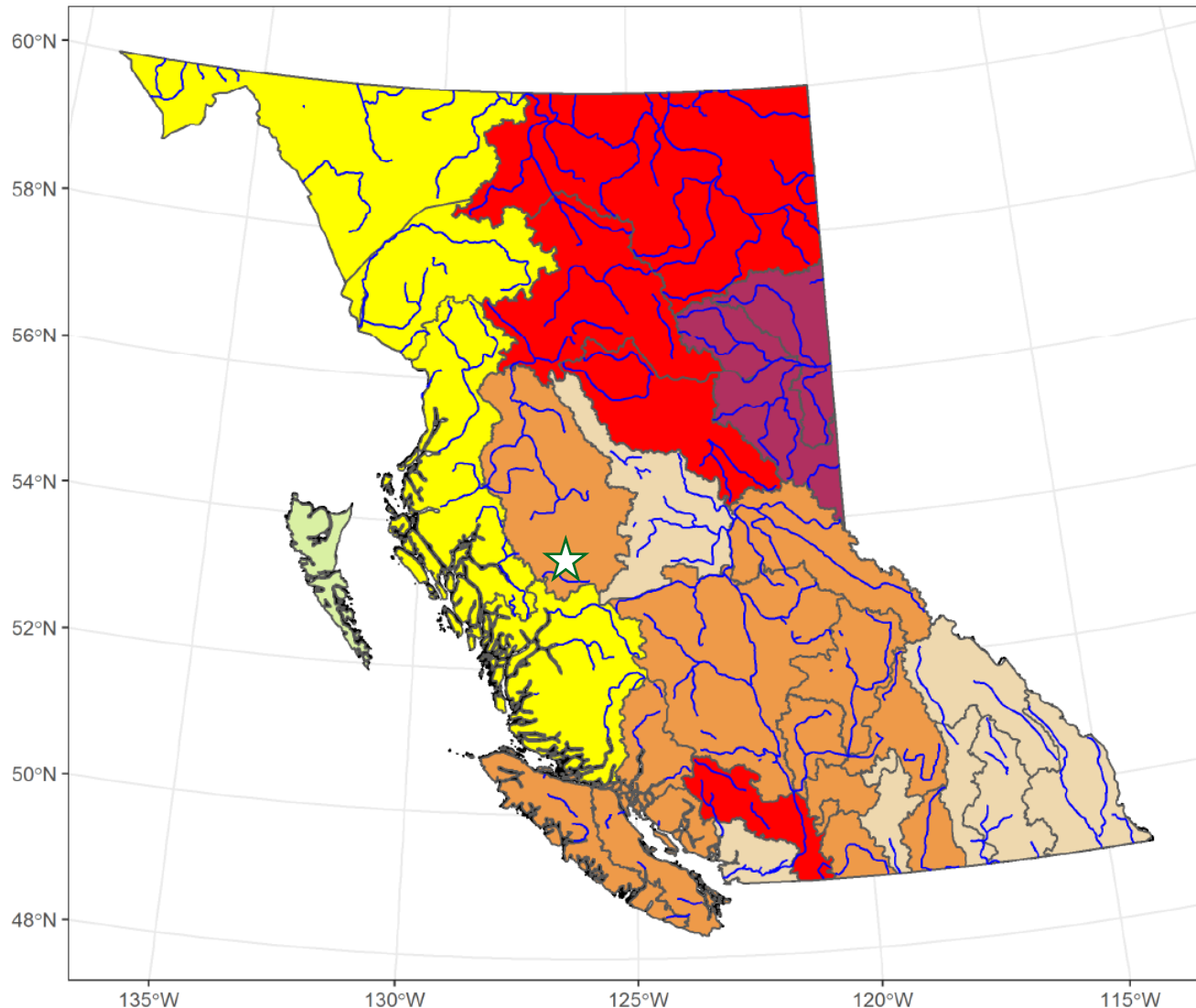
Marilla Weather

Next 7 Days



	Thu 01/05	Fri 01/06	Sat 01/07	Sun 01/08	Mon 01/09	Tue 01/10	Wed 01/11
	Cloudy with sunny breaks	A mix of sun and clouds	A mix of sun and clouds	A mix of sun and clouds	Mainly cloudy	Mainly cloudy	Mainly cloudy
	-5°	-2°	0°	-3°	-4°	-4°	-4°
Feels like	-7	-5	-1	-5	-5	-4	-6
Night	-8°	-4°	-8°	-9°	-7°	-6°	-6°
POP	30 %	30 %	30 %	20 %	30 %	40 %	40 %
Wind (km/h)	8 N	8 SE	8 SE	8 s	3 NE	5 w	4 E
Wind gust (km/h)	12	12	12	12	5	8	6
Hrs Of Sun	1 h	2 h	3 h	3 h	1 h	0 h	1 h
24 Hr Snow	-	-	<1 cm	-	-	-	<1 cm

Provincial Drought Advisories



Last updated : December 1st
***Drought updates have concluded for the 2022 season and
will resume in spring 2023.***

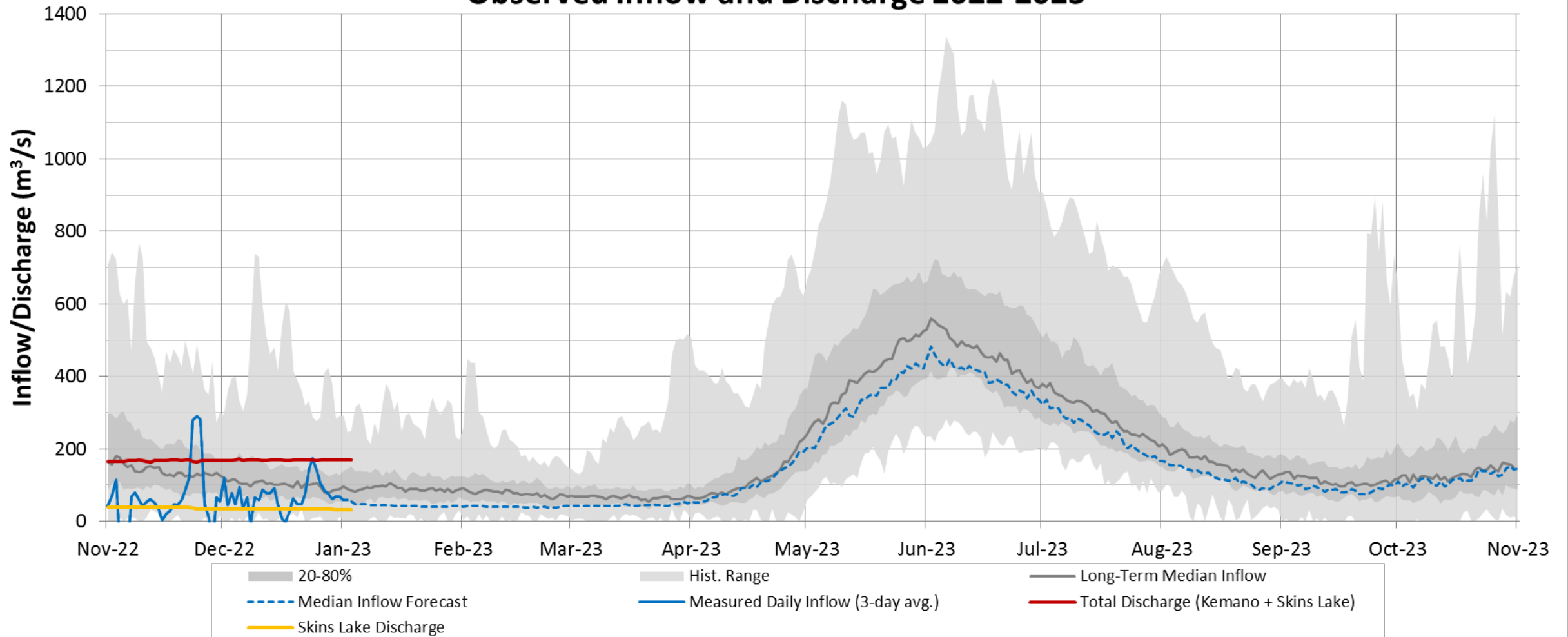
Drought Level

- 0 - No Adverse Impacts
- 1 - Adverse Impacts Rare
- 2 - Adverse Impacts Unlikely
- 3 - Adverse Impacts Possible
- 4 - Adverse Impacts Likely
- 5 - Adverse Impacts Almost Certain

Source: British Columbia Drought Information Portal
Water Management Branch – Ministry of Forests

Observed Inflows & Discharge vs Historical

Nechako Reservoir Operation
Observed Inflow and Discharge 2022-2023

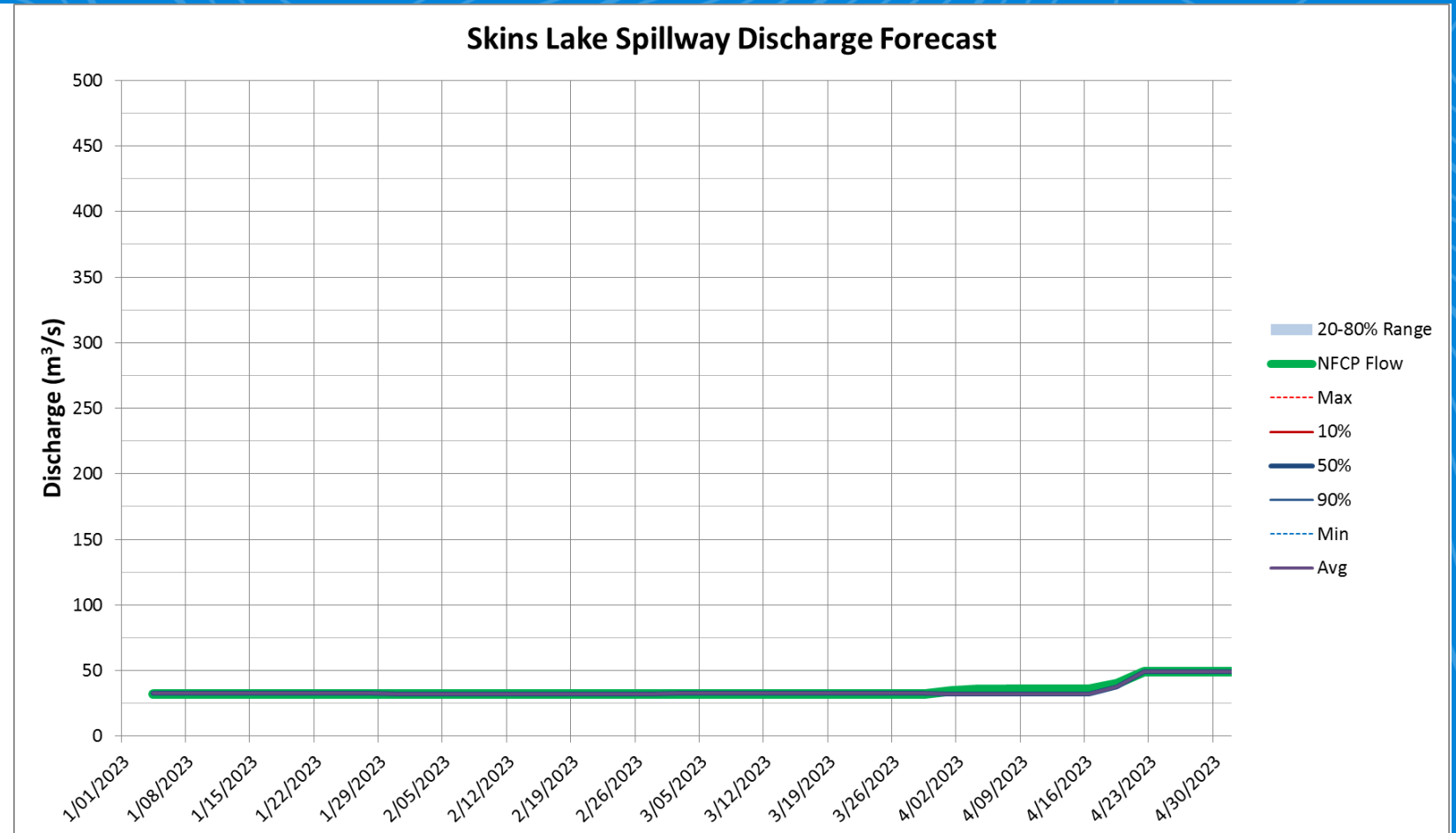


Skins Lake Spillway Release Forecast

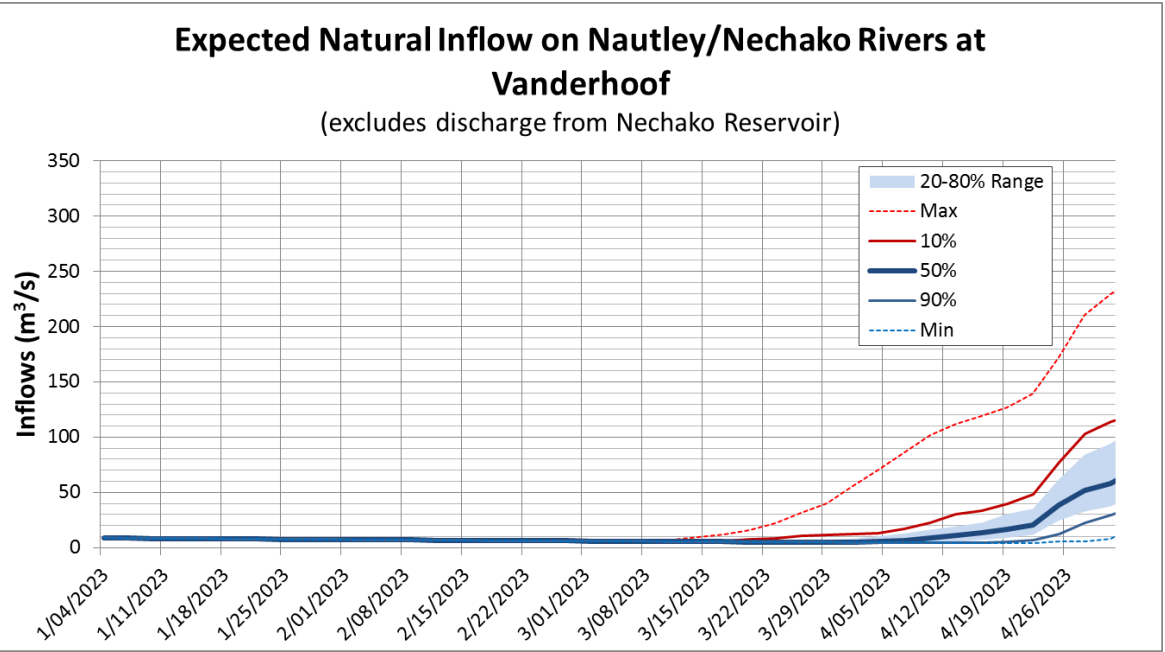
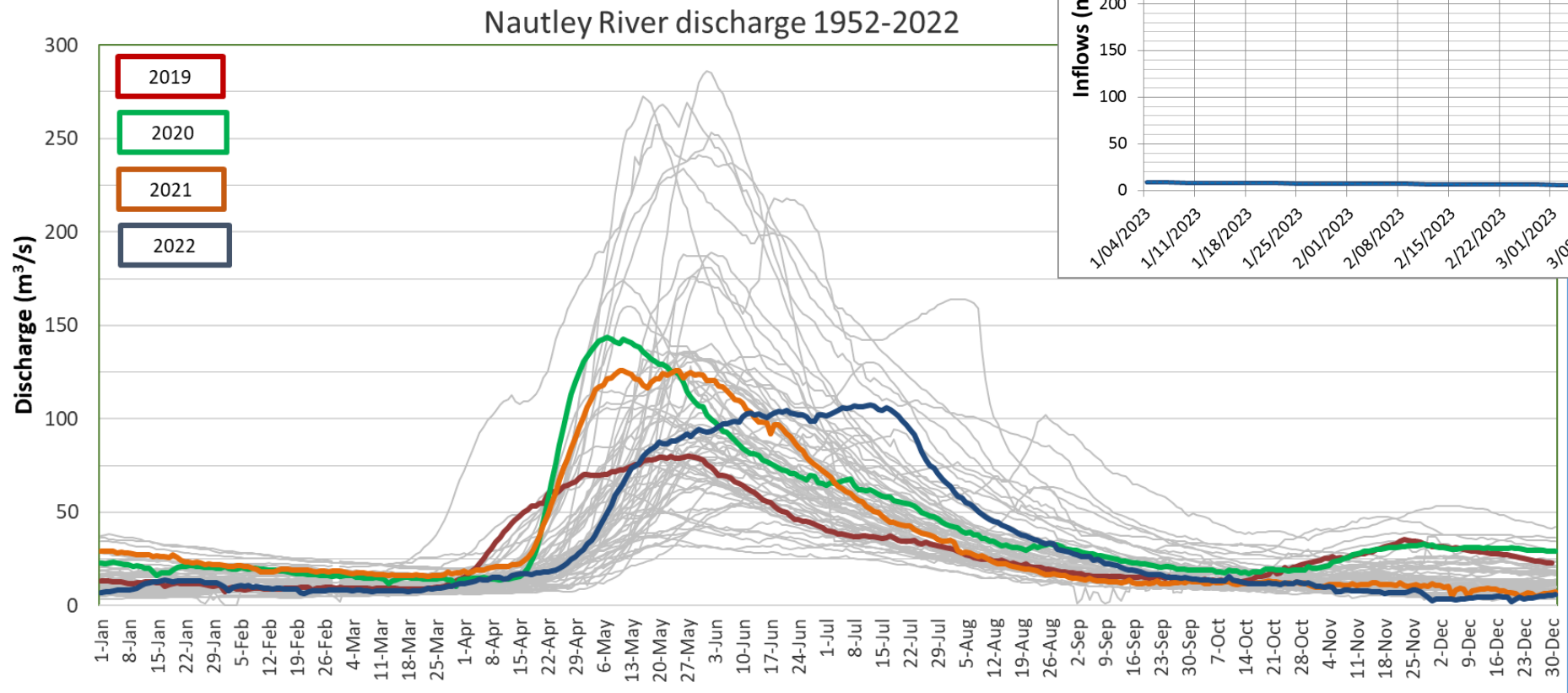
Last gate change (November 23rd)
= **34 m³/s**

Current = **~33 m³/s**

Winter minimum = **32 m³/s**

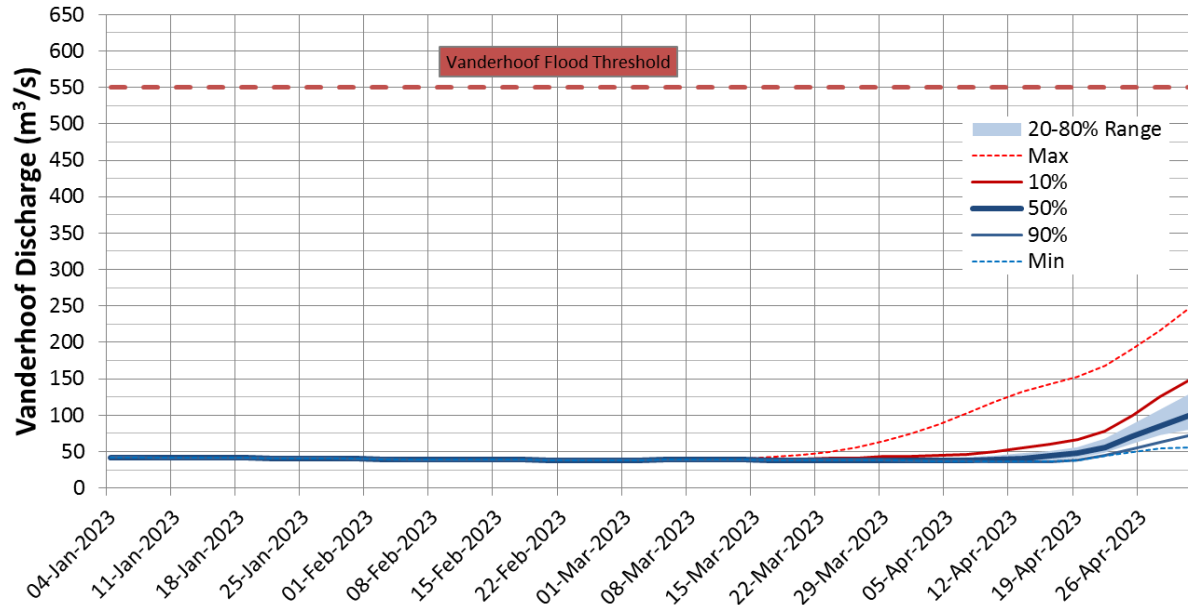


Nautley River Flows, Forecast

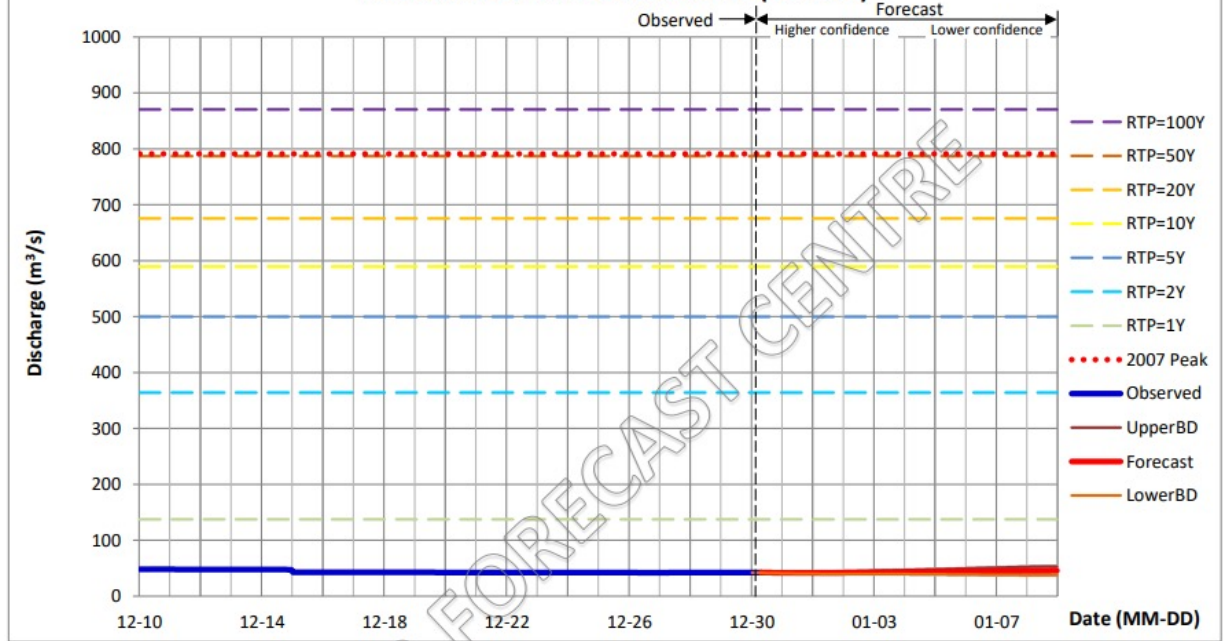


Forecast – Vanderhoof

Expected Total Discharge at Vanderhoof



NECHAKO RIVER AT VANDERHOOF (08JC001)

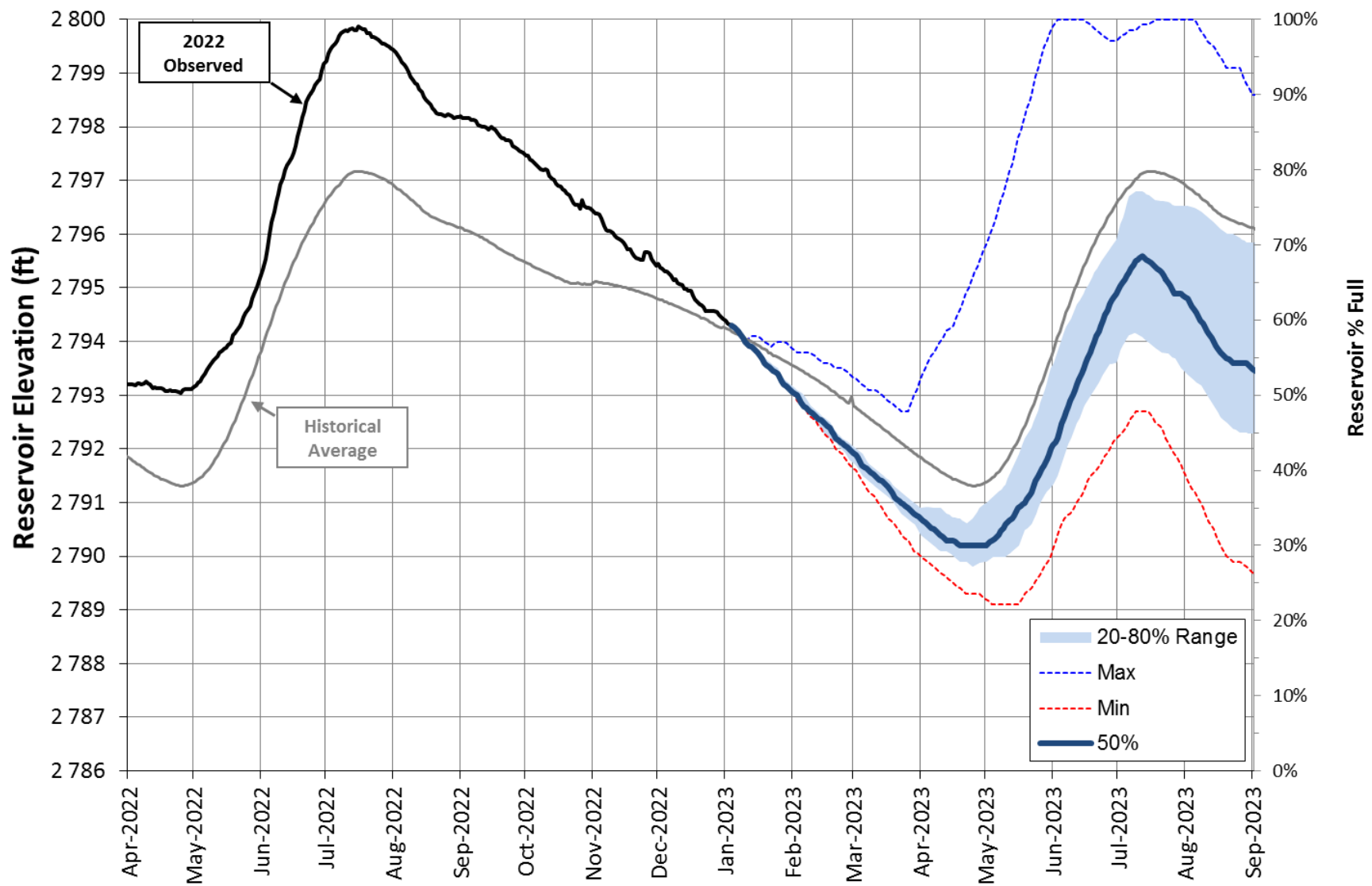


Reading at 08 AM (m³/s) Fri	Forecast Daily Discharge (m³/s): AVERAGE									
	UPPER BOUND									
	LOWER BOUND									
	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2022-12-30	2022-12-30	2022-12-31	2023-01-01	2023-01-02	2023-01-03	2023-01-04	2023-01-05	2023-01-06	2023-01-07	2023-01-08
42.1	42.6	43.2	43.8	44.6	45.8	47.2	48.7	50.2	51.7	53.0
	42.0	41.8	41.8	42.3	42.8	43.3	43.8	44.4	44.9	45.4
	41.5	40.4	39.9	40.0	39.8	39.4	39.0	38.5	38.1	37.9

Color Scheme for Return Periods:	RTP=1Y	RTP=2Y	RTP=5Y	RTP=10Y	RTP=20Y	RTP=50Y	RTP=100Y	2007 Peak
	137.4	364.1	499.7	589.4	675.5	786.9	870.4	791.0
								(m³/s)

Remark: This station is labeled as "regulated", and the forecast is the sum of natural flows and extended regulated flow from 08JA017.

Reservoir Level Projection



NECHAKO RESERVOIR
Observed and Projection 2022-2023
04-Jan-2023 Projection - SDP V7.13

Next Steps – Actions



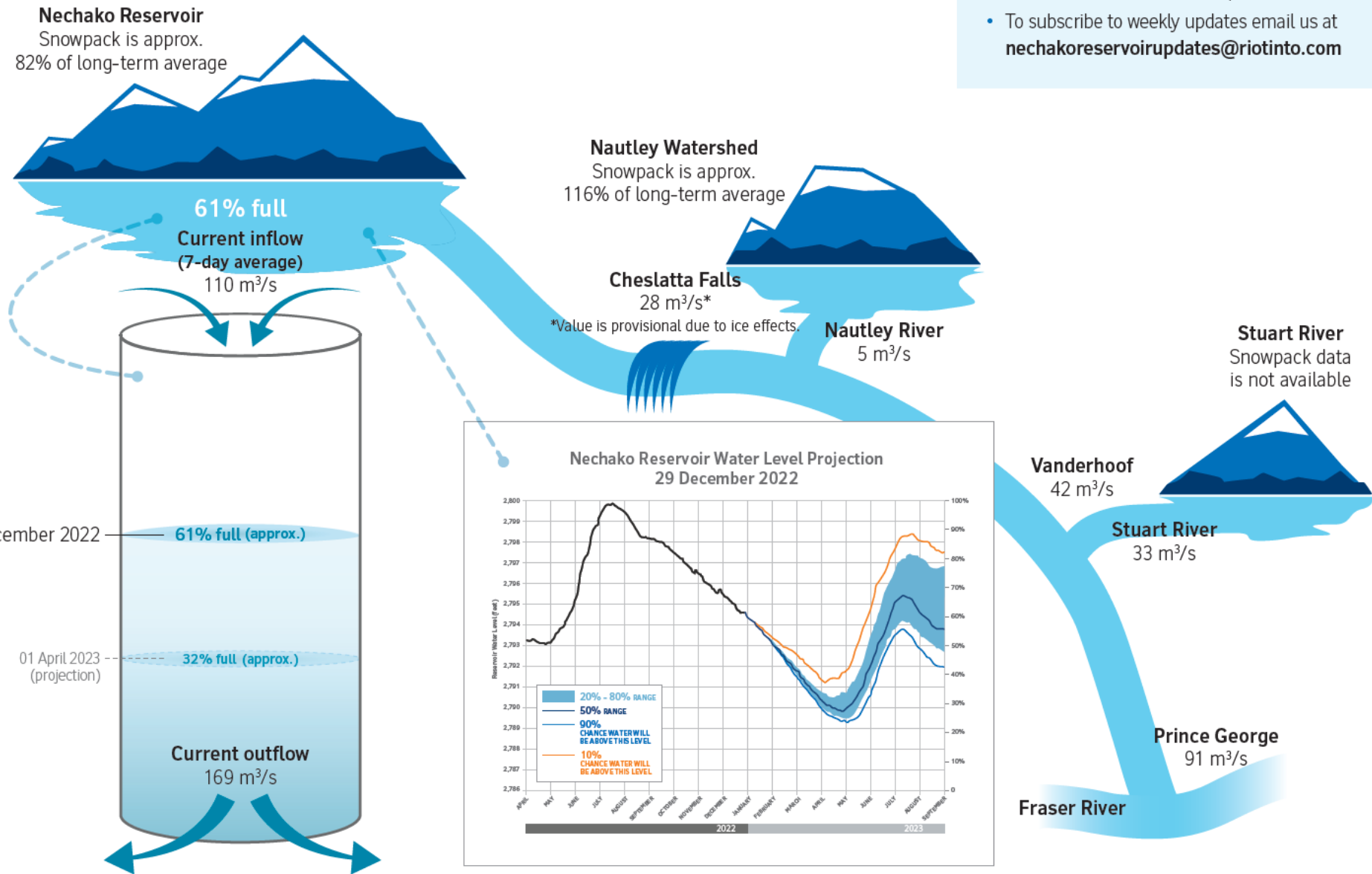
1. Model update and communications.
2. Monitoring work to learn from 2022 release
3. Continue to update on Smelter Re-Start
4. Confirm next meeting date & time – **Propose**
(4w) **February 1st.**
(5w) **February 8th.**

Presentations are available on the Get Involved Nechako website under 'Our Operations'. Recordings can be requested up to 30 days following the meeting.

Current Conditions – 29 December 2022

Nechako Reservoir operations update

- Skins Lake Spillway will be maintained between 32 m³/sec and 34 m³/sec for the duration of the winter period.
- To subscribe to weekly updates email us at nechakoreservoirupdates@riotinto.com



Feedback & Reflections

