



RioTinto

Nechako Reservoir / River / Freshet Information Sharing – Community Leaders

30 August 2023

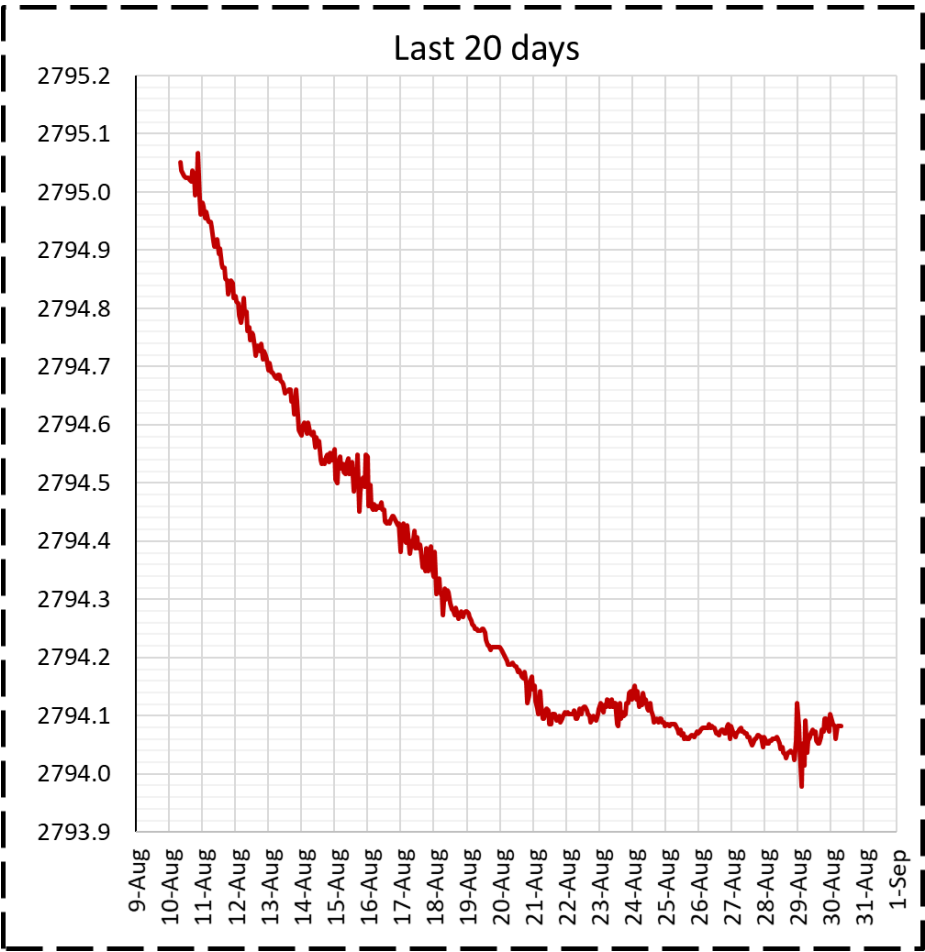
Prepared by Andrew Czornohalan & Simon Matte

Reservoir Elevation - Last 20 days

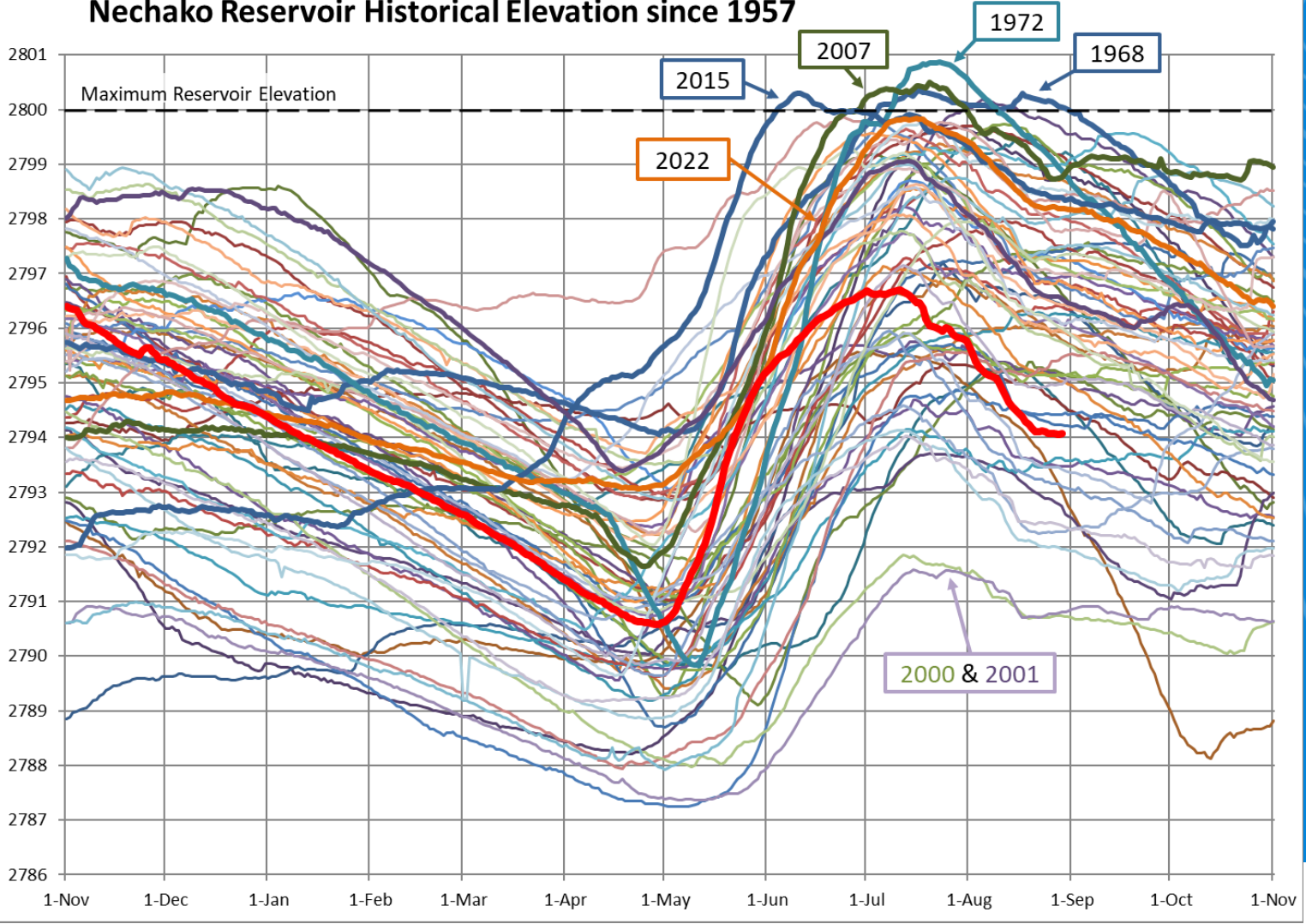
Current reservoir level

2794.08 ft

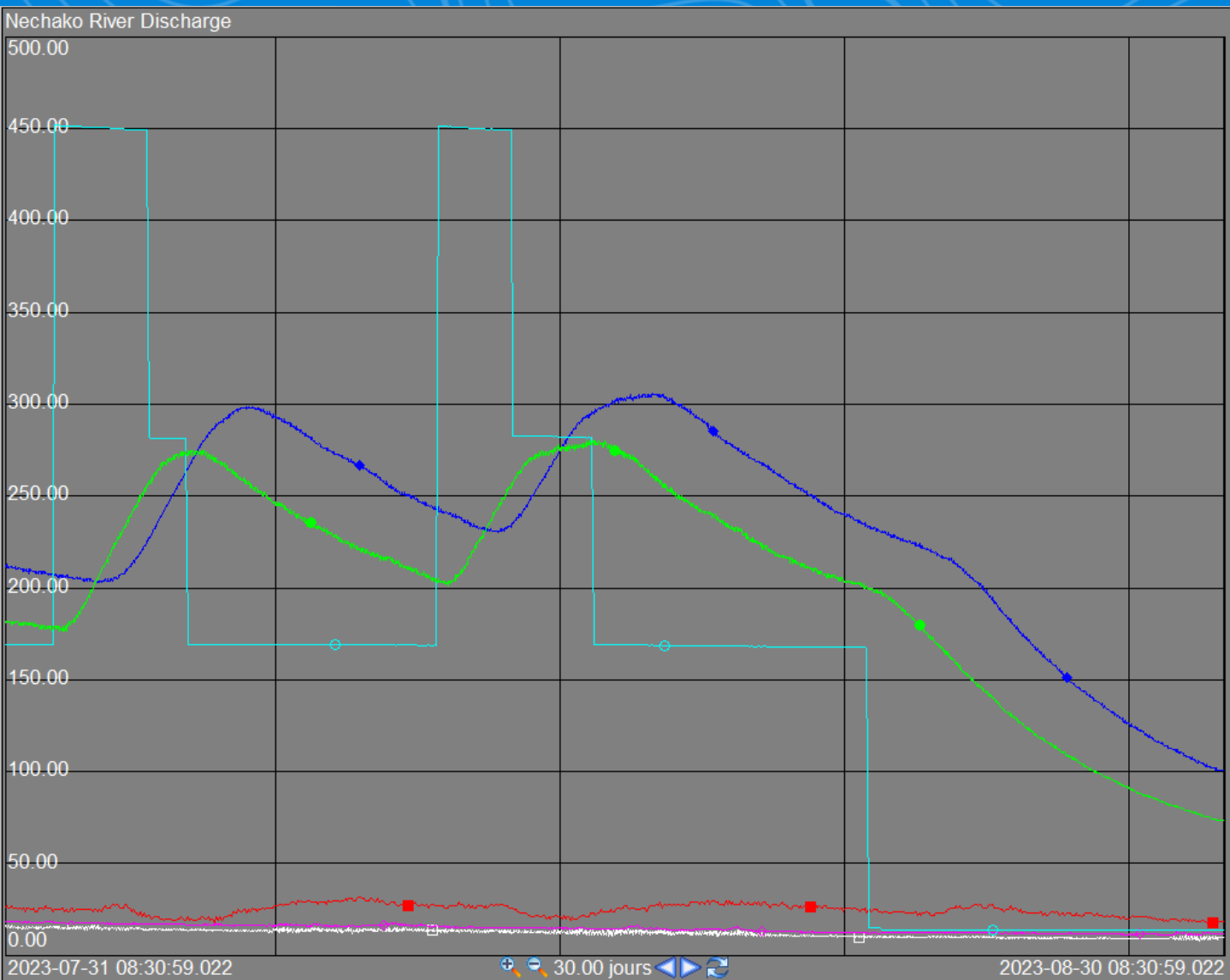
Last 20 days



Nechako Reservoir Historical Elevation since 1957

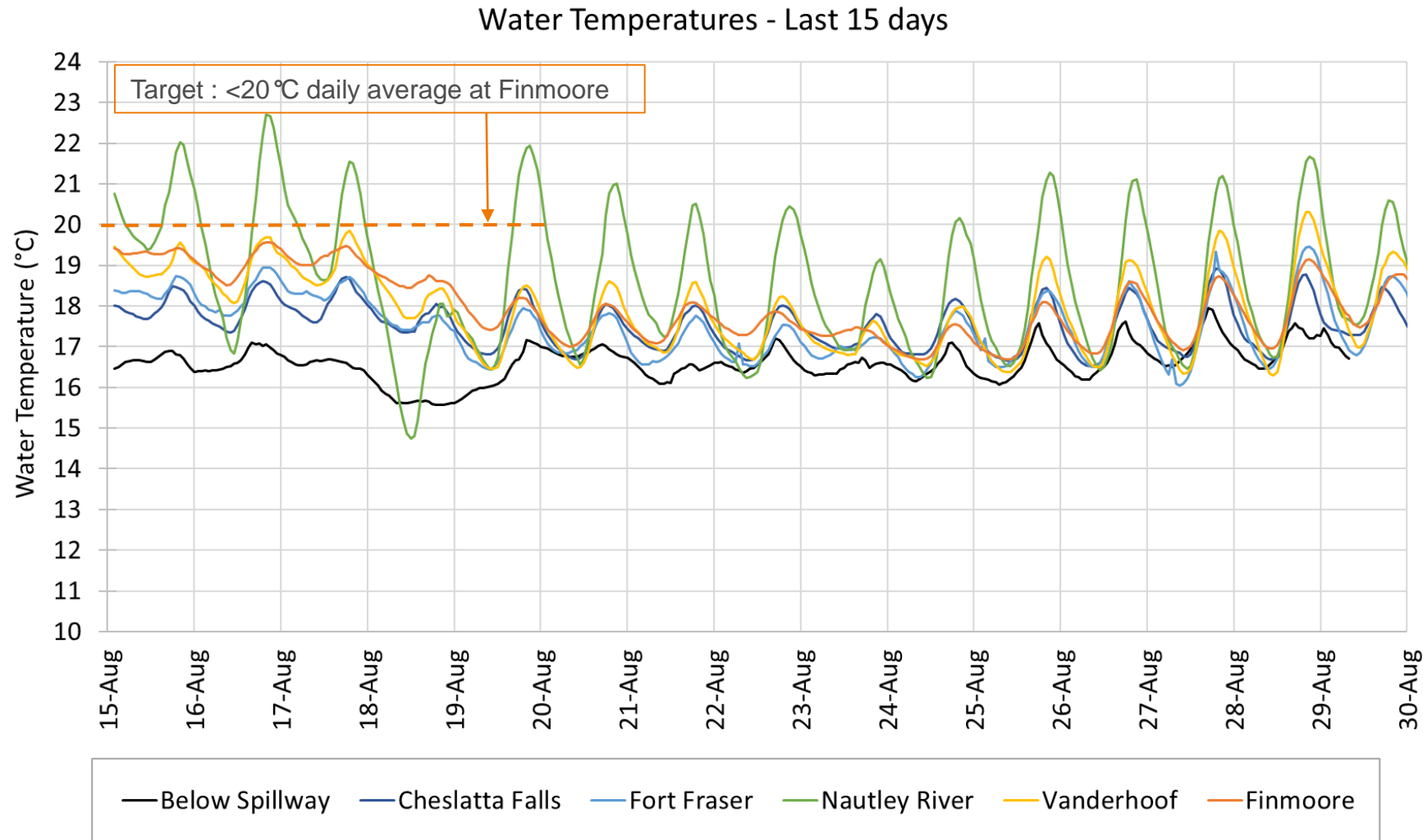


Flows - Last 30 days



Current values (m³/s)	
Vanderhoof	101
Skins Lake	14
Cheslatta Falls	74
Nautley	12
Stellako	10

Observed Water Temperatures – Last 15 days

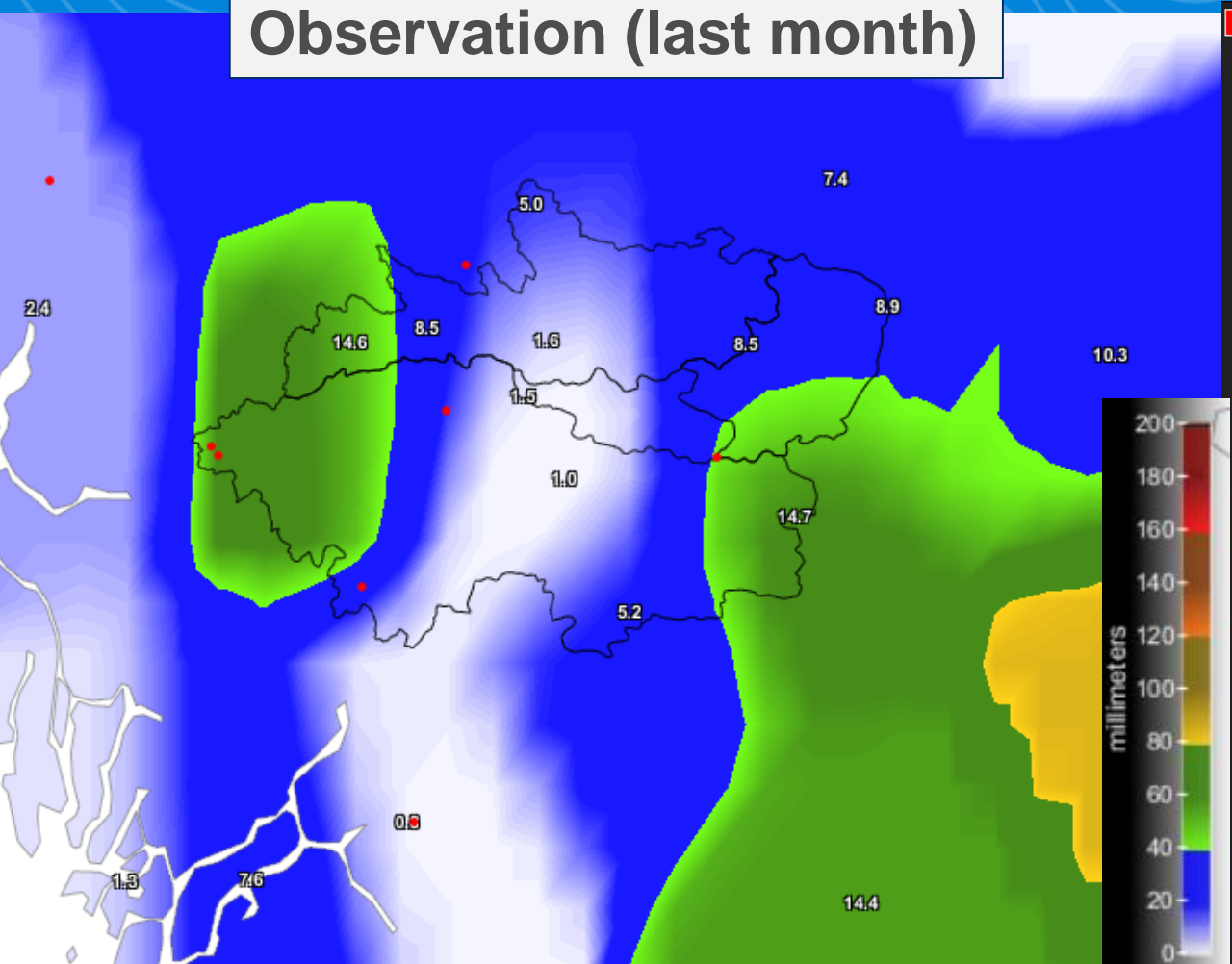


Average – Last 24h (°C)

Below spillway	17.1
Cheslatta Falls	17.7
Fort Fraser	17.8
Nautley River	18.8
Vanderhoof	18.3
Finmoore	18.2

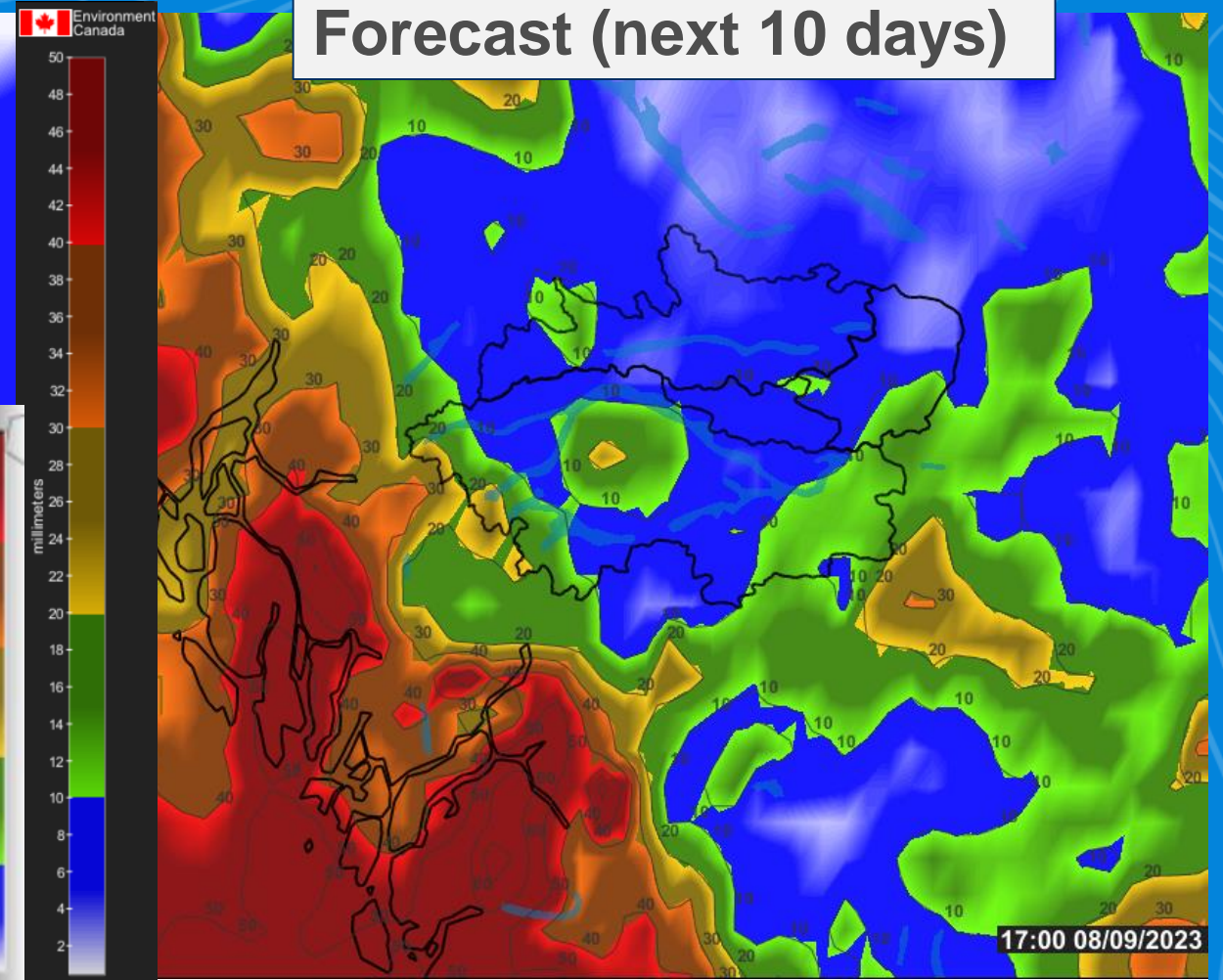
Past & Future cumulative precipitation

Observation (last month)



Nechako Reservoir watershed area-average = 18 mm

Forecast (next 10 days)



Nechako Reservoir watershed area-average = 5-20 mm

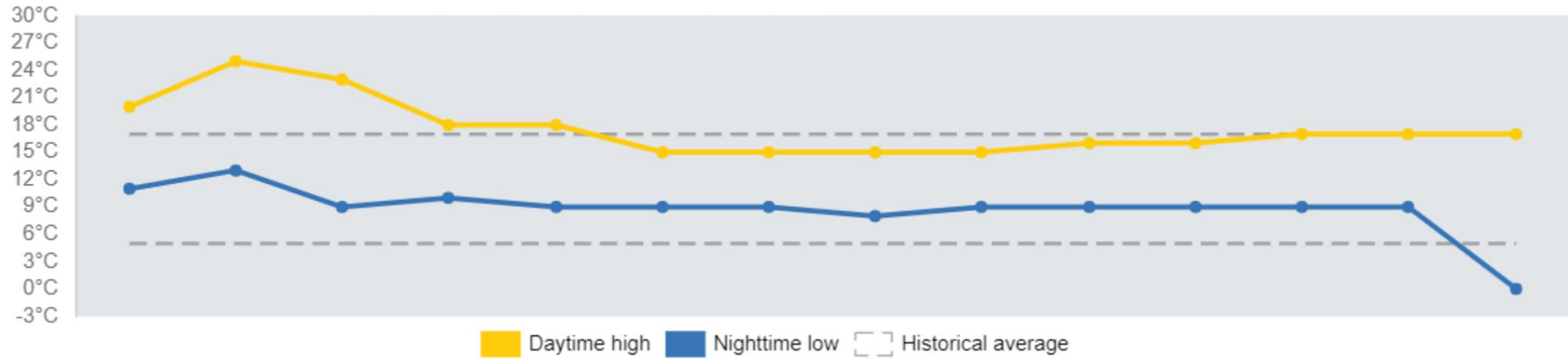
Weather Forecast

Marilla Weather

Full 14 Days Overview
Aug 31 - Sep 13



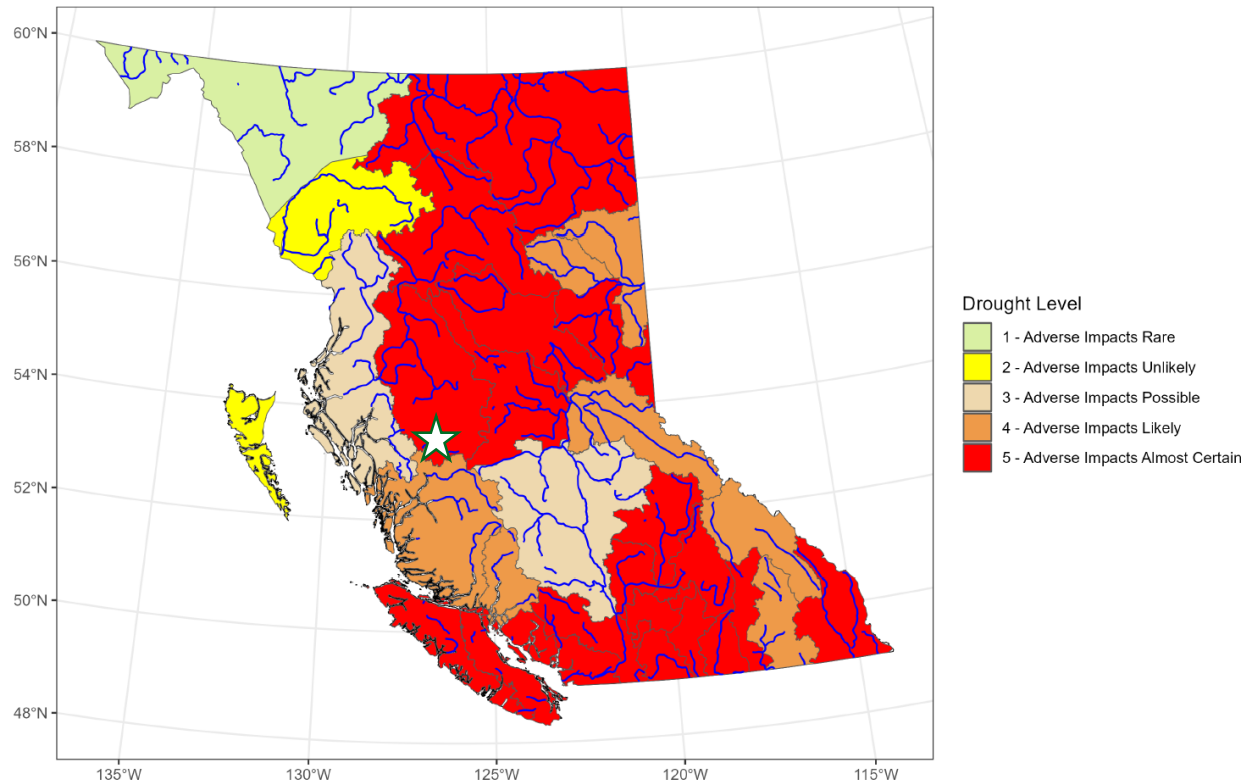
	Thu 08/31	Fri 09/01	Sat 09/02	Sun 09/03	Mon 09/04	Tue 09/05	Wed 09/06	Thu 09/07	Fri 09/08	Sat 09/09	Sun 09/10	Mon 09/11	Tue 09/12	Wed 09/13
Day	20°	25°	23°	18°	18°	15°	15°	15°	15°	16°	16°	17°	17°	17°
POP	30 %	10 %	20 %	30 %	30 %	30 %	60 %	20 %	20 %	20 %	20 %	20 %	10 %	10 %
Night	11°	13°	9°	10°	9°	9°	9°	8°	9°	9°	9°	9°	9°	0°
POP	10 %	10 %	20 %	30 %	30 %	40 %	20 %	20 %	20 %	10 %	20 %	10 %	10 %	0 %



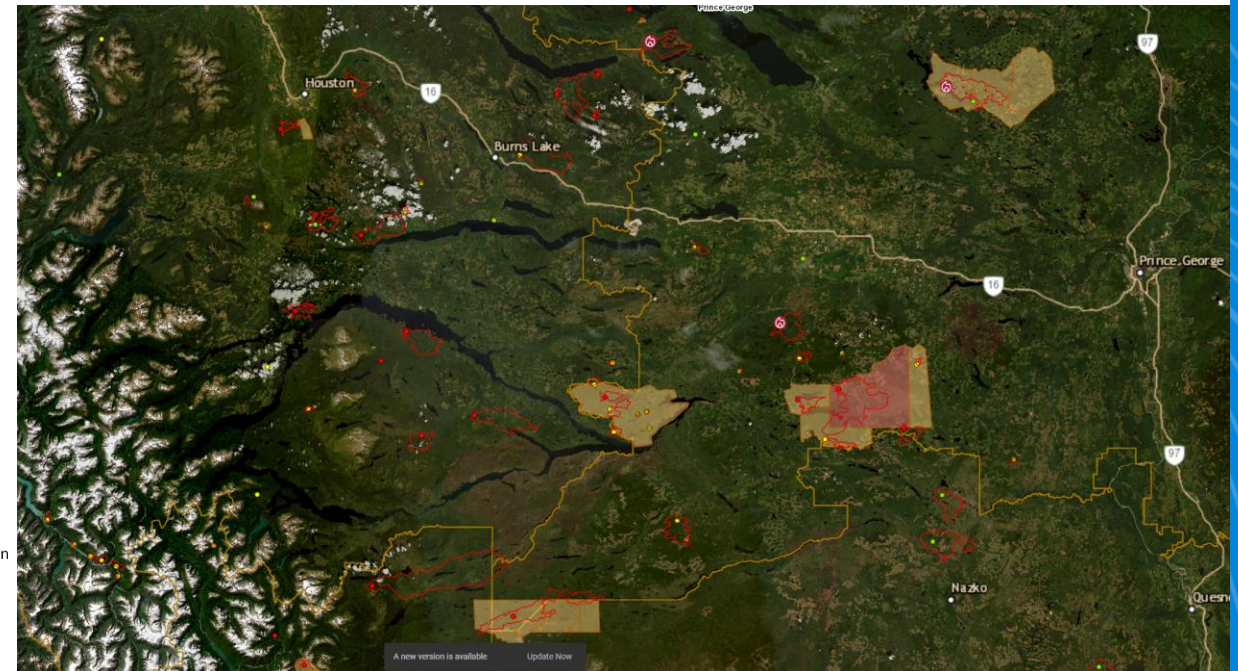
Provincial Advisories - Drought

Last updated : Aug. 24th

Drought Level 5 : Adverse Impacts Almost Certain



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



Wildfire of Note

A wildfire that is highly visible or poses a potential threat to public safety.

Out of Control

A wildfire that is continuing to spread and is not responding to suppression efforts.

Being Held

A wildfire that is not likely to spread beyond predetermined boundaries under current conditions.

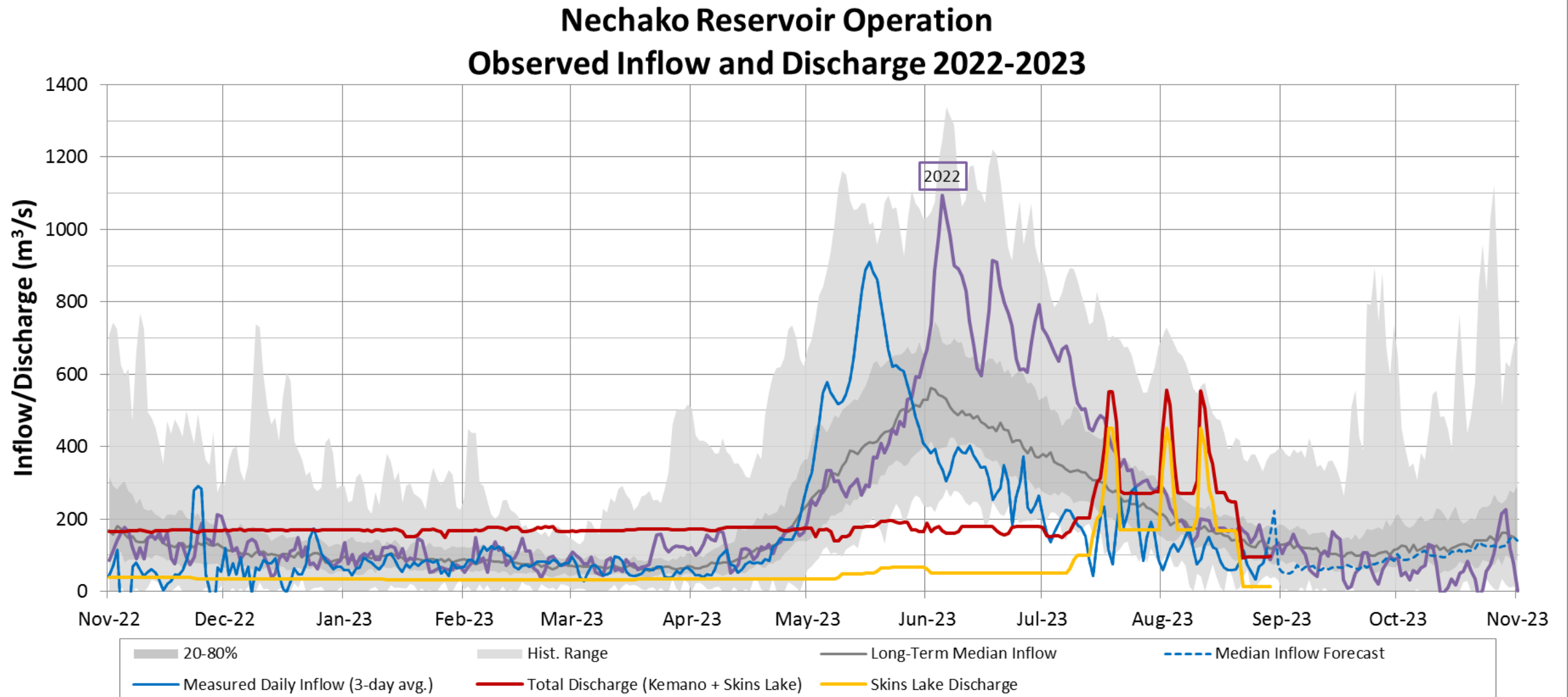
Under Control

A wildfire that will not spread any further due to suppression efforts.

Out

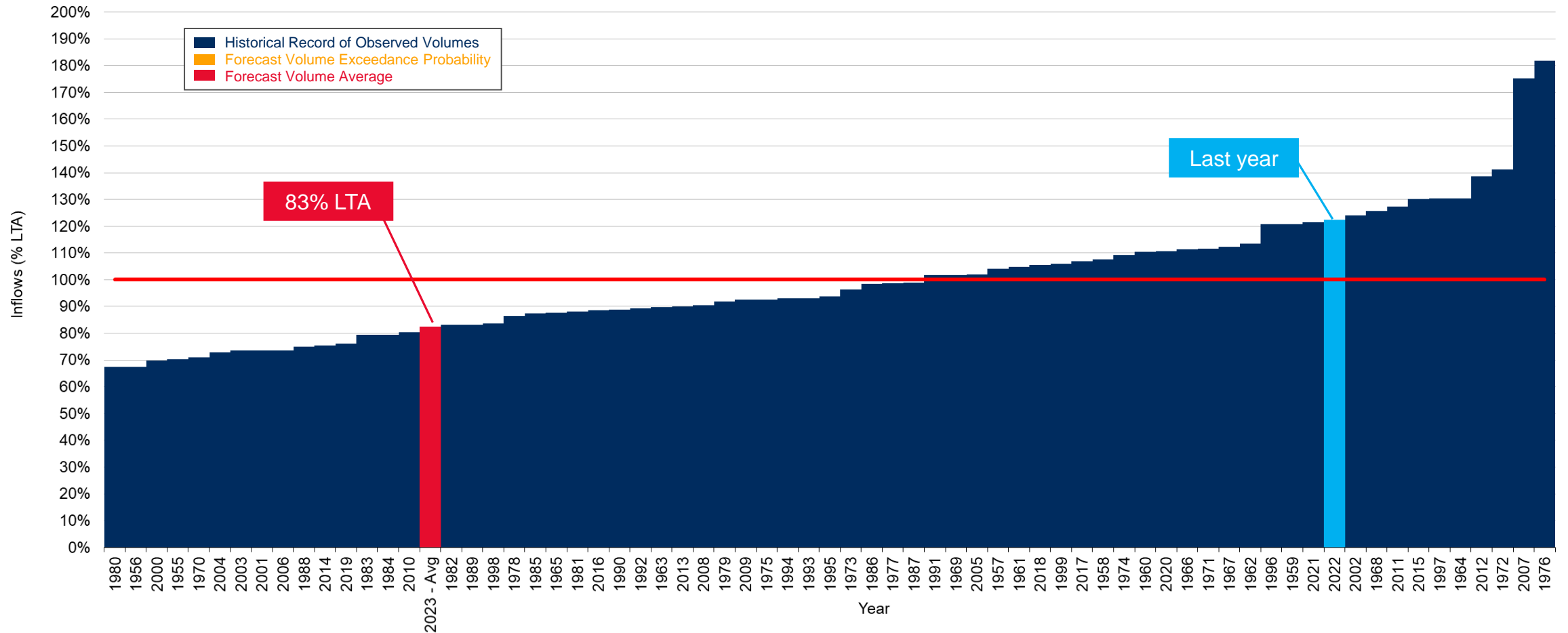
A wildfire that is extinguished. Suppression efforts are complete.

Observed Inflows & Discharge vs Historical



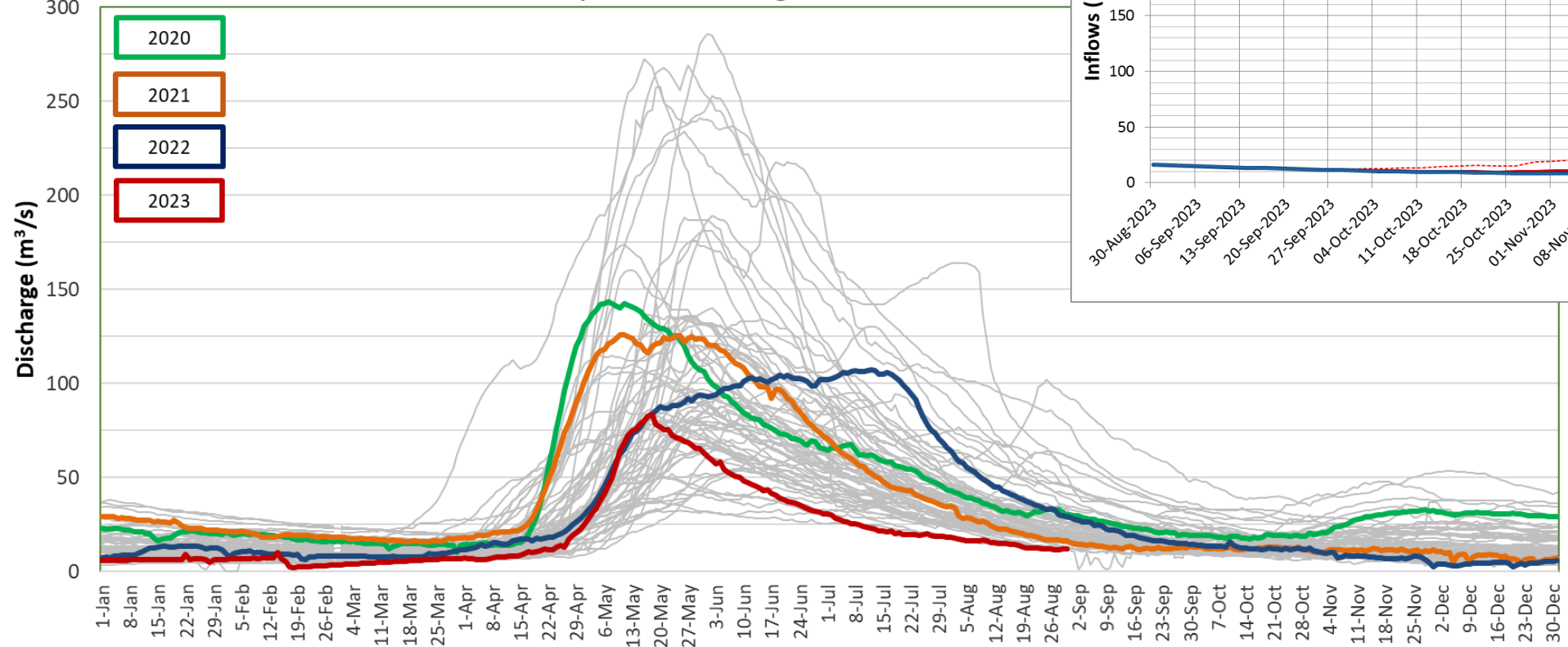
Spring Freshet Inflow Volume

2023 Freshet Volume Forecast vs Historical Record [1 April - 31 August]
Ranked Values - 30 Aug 2023

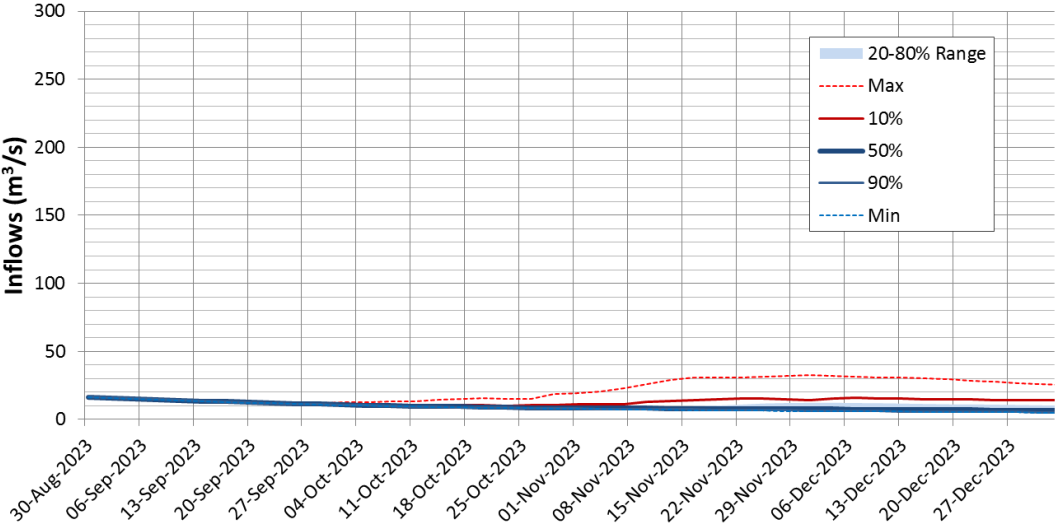


Nautley River Flows, Forecast

Nautley River discharge 1952-2023

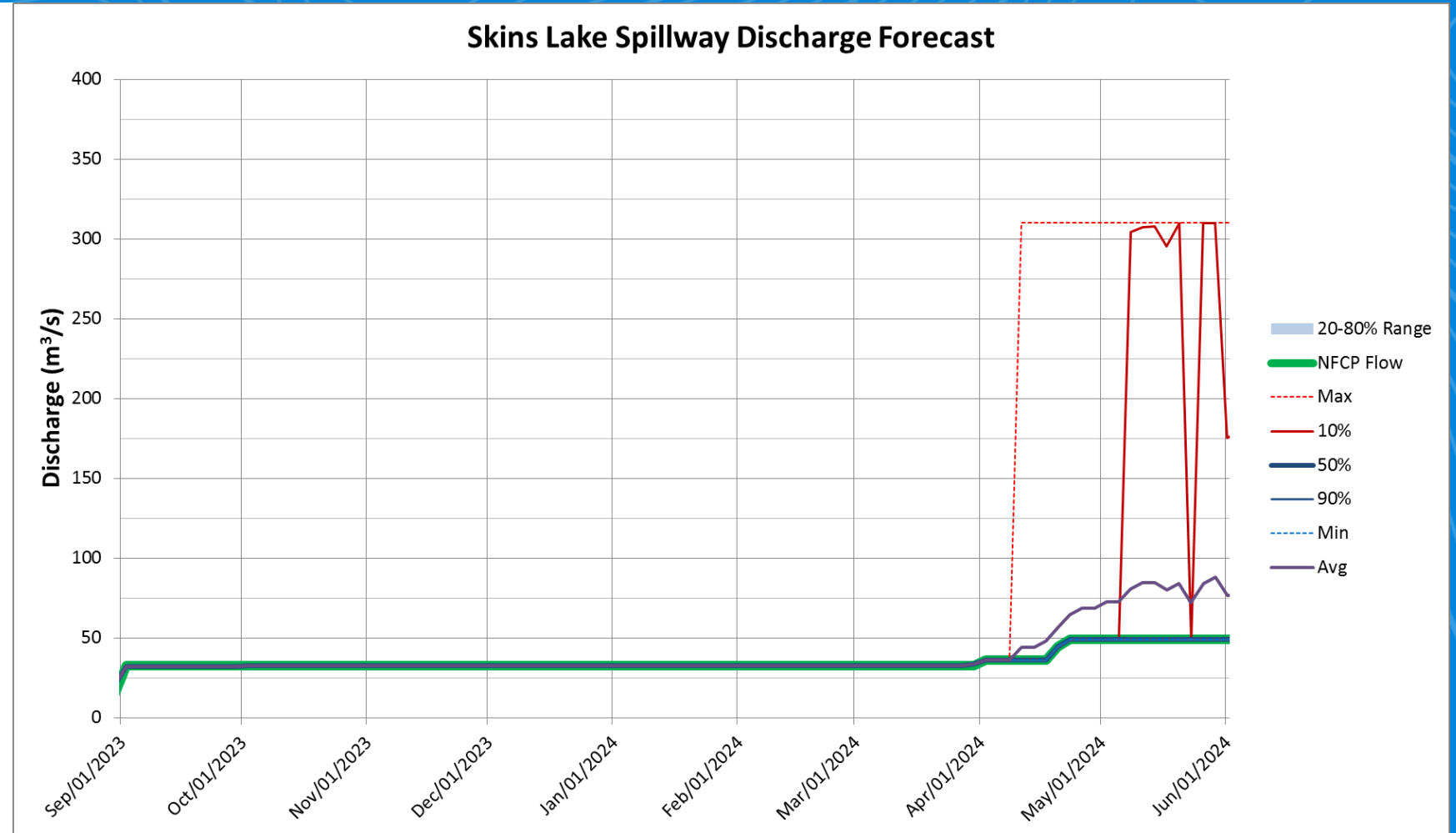


Expected Natural Inflow on Nautley/Nechako Rivers at Vanderhoof
(excludes discharge from Nechako Reservoir)



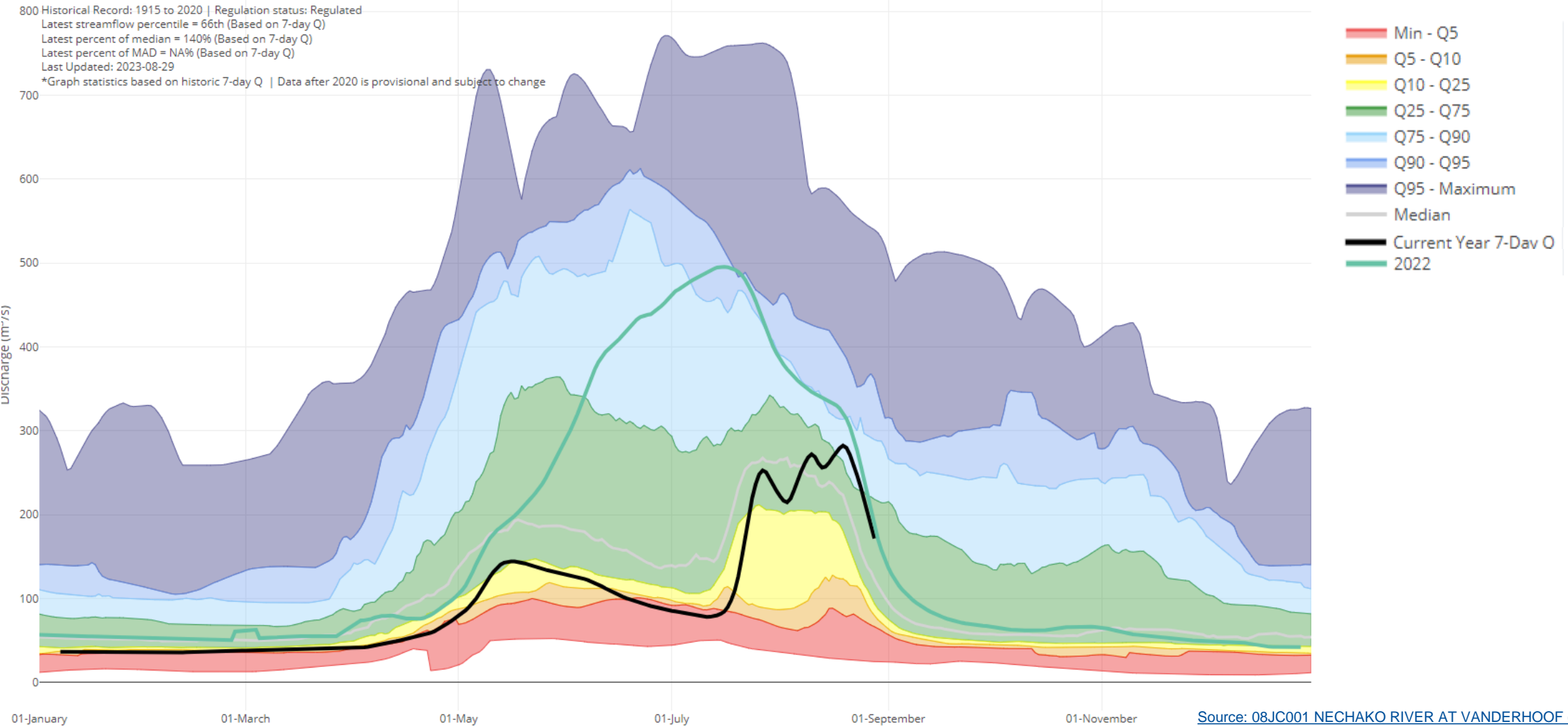
Skins Lake Spillway Release - Forecast

- Current release = **14 m³/s**
- Annual maintenance work
- Expected next gate change:
August 31st @ 6pm = 32 m³/s



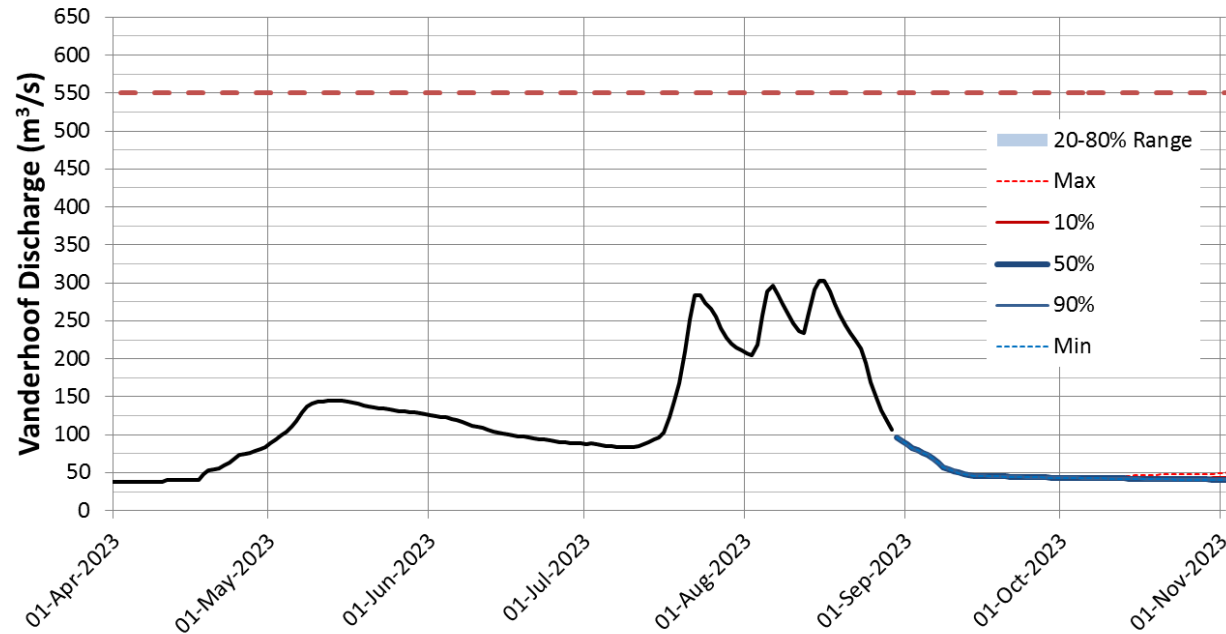
Vanderhoof

Seven Day Mean Streamflow for 08JC001 NECHAKO RIVER AT VANDERHOOF

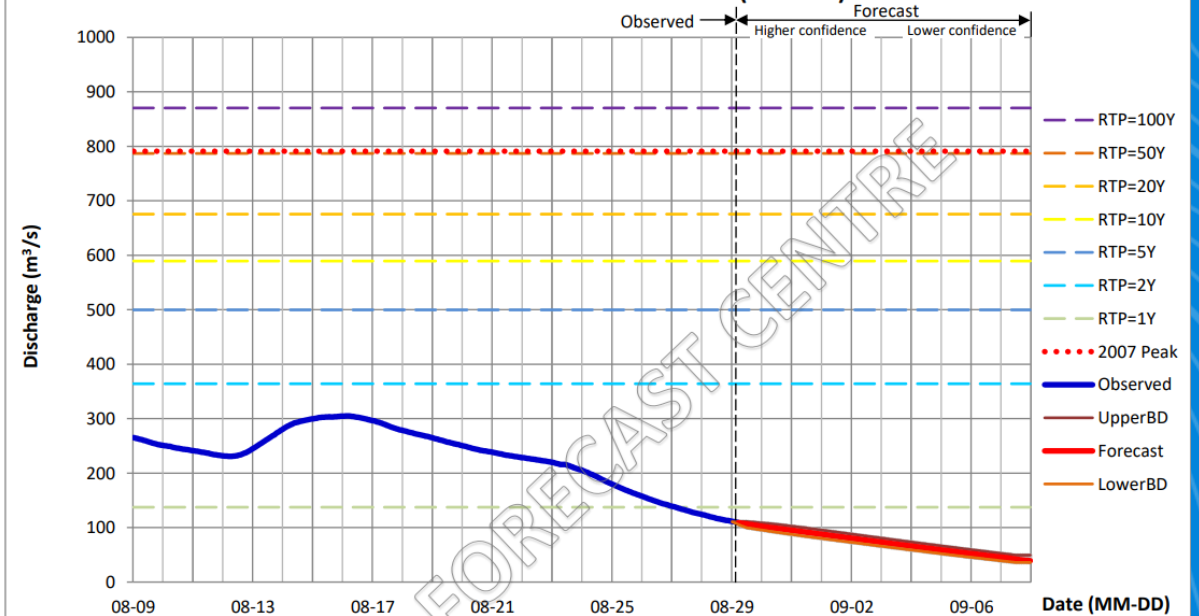


Forecast – Vanderhoof

Expected Total Discharge at Vanderhoof



NECHAKO RIVER AT VANDERHOOF (08JC001)



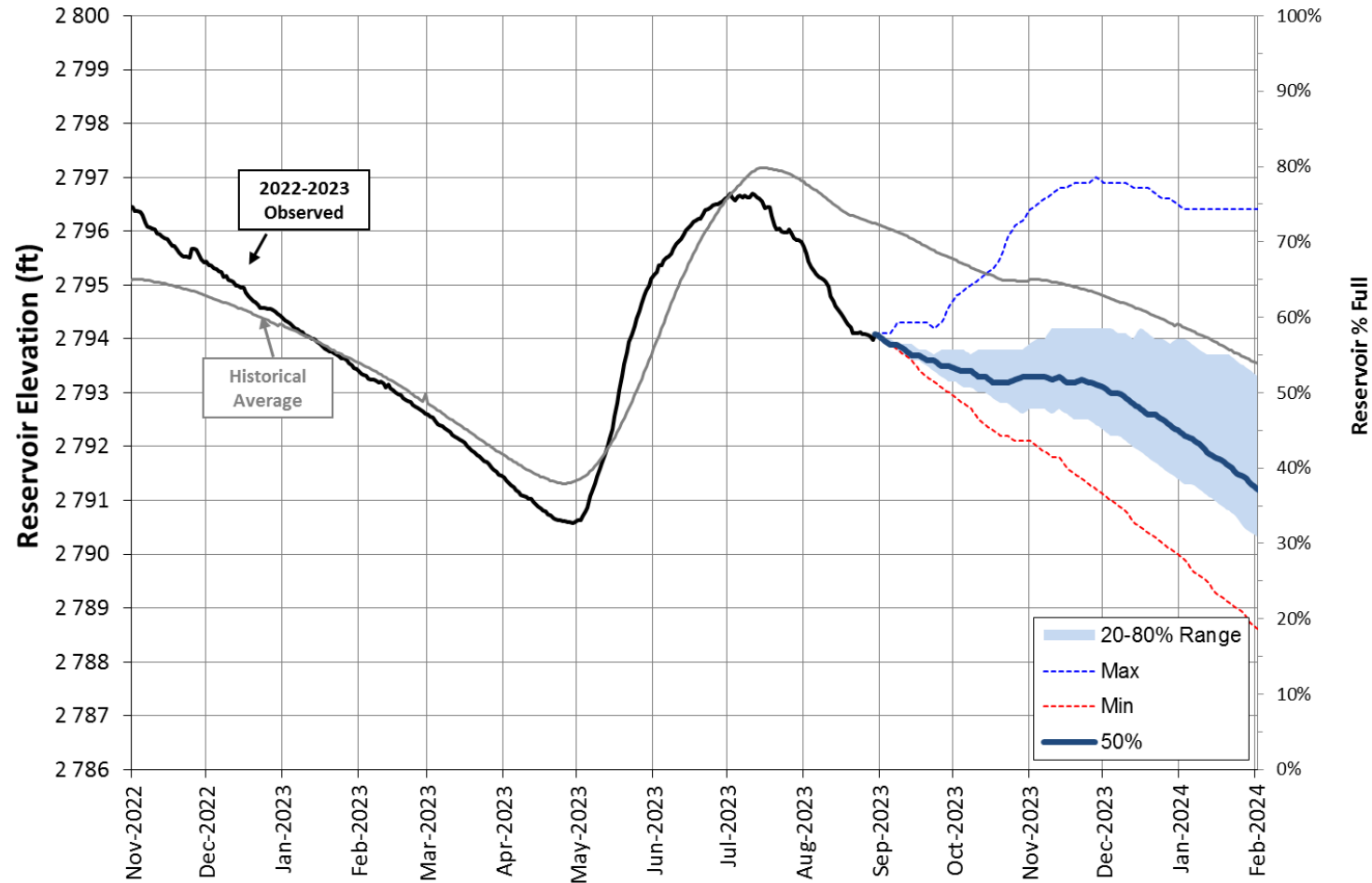
Reading at 06 AM (m³/s) Tue 2023-08-29	Forecast Daily Discharge (m³/s): AVERAGE									
	UPPER BOUND					LOWER BOUND				
	Tue 2023-08-29	Wed 2023-08-30	Thu 2023-08-31	Fri 2023-09-01	Sat 2023-09-02	Sun 2023-09-03	Mon 2023-09-04	Tue 2023-09-05	Wed 2023-09-06	Thu 2023-09-07
109.0	111.2 105.5 100.0	106.1 98.8 91.6	99.4 91.5 83.9	92.0 84.2 76.7	84.5 76.9 69.6	77.2 69.7 62.6	70.0 62.6 55.7	63.0 55.7 48.9	56.1 49.0 42.5	49.4 42.3 36.0

	RTP=1Y	RTP=2Y	RTP=5Y	RTP=10Y	RTP=20Y	RTP=50Y	RTP=100Y	2007 Peak
Color Scheme for Return Periods:	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
30-Aug-2023 Projection - SDP V7.13



Updates - Next Steps – Actions



1. Work with BC Wildfire on access
2. Model update and communications – STMP, Generation etc
3. Monitoring work in the field
4. 2023 7 Yearly Dam Safety Review underway
5. Continue to update on Smelter Re-Start currently at 93% full production
6. Confirm next meeting date & time
– **Propose September 13th / 20th / 27th**

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

Feedback & Reflections

