



RioTinto

Nechako Reservoir / River / Freshet Information Sharing – Community Leaders

11 May 2022

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Mercier

Photo: Avison

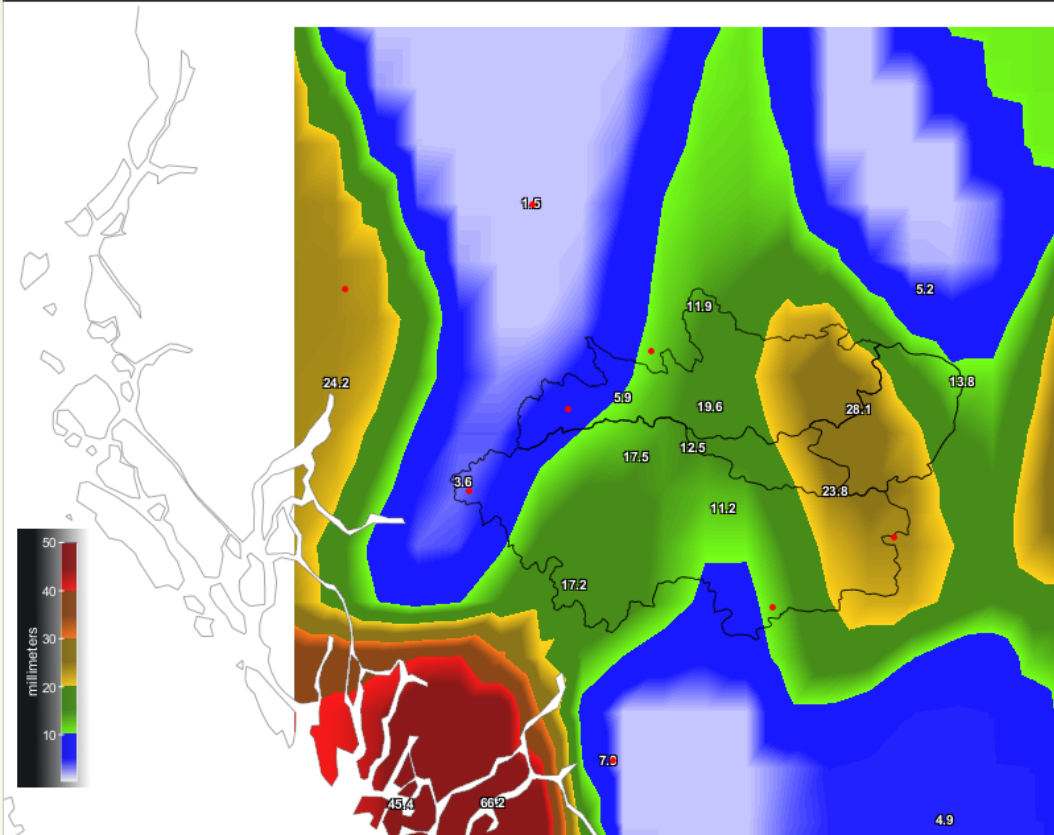
Key Focus

1. Current Watershed Data:
Precipitation and elevation
2. Freshet Forecast, looking
to the spring / summer
and next steps

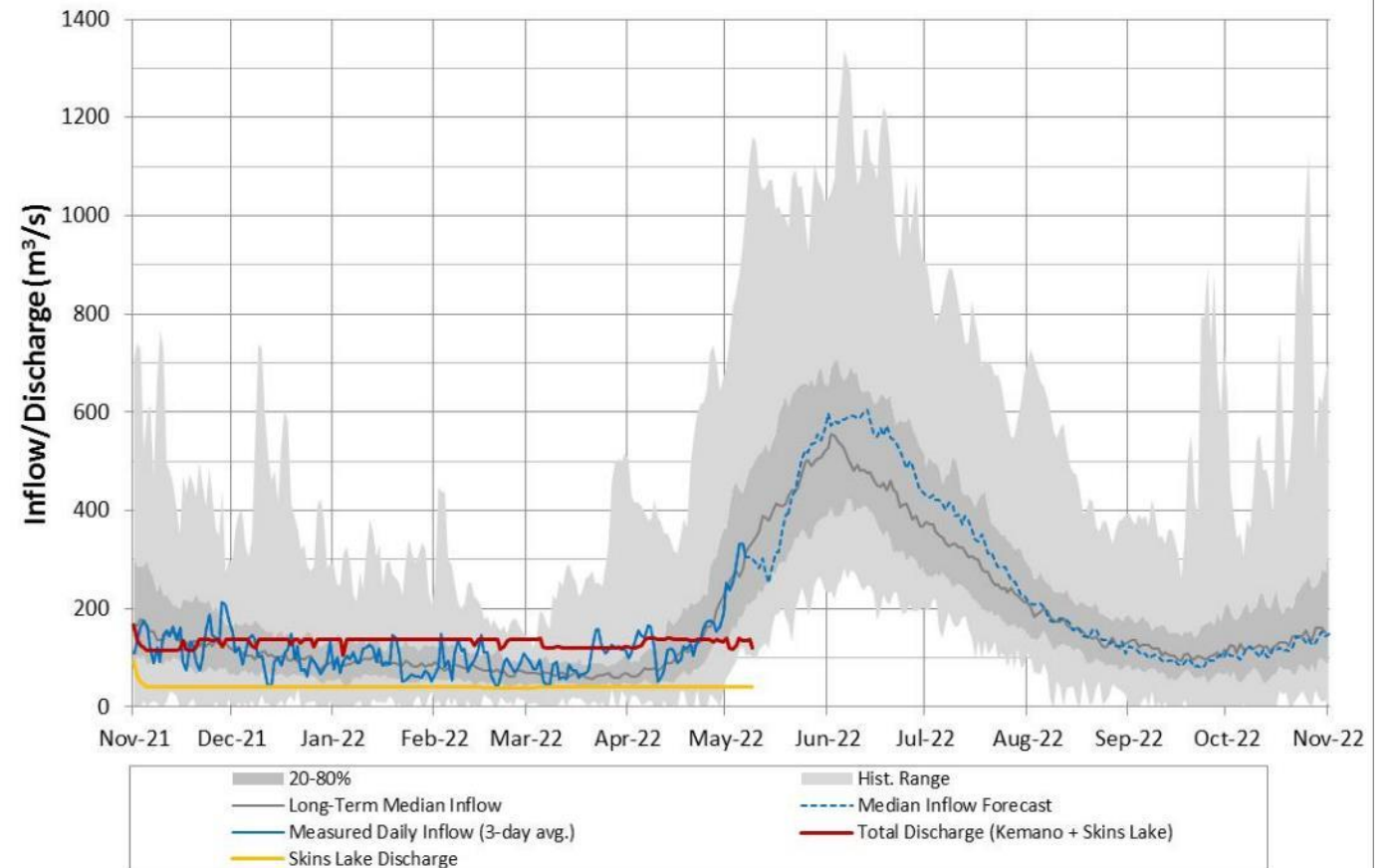


Observed Precipitation, Inflows vs Historical

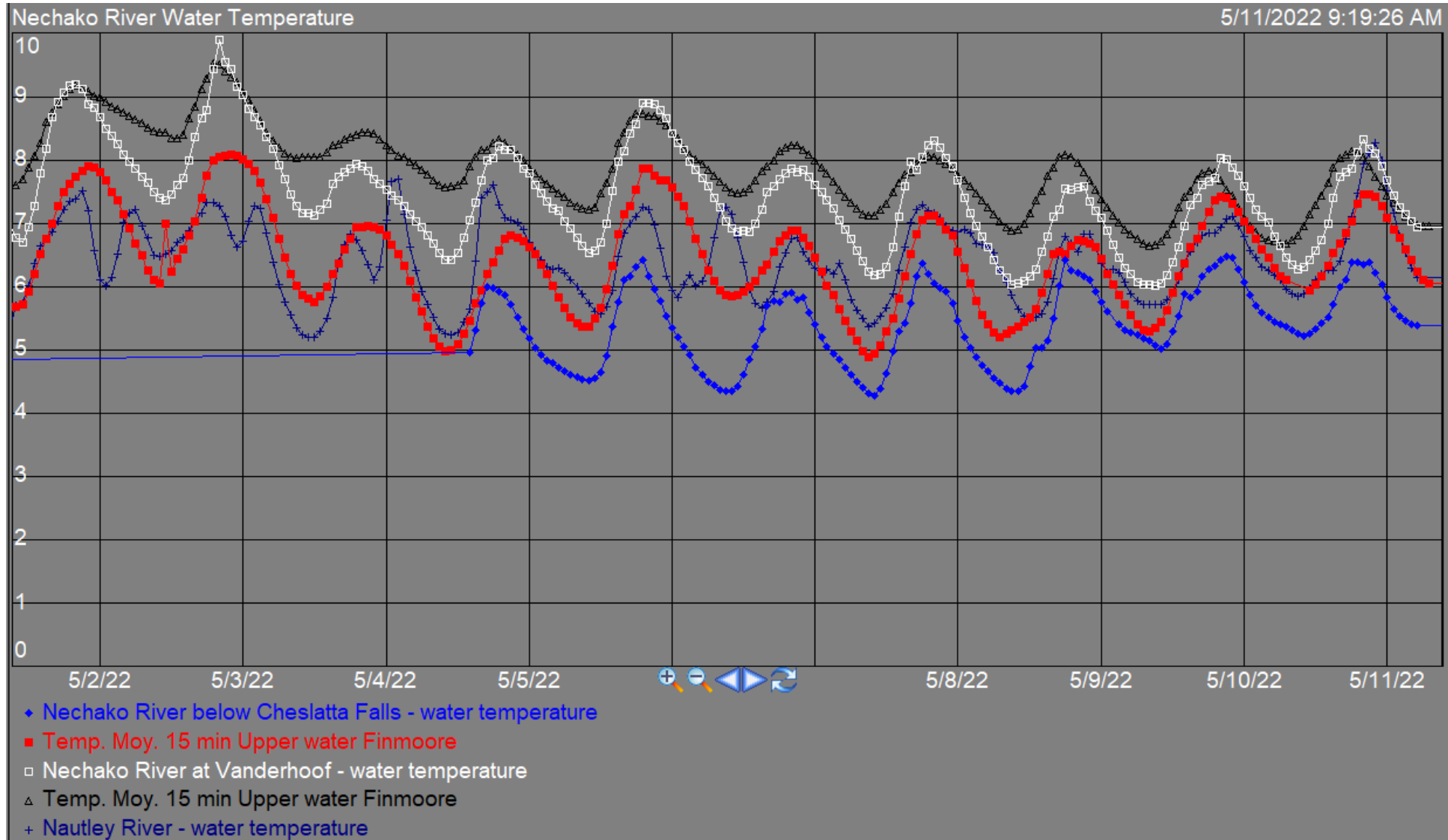
7-day cumulative rainfall



Nechako Reservoir Operation
Observed Inflow and Discharge 2021-2022



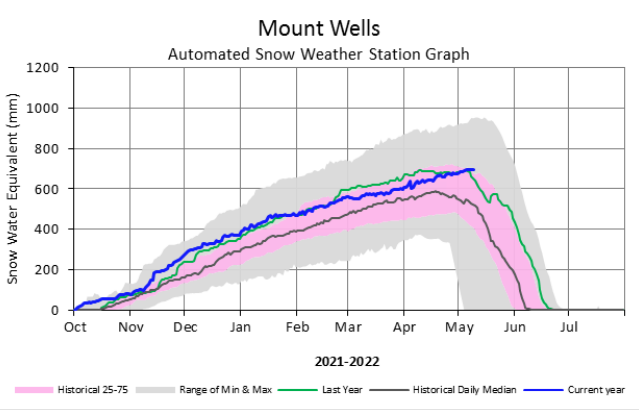
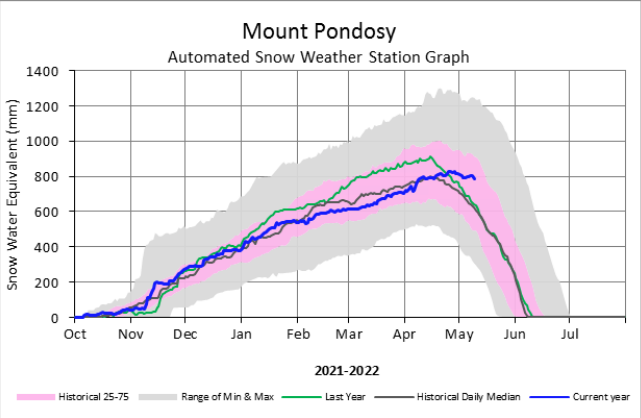
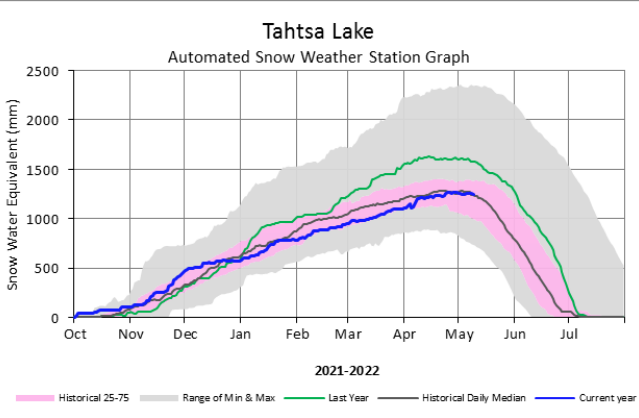
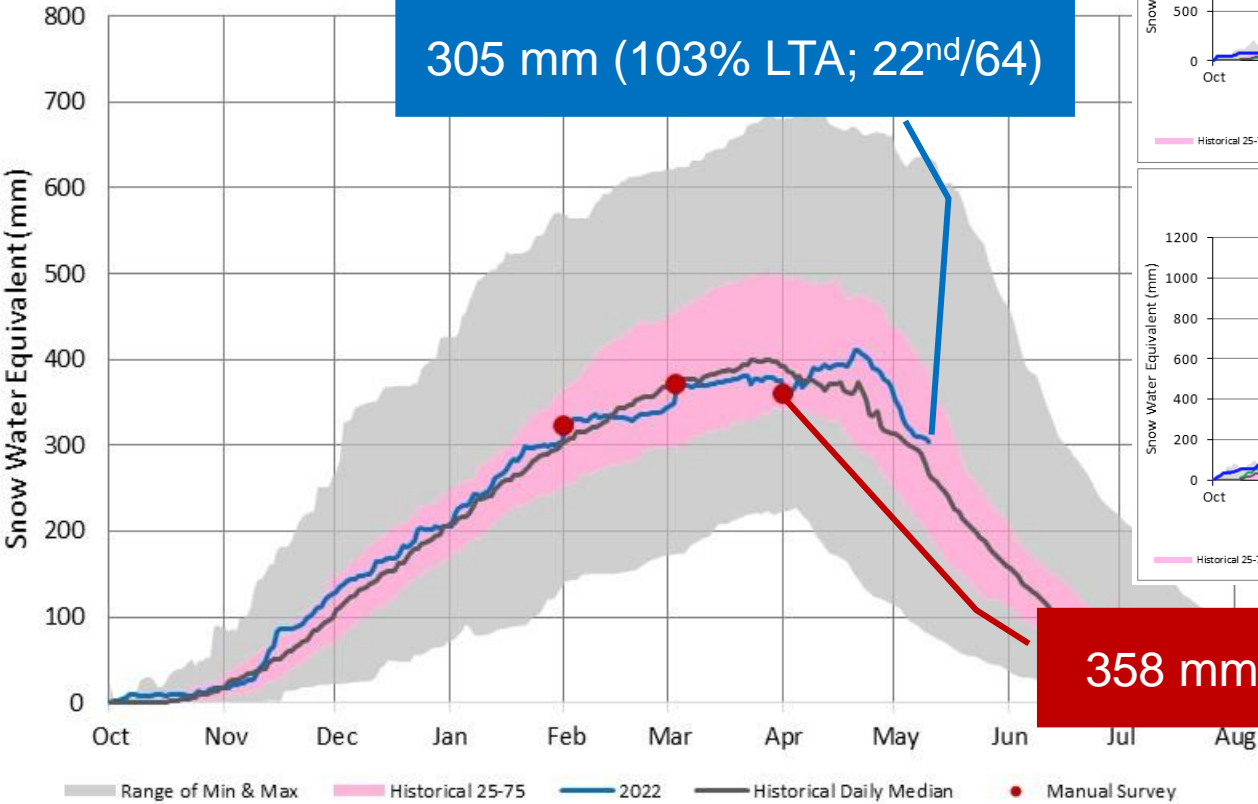
Observed Water Temperatures



Current Snowpack

Nechako Reservoir Snowpack

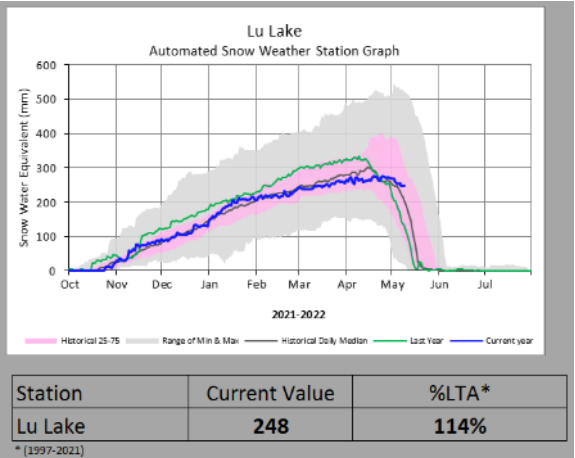
305 mm (103% LTA; 22nd/64)



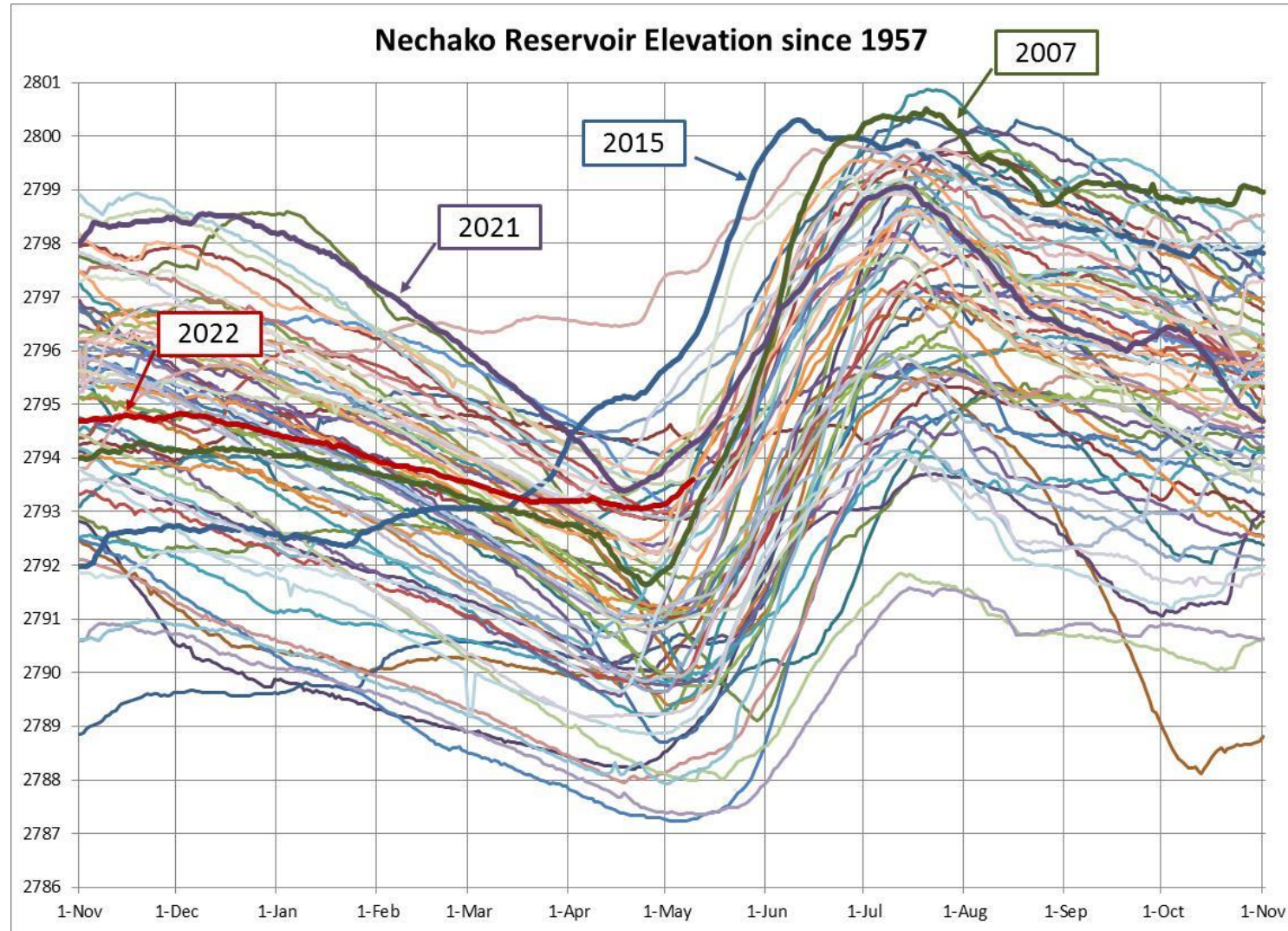
Station	Current Value (mm)	LTA* (mm)	%LTA*	Percentile Rank*
Tahtsa Lake	1250	1275	98%	52%
Mount Pondosy	786	692	114%	70%
Mount Wells	693	555	125%	77%

* (1992-2021)

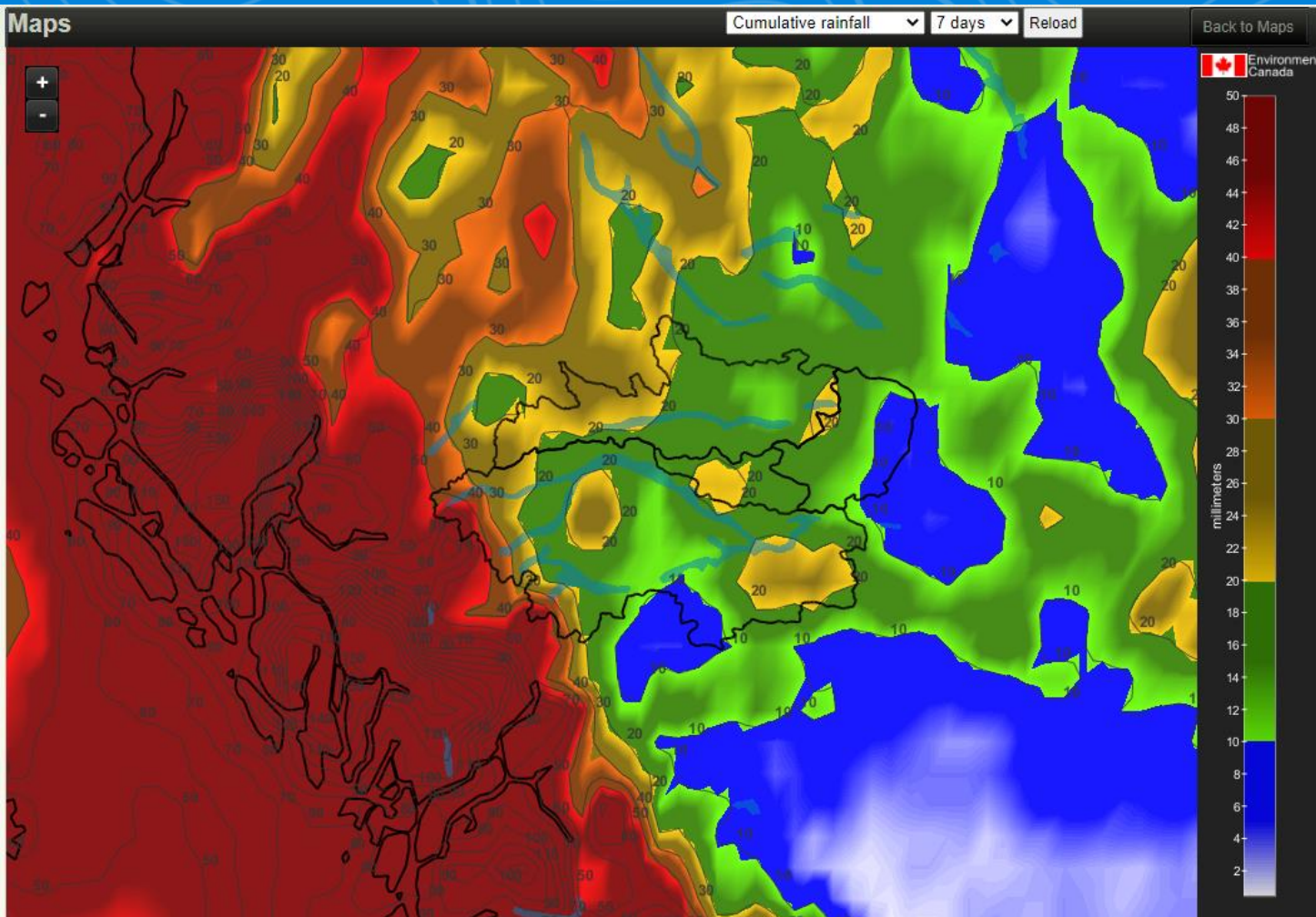
358 mm (85% LTA; 40th/64)



Historical Reservoir Elevation



7 Day Weather Forecast

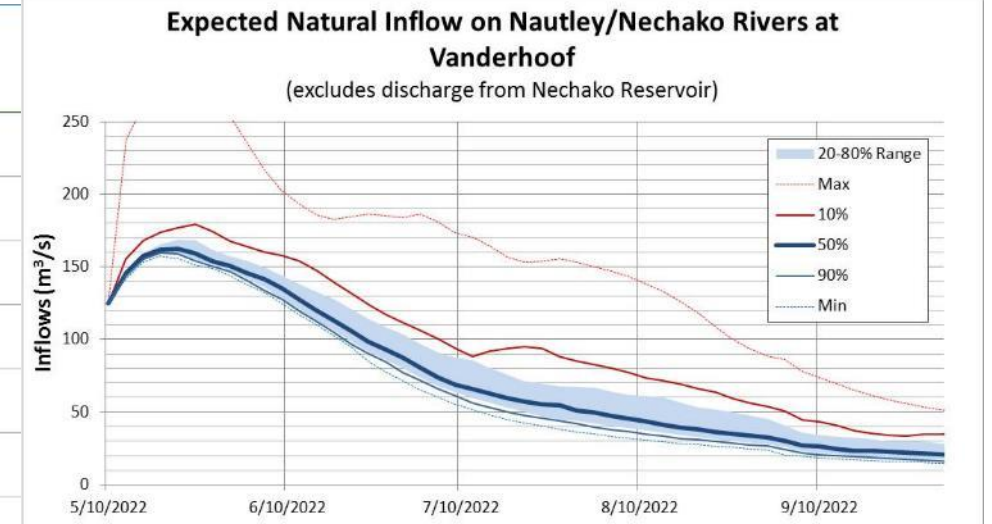
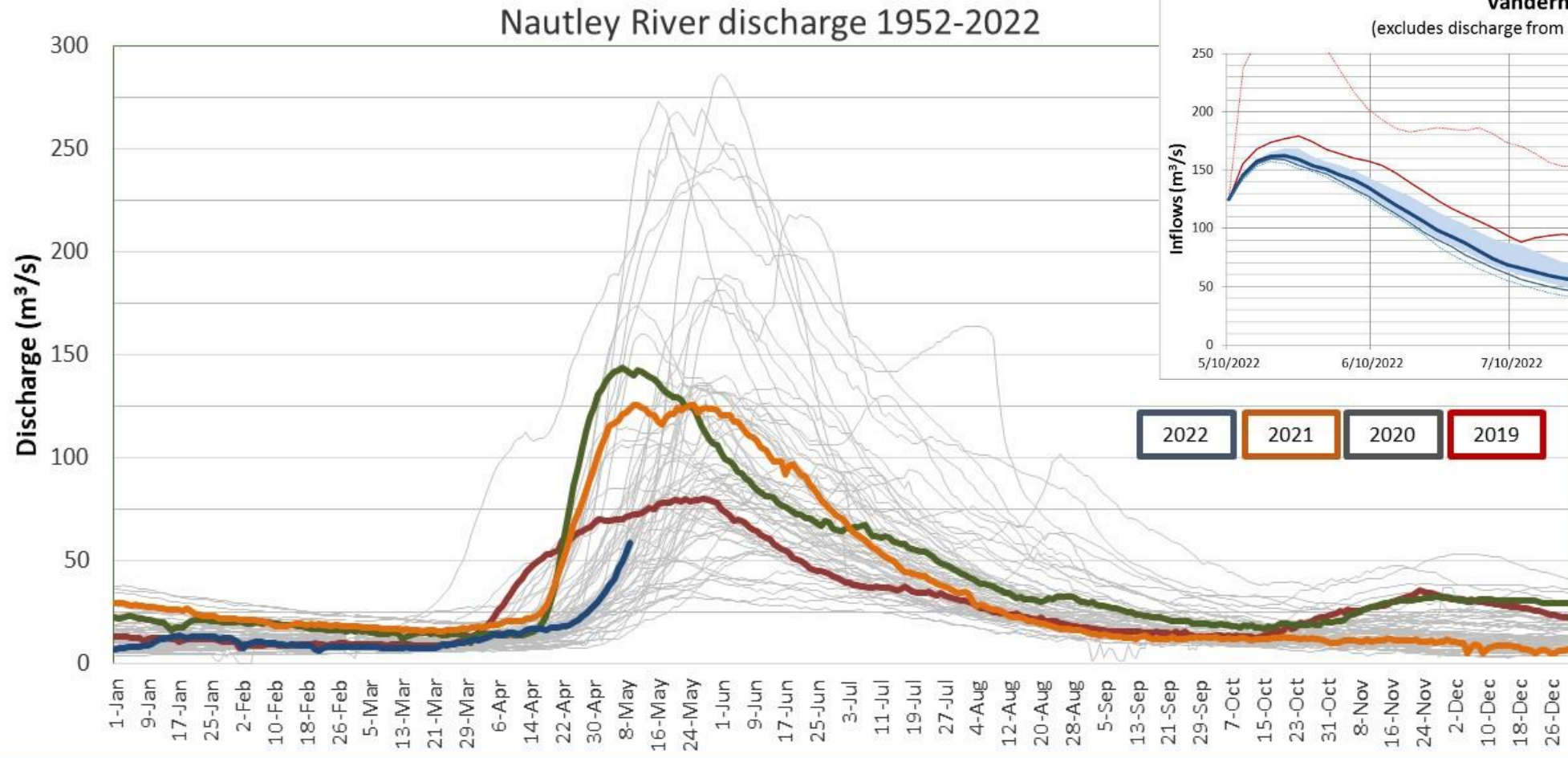


Next 7 Days

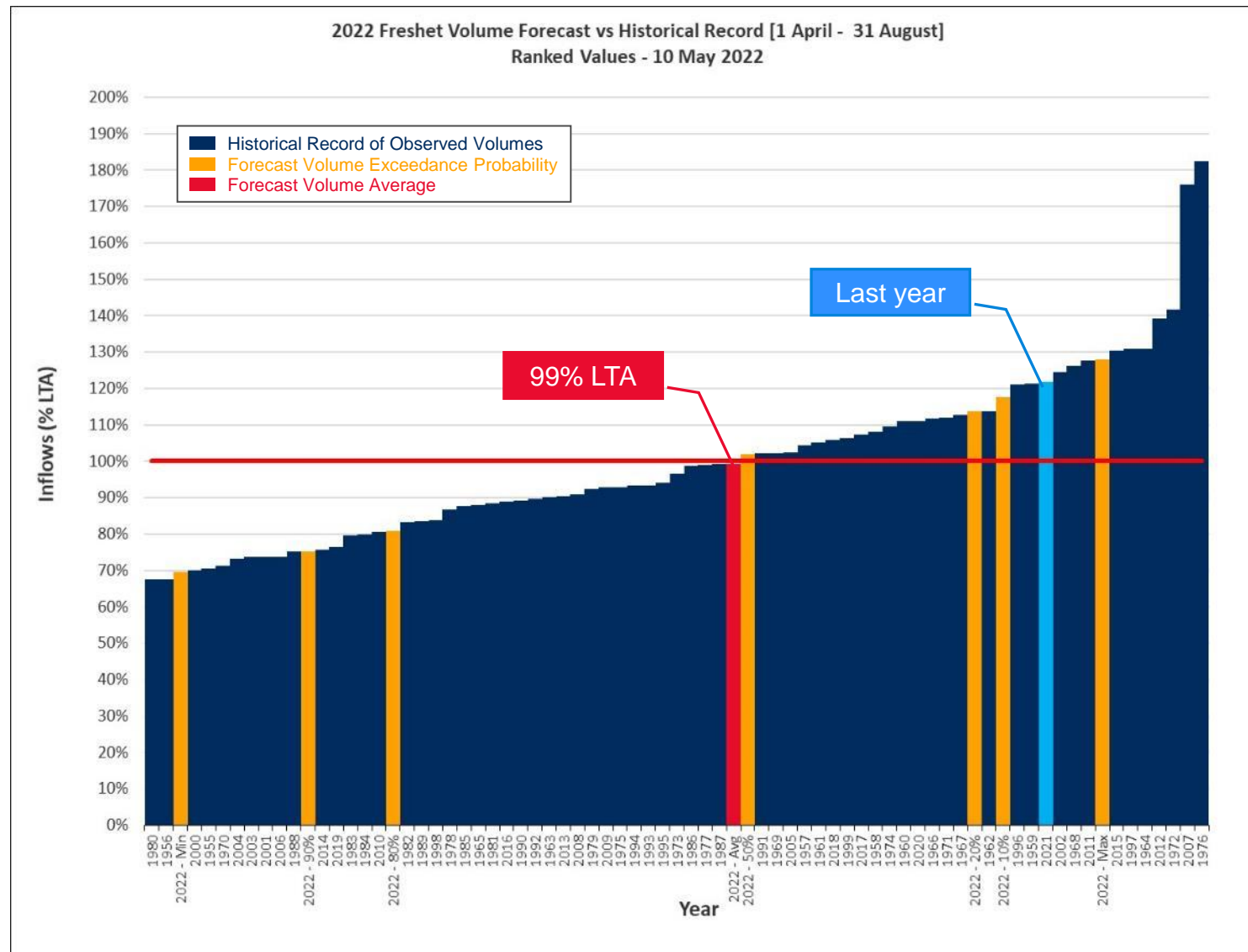


	Wed 05/11	Thu 05/12	Fri 05/13	Sat 05/14	Sun 05/15	Mon 05/16	Tue 05/17
	Cloudy with showers	Cloudy with showers	Mainly cloudy	A mix of sun and clouds	Cloudy with showers	A mix of sun and clouds	Cloudy with sunny breaks
	10°	13°	9°	12°	13°	10°	10°
Feels like	9	12	8	11	12	8	8
Night	2°	1°	-1°	1°	1°	0°	1°
POP	40 %	60 %	30 %	30 %	60 %	30 %	30 %
Wind (km/h)	12 SE	12 E	10 SW	10 S	20 E	16 SW	14 SW
Wind gust (km/h)	18	18	15	15	30	24	21
Hrs Of Sun	1 h	3 h	2 h	4 h	2 h	6 h	5 h
24 Hr Rain	~5 mm	~5 mm	-	<1 mm	2-4 mm	-	-

Nautley River Flows, Forecast

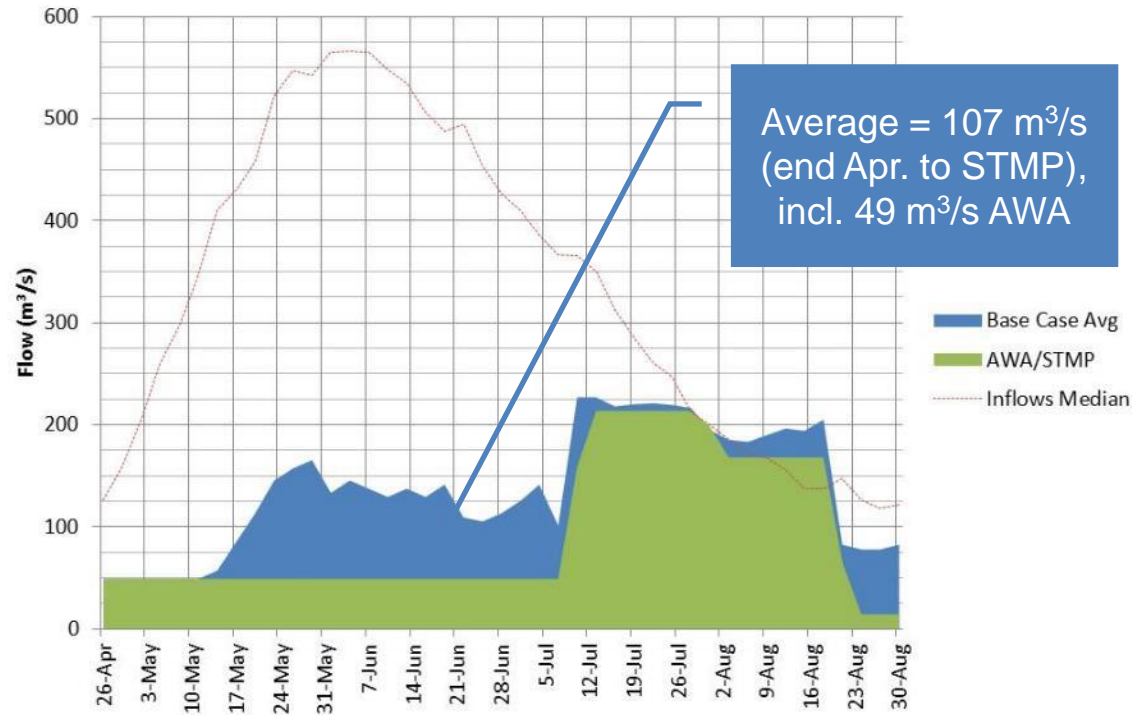


Spring Freshet Inflow Forecast

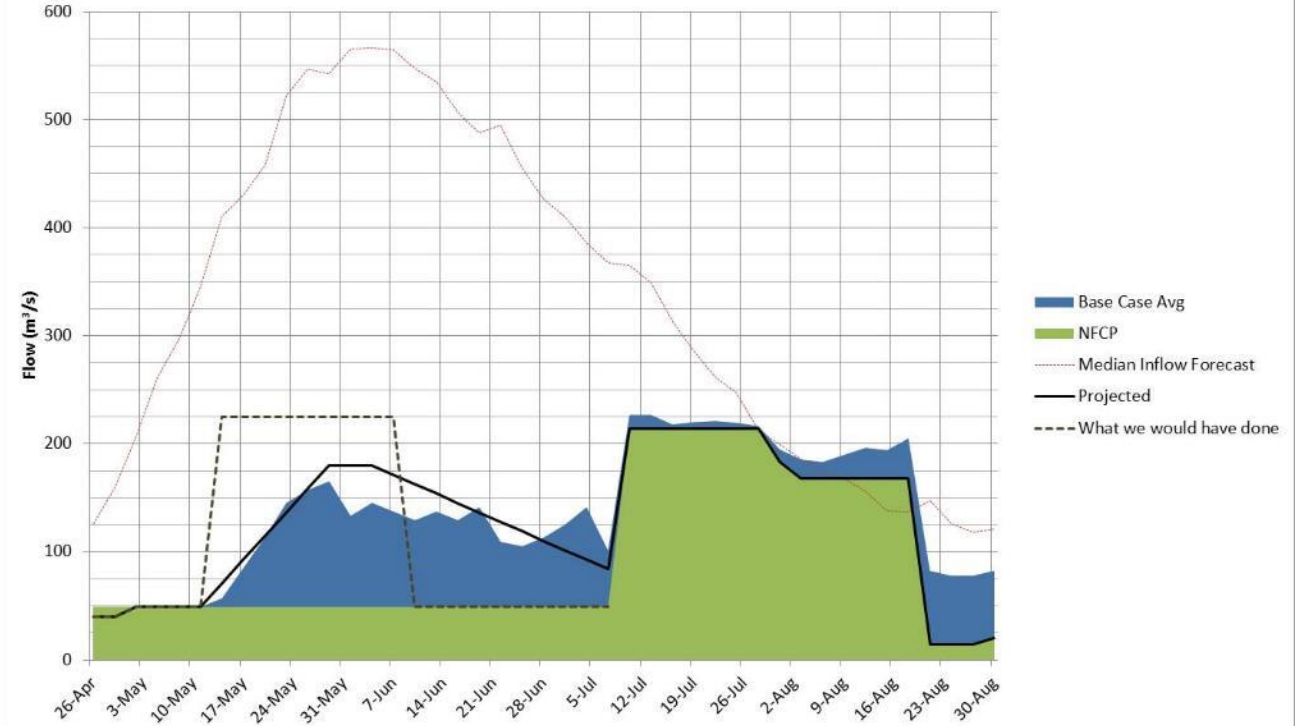


Planning the 2022 Release

Average expected spillway release, inflows



Average expected spillway release, inflows



Release Considerations:

- Feedback from the Nechako First Nations, Cheslatta and from Water Engagement Initiative
- Release timing corresponding to seasonal triggers that mimic, as much as possible, natural conditions
- Releases that mimic a spring-early summer freshet-like shape, increasing access to habit
- Flood risk to be maintained as low as possible

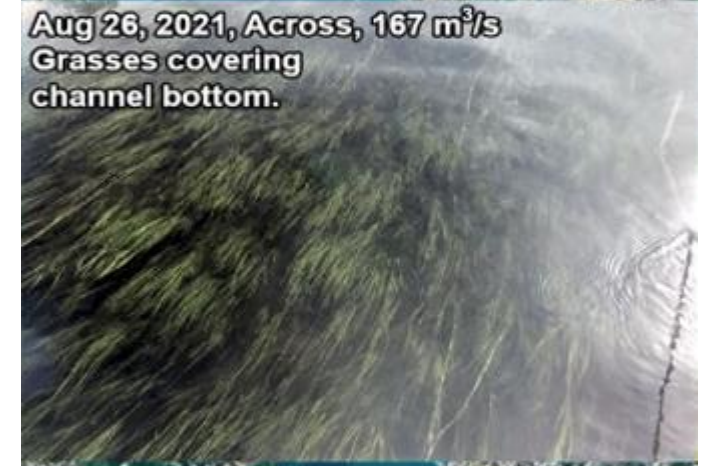
Upper Nechako



Aug 26, 2021, Downstream, 167 m³/s
Lots of flow but shallow. Fully
vegetated across the channel.



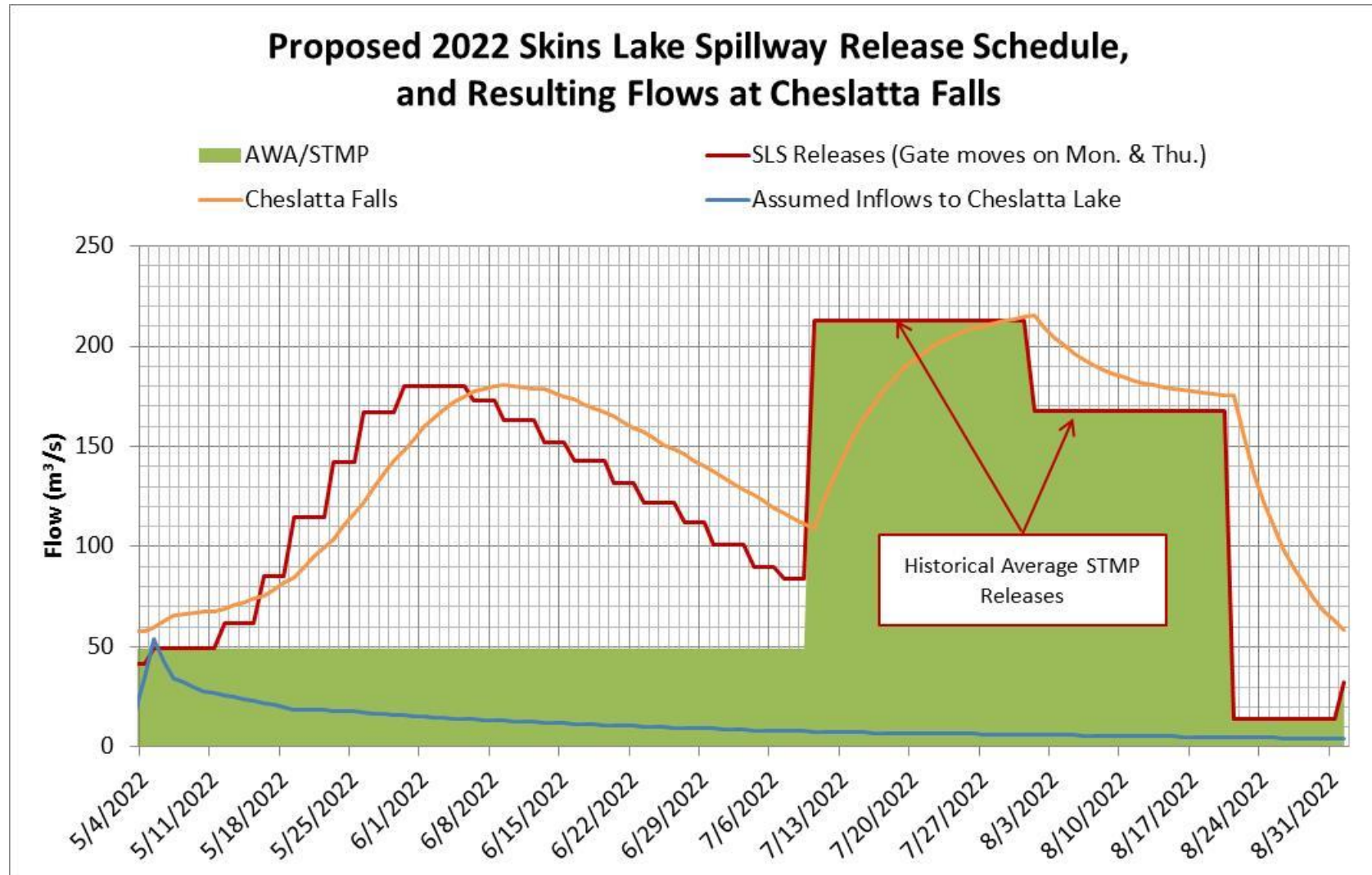
Aug 26, 2021, Across, 167 m³/s
Grasses covering
channel bottom.



Aug 26, 2021, Upstream, 167 m³/s
Navigable from top to bottom
(~2.5 km) Likely to dewater.

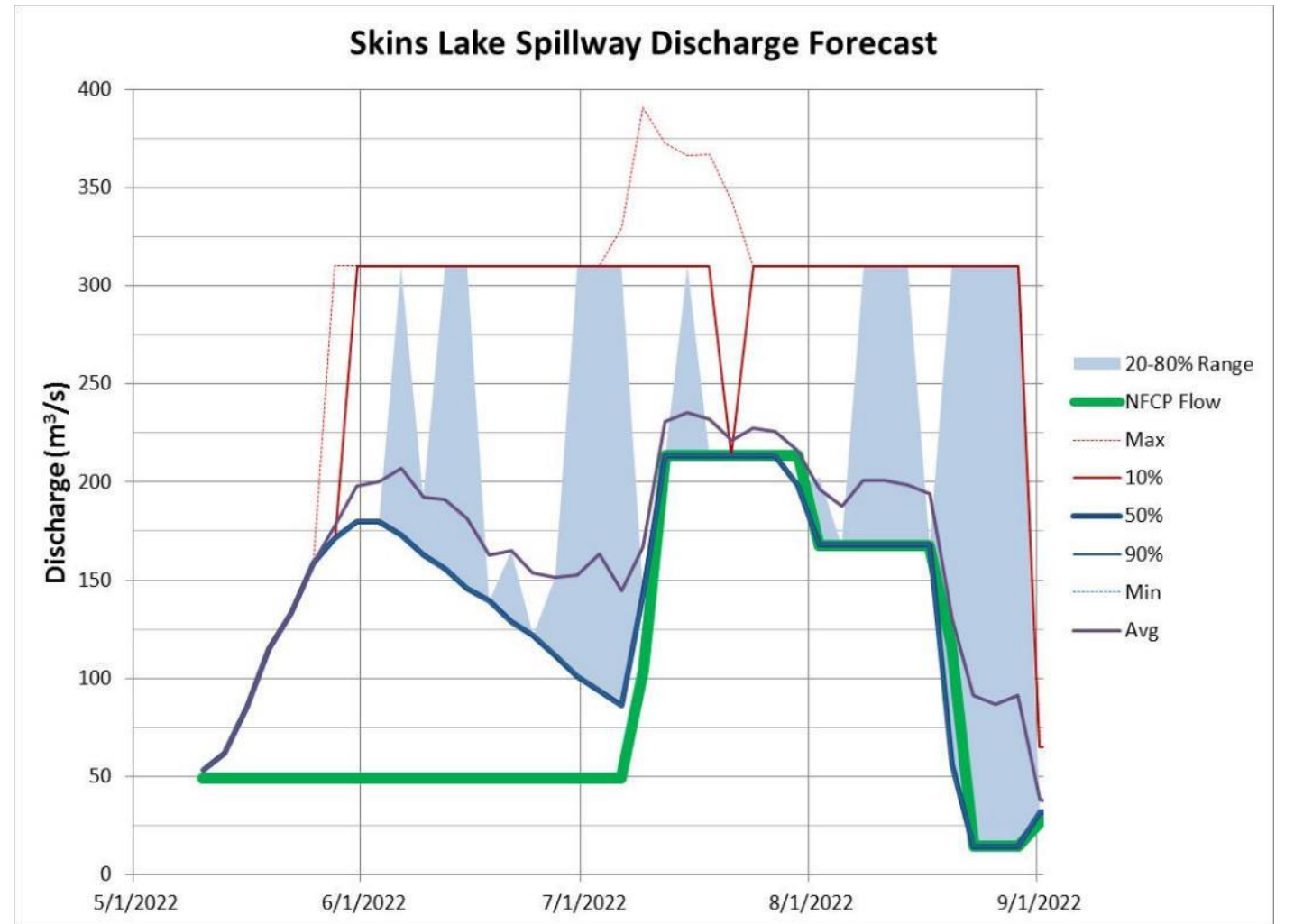


Expected Spillway Release

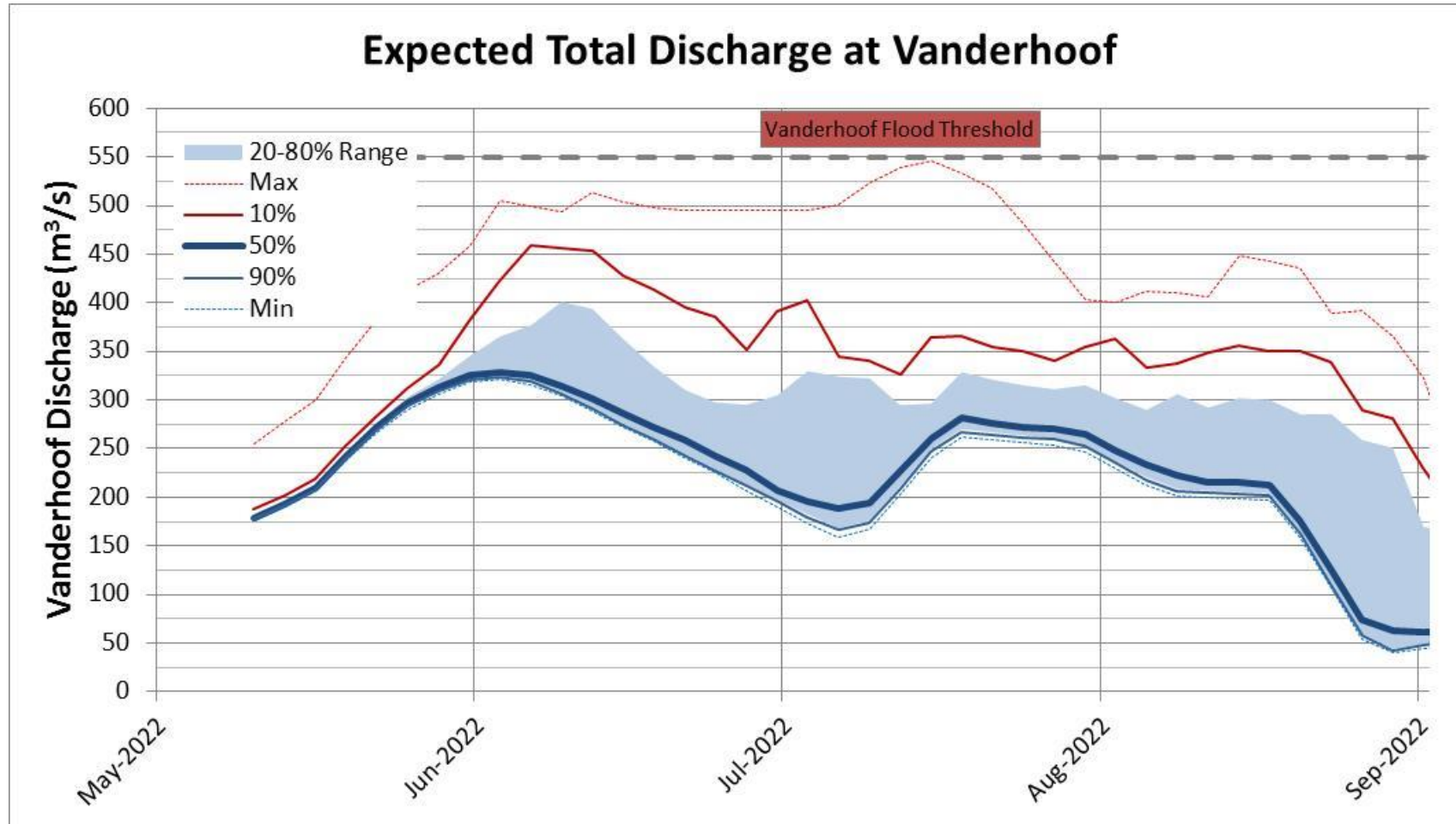


Spillway Management – Looking to Spring/Summer

- SLS discharge is currently still at 40 m³/s. Most of the ice has now melted on Murray and Cheslatta Lakes, and discharge will be increased to 72 m³/s on Thursday;
- Smelter Re-Start plan integrated
- Spring Freshet flood risk; Murray Cheslatta System and Vanderhoof

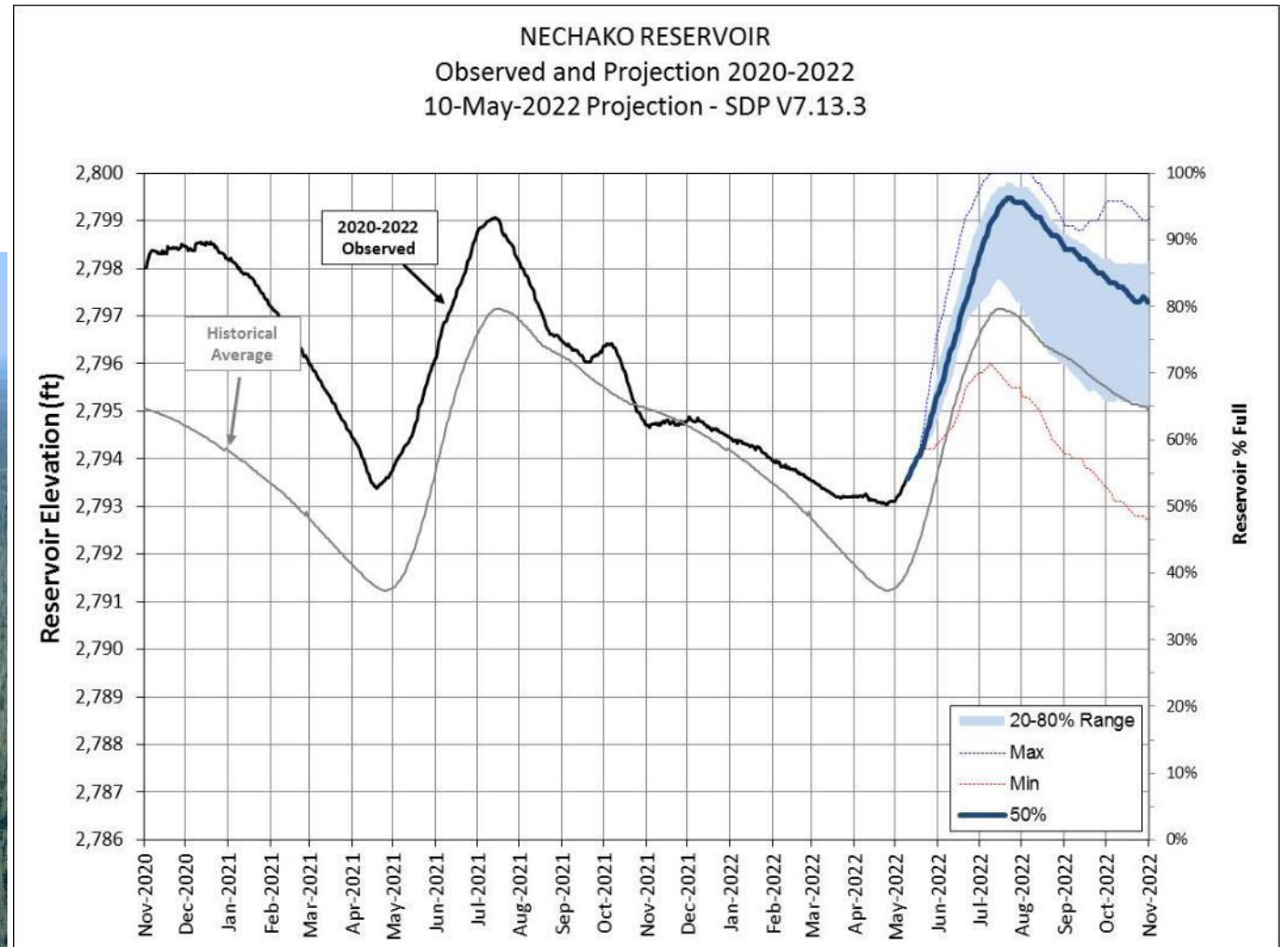


Forecast – Vanderhoof



Reservoir Level Projection

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



Next Steps – Actions



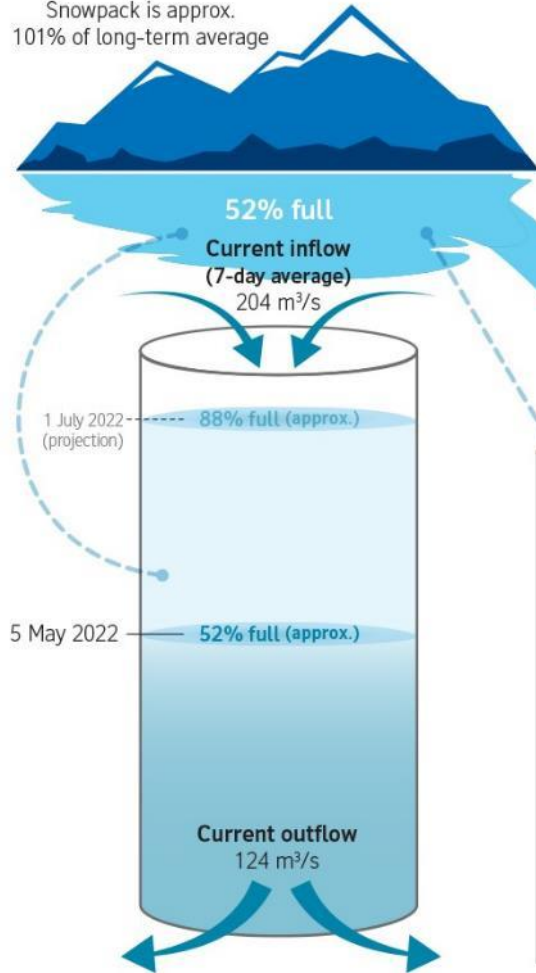
Photo: Avison

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 – **15 June**

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 - 5 May 2022

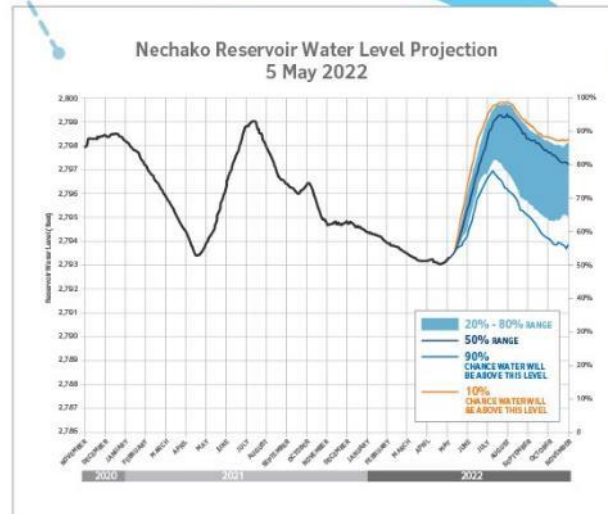
Nechako Reservoir
Snowpack is approx.
101% of long-term average



Nautley Watershed
Snowpack is approx.
101% of long-term average

Cheslatta Falls
59 m³/s

Nautley River
40 m³/s



Nechako Reservoir operations update

- Skins Lake Spillway discharge is being maintained at ~40 m³/s. Discharge will be increased to 49 m³/s when ice formations on Murray and Cheslatta Lakes recedes.
- For real time information and updates visit getinvolvednechako.ca
- To subscribe to weekly updates email us at nechakoreservoirupdates@riotinto.com

Stuart River
Snowpack data
is not available

Vanderhoof
126 m³/s

Stuart River
73 m³/s

Prince George
240 m³/s

Fraser River

Feedback & Reflections

