



RioTinto

Nechako Reservoir / River / Freshet Information Sharing – Community Leaders

9 May 2023

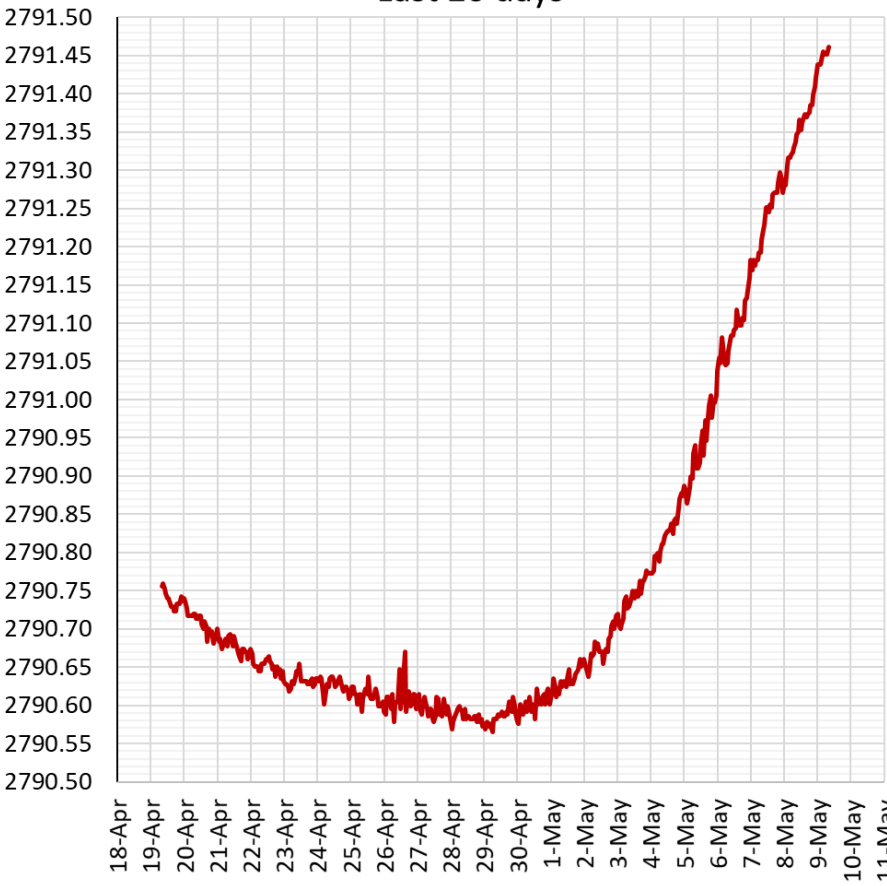
Prepared by Andrew Czornohalan & Simon Matte

Reservoir Elevation - Last 20 days

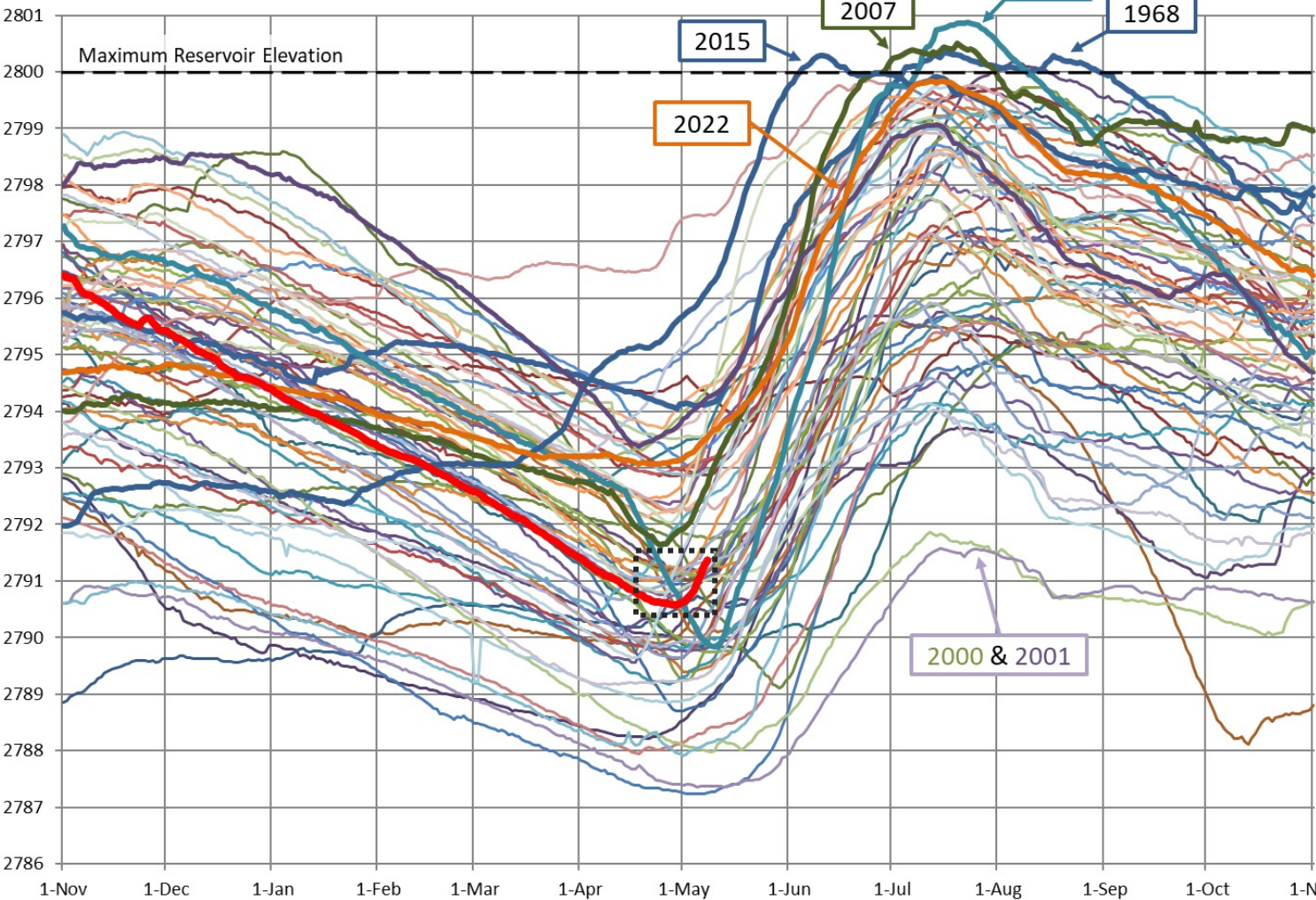
Current reservoir level (May 9th):

2791.46 ft

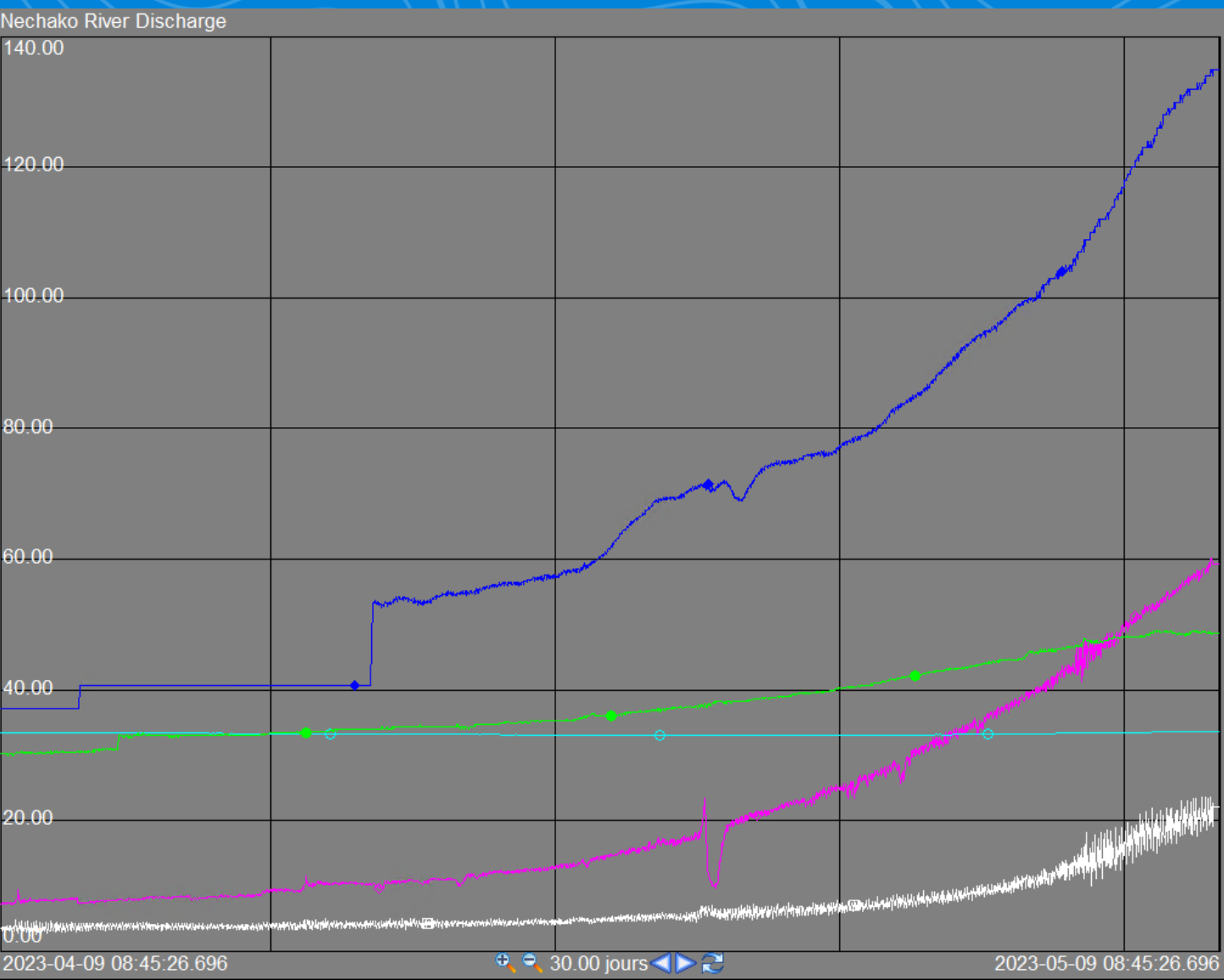
Last 20 days



Nechako Reservoir Historical Elevation since 1957



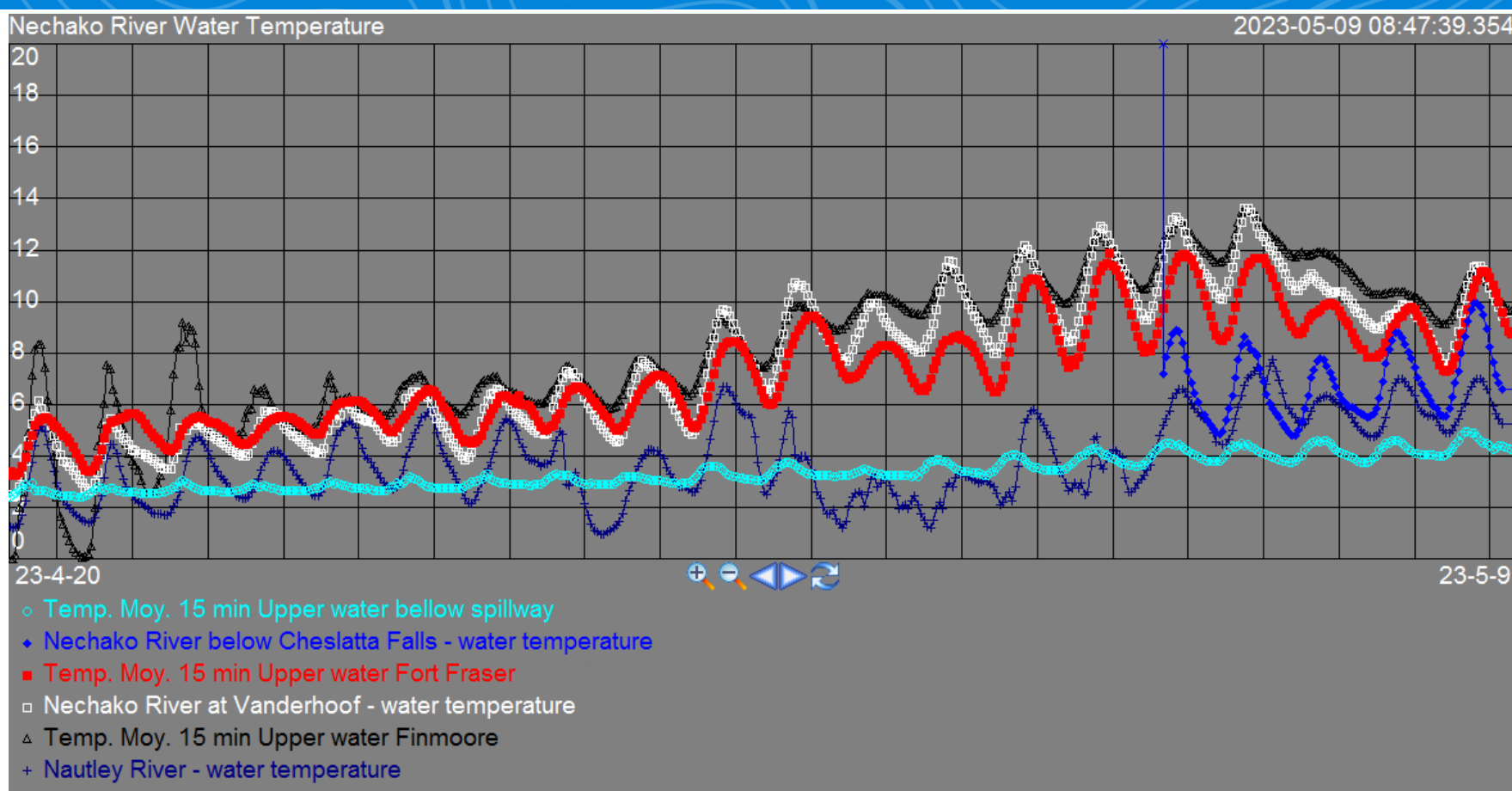
Flows - Last 30 days



Current values (m ³ /s)	
Vanderhoof	135
Skins Lake	34
Cheslatta Falls	49
Nautley	59
Stellako	22

Skins Lake Spillway release to be increased to 49 m³/s today

Observed Water Temperatures – Last 20 days

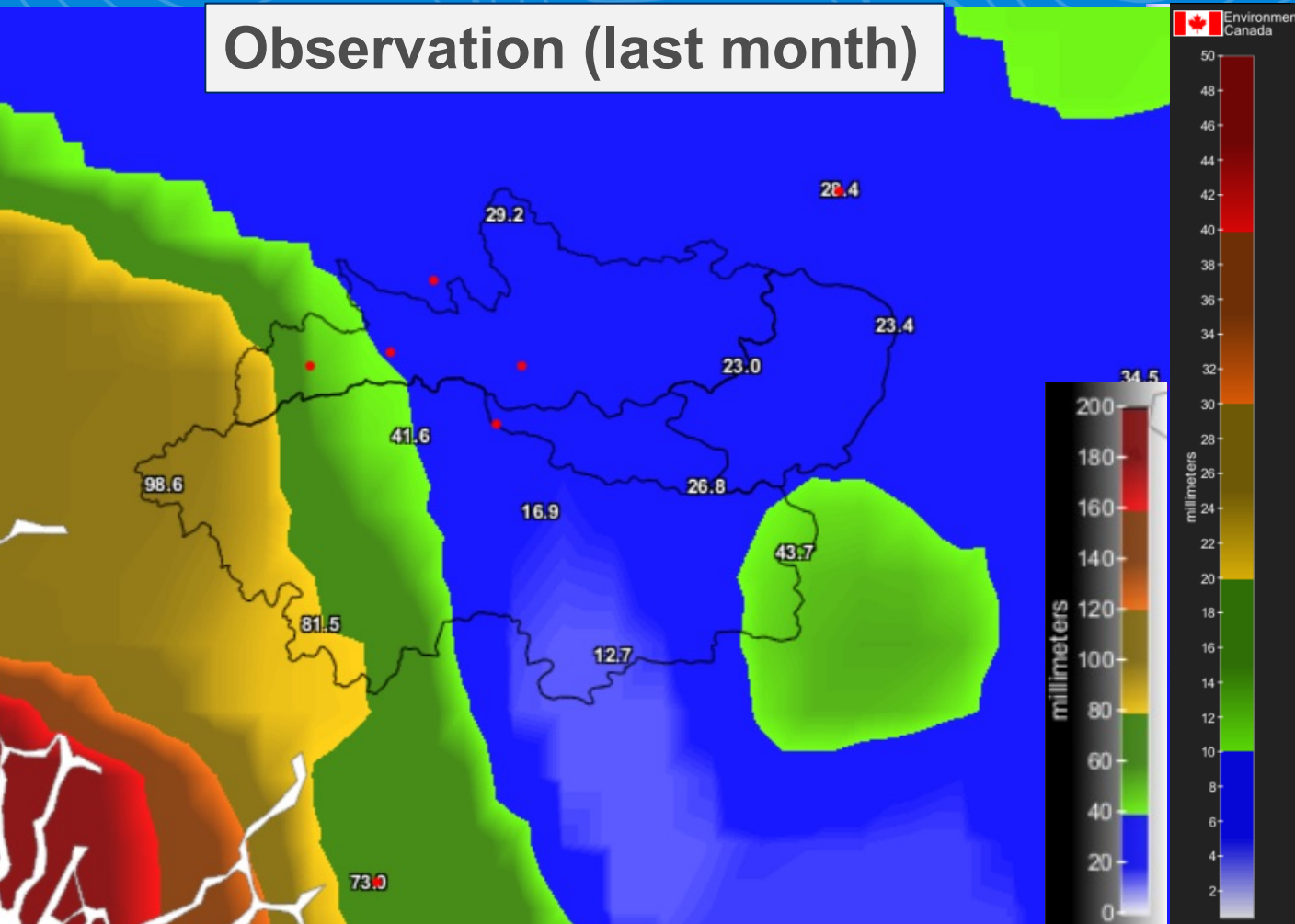


Current values (°C)

Upper water below spillway	4.3
Nechako River below Cheslatta Falls	6.6
Upper water Fort Fraser	8.7
Nechako River at Vanderhoof	9.5
Upper water Finmoore	9.6
Nautley River	5.3

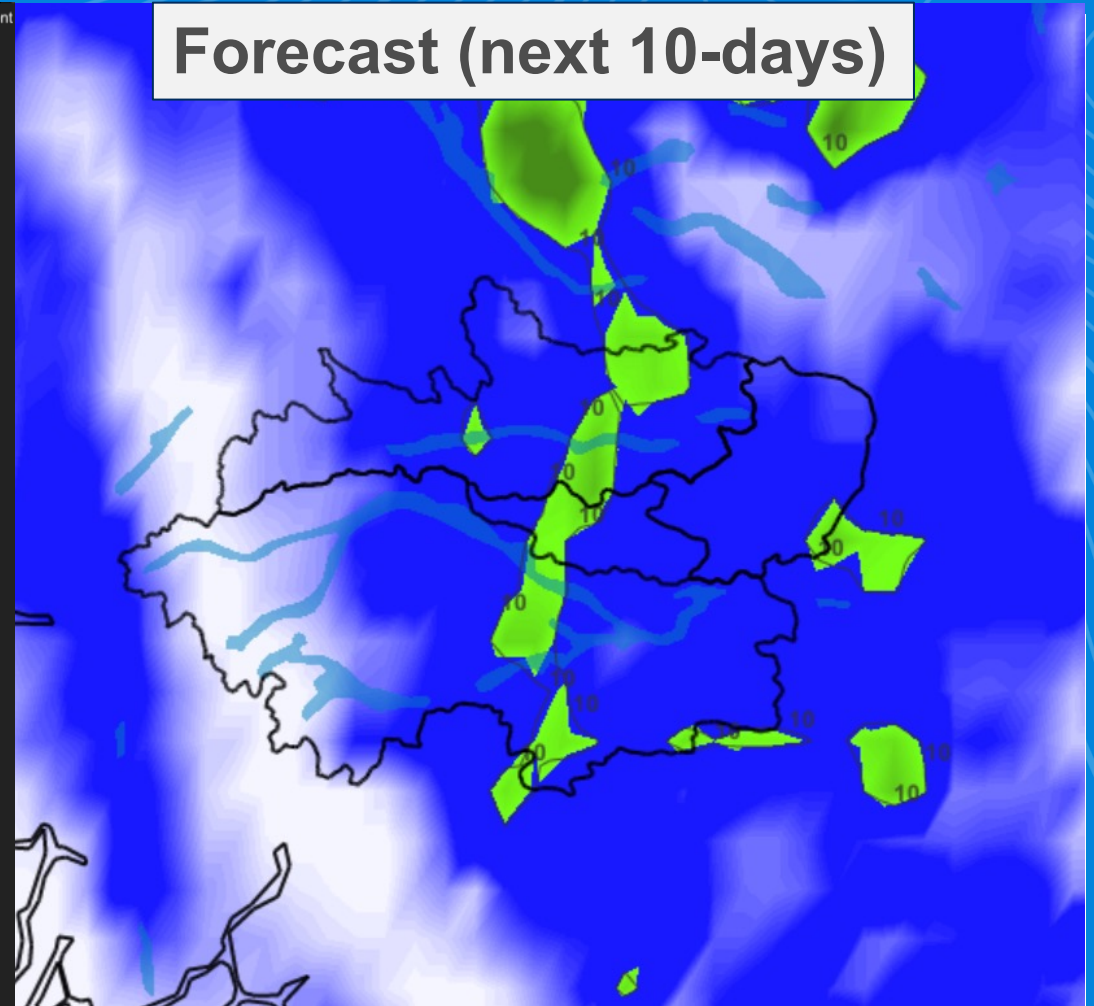
Past & Future cumulative precipitation

Observation (last month)



Nechako Reservoir watershed area-average = 47 mm

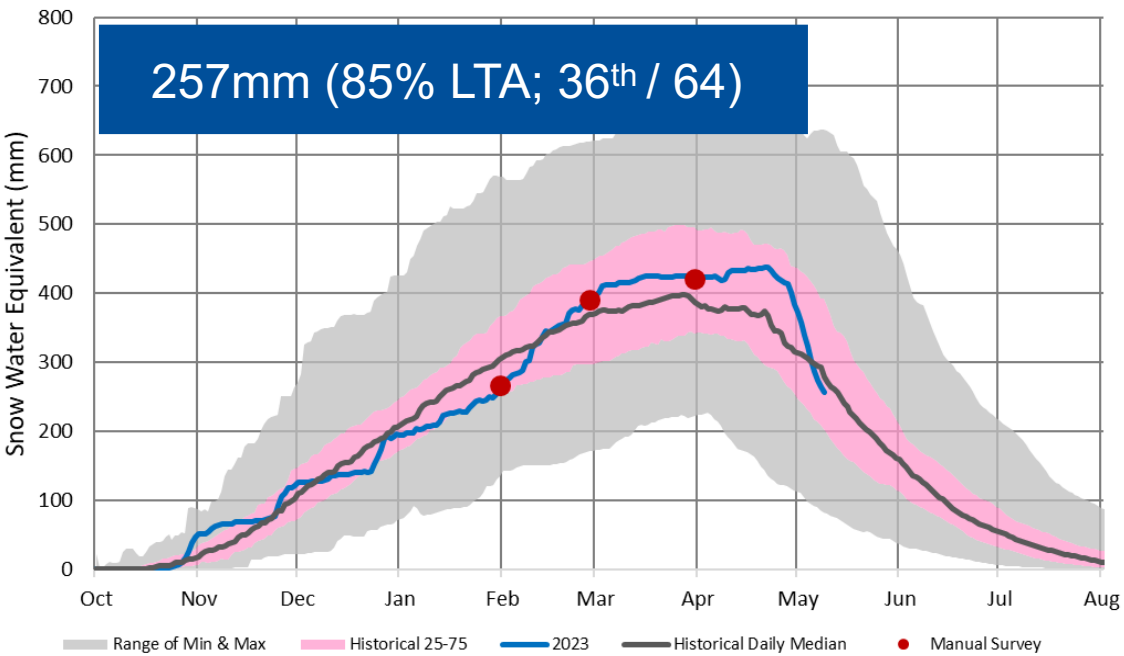
Forecast (next 10-days)



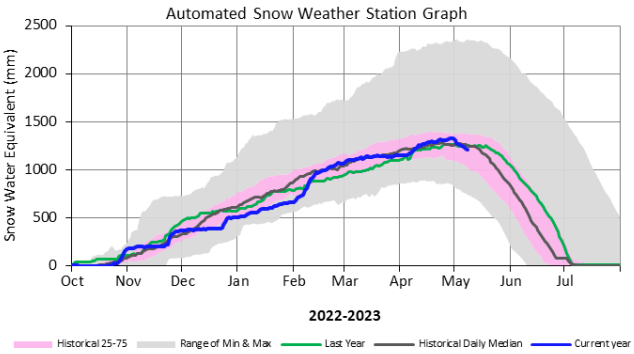
Nechako Reservoir watershed area-average = 0-5 mm

Current Snowpack

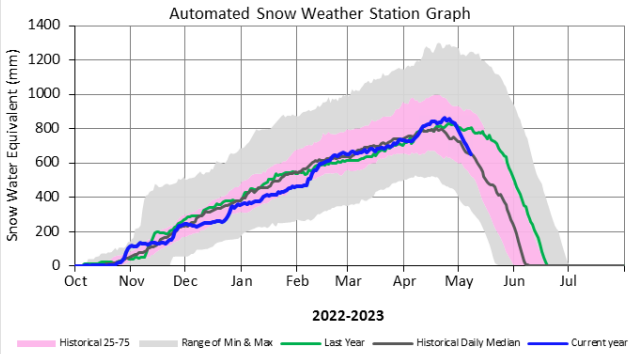
Nechako Reservoir Snowpack



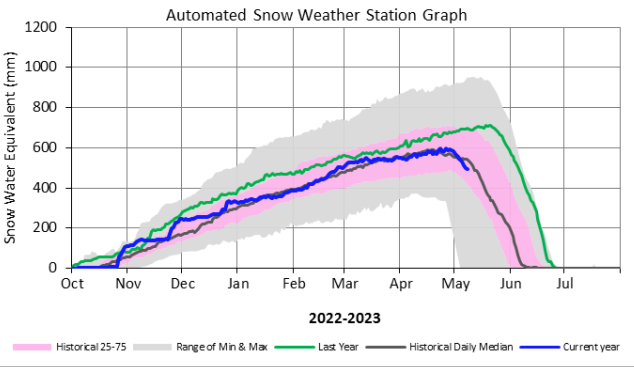
Tahtsa Lake



Mount Pondosy



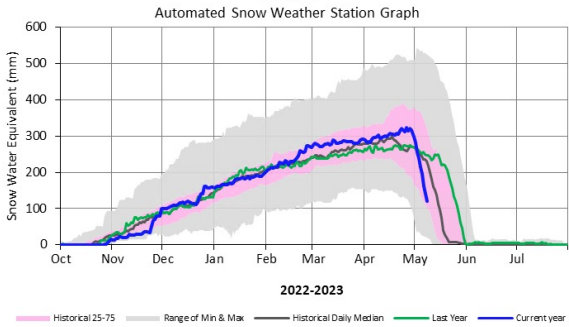
Mount Wells



Station	Current Value (mm)	LTA* (mm)	%LTA*	Percentile Rank*
Tahtsa Lake	1211	1283	94%	41%
Mount Pondosy	653	707	92%	49%
Mount Wells	495	547	90%	39%

* (1997-2022)

Lu Lake



Station	Current Value	%LTA*
Lu Lake	120	52%

* (1997-2022)

Weather Forecast



Next 7 Days

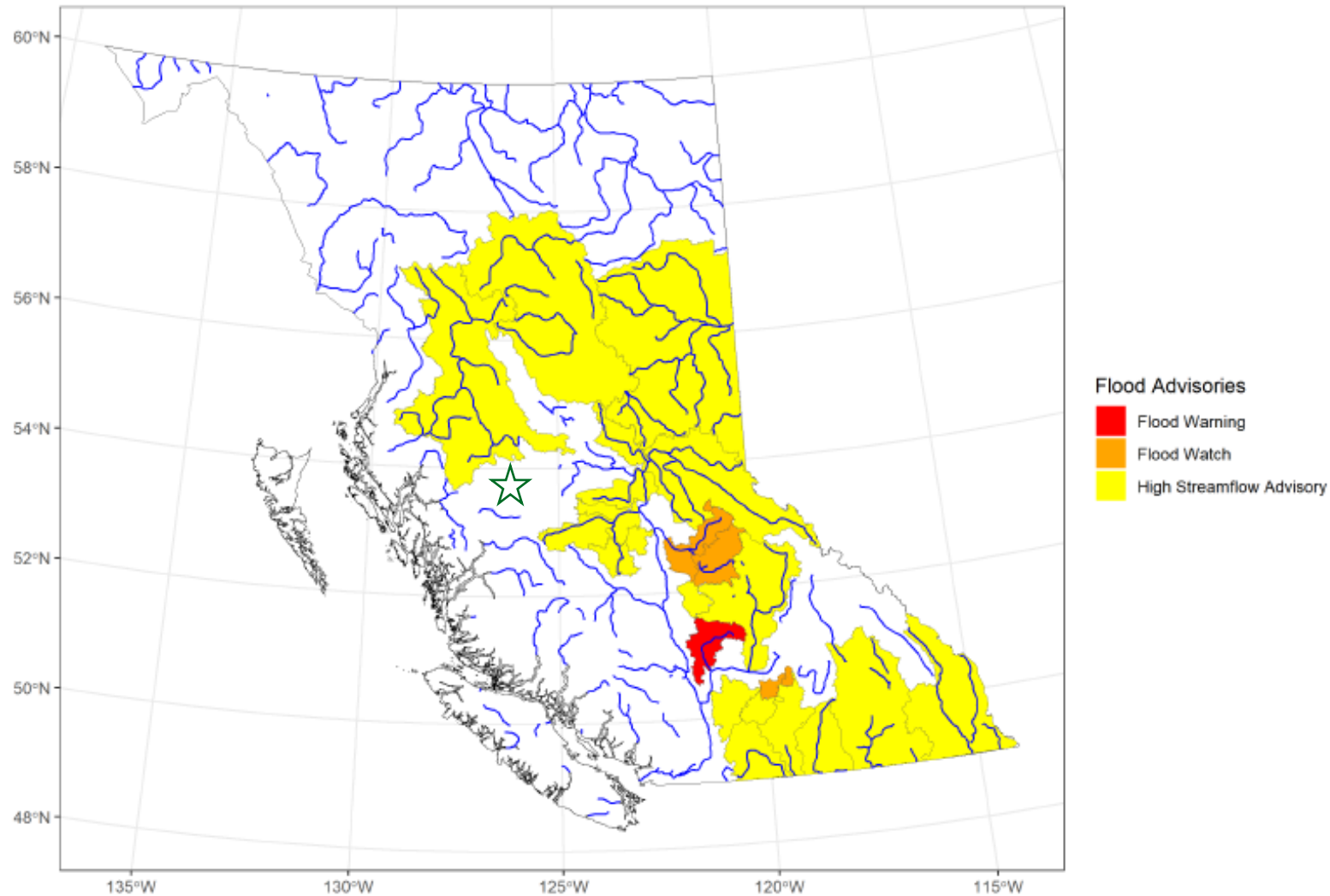
Marilla Weather

	<div>Wed</div> <div>05/10</div> <div>Risk of a thunderstorm</div> <div> </div> <div>18°</div>	<div>Thu</div> <div>05/11</div> <div>A mix of sun and clouds</div> <div> </div> <div>17°</div>	<div>Fri</div> <div>05/12</div> <div>Mainly cloudy</div> <div> </div> <div>19°</div>	<div>Sat</div> <div>05/13</div> <div>A mix of sun and clouds</div> <div> </div> <div>24°</div>	<div>Sun</div> <div>05/14</div> <div>Mainly sunny</div> <div> </div> <div>27°</div>	<div>Mon</div> <div>05/15</div> <div>Sunny</div> <div> </div> <div>29°</div>	<div>Tue</div> <div>05/16</div> <div>Sunny</div> <div> </div> <div>26°</div>
Feels like	18	17	19	24	27	29	26
Night	4°	5°	6°	8°	10°	9°	8°
POP	40 %	30 %	30 %	30 %	10 %	0 %	10 %
Wind (km/h)	13 NE	9 W	12 SE	6 NE	7 N	9 N	13 NE
Wind gust (km/h)	20	14	18	9	11	14	20
Hrs Of Sun	10 h	5 h	2 h	4 h	14 h	16 h	16 h
24 Hr Rain	1-3 mm	-	-	-	-	-	-

Sources
Base : CanVec 1:250,000, NRCan 2018
Digital elevation model, CDEM, NRCan 2017
Cartographie : GCNN, 2019-08

Provincial Advisories - Flood

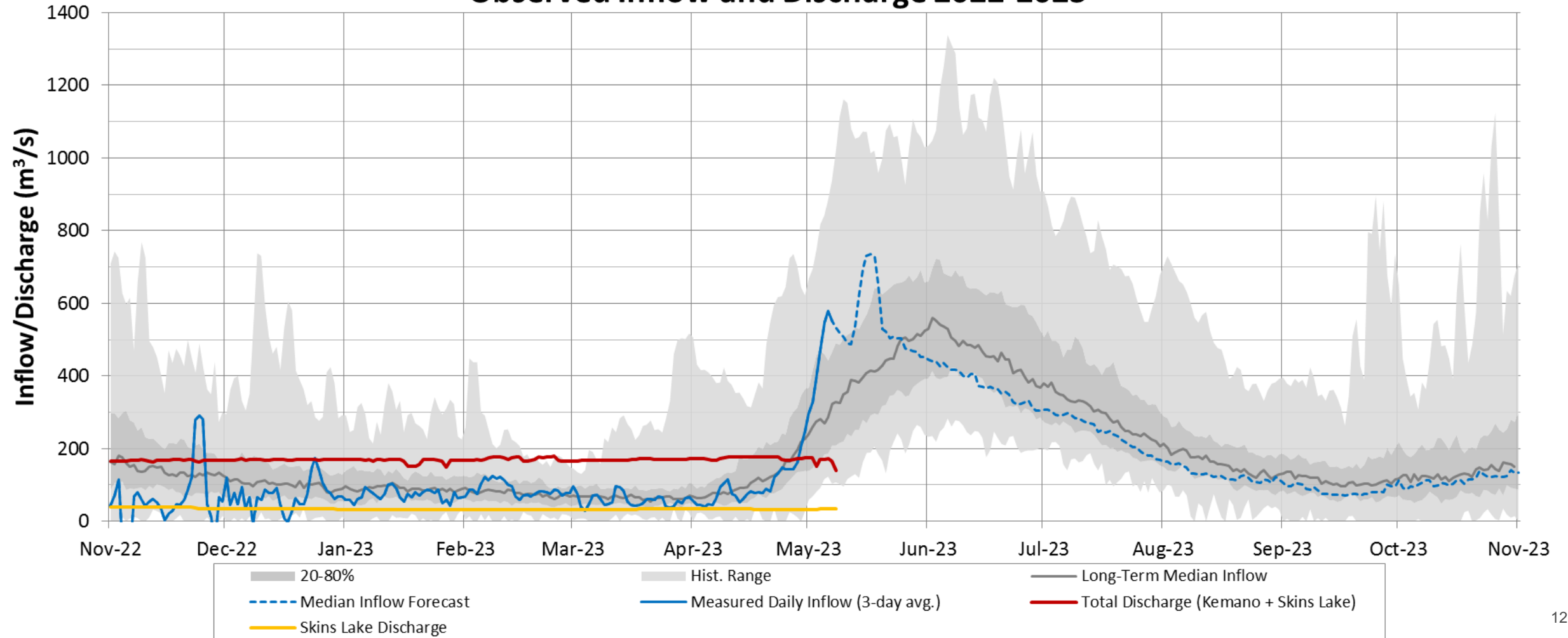
Last updated : May 9th 2023



Source: BC River Forecast Center.

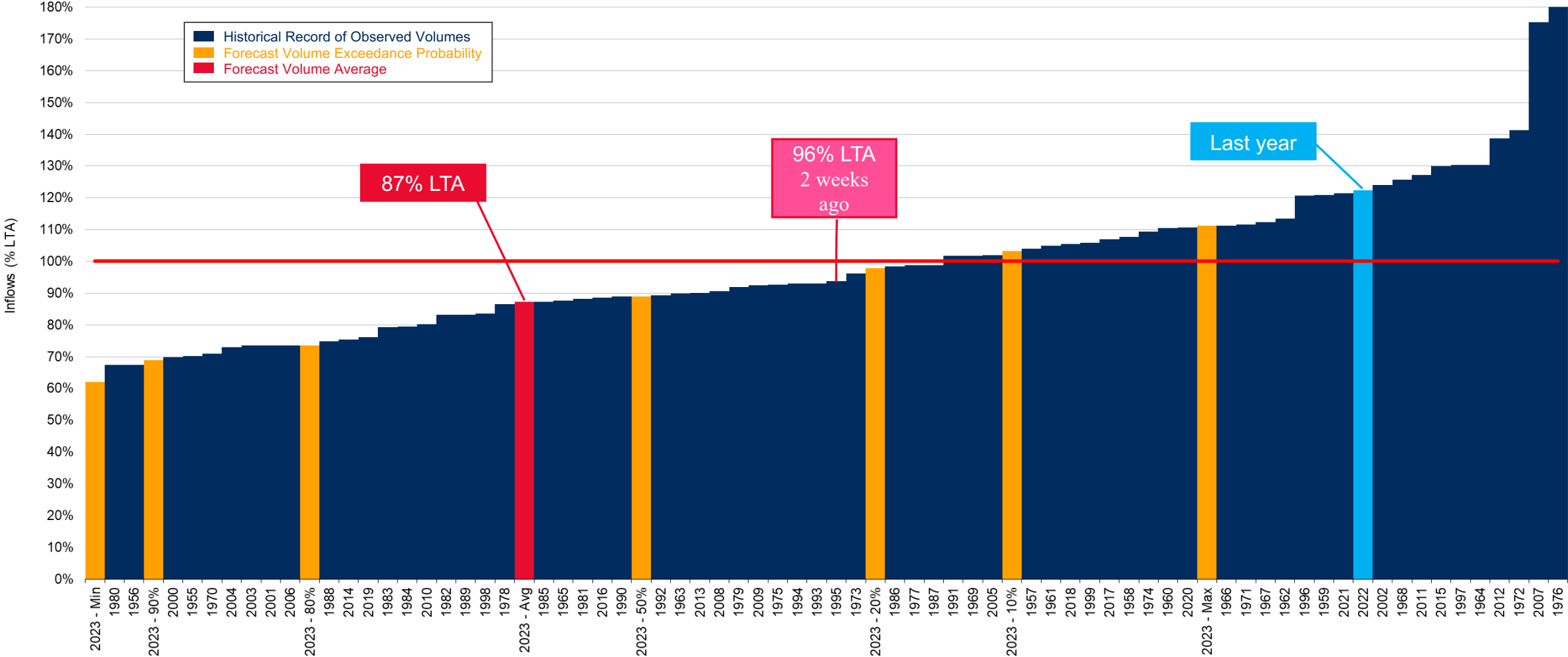
Observed Inflows & Discharge vs Historical

Nechako Reservoir Operation
Observed Inflow and Discharge 2022-2023



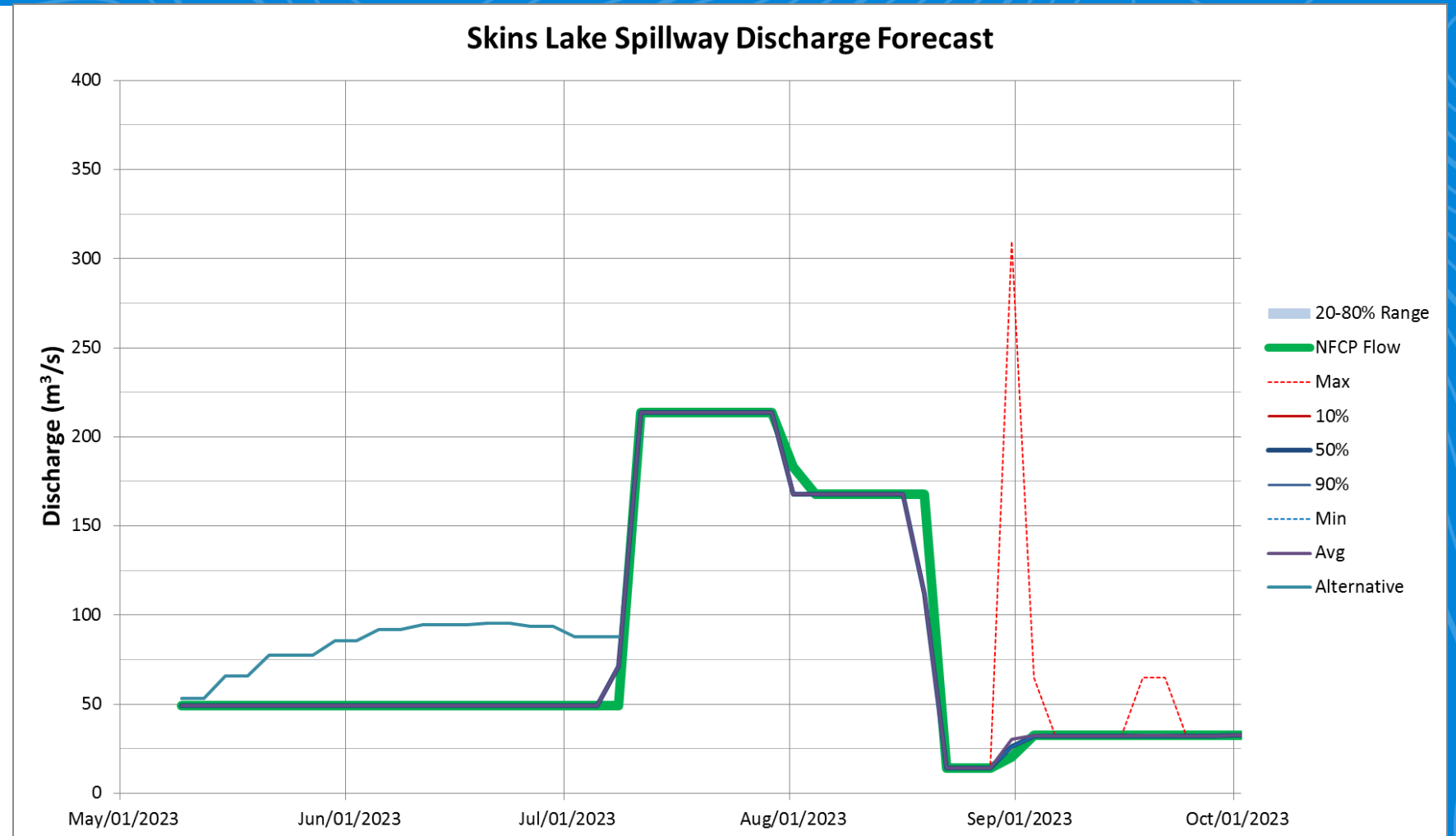
Spring Freshet Inflow Volume

2023 Freshet Volume Forecast vs Historical Record [1 April - 31 August]
Ranked Values - 9 May 2023

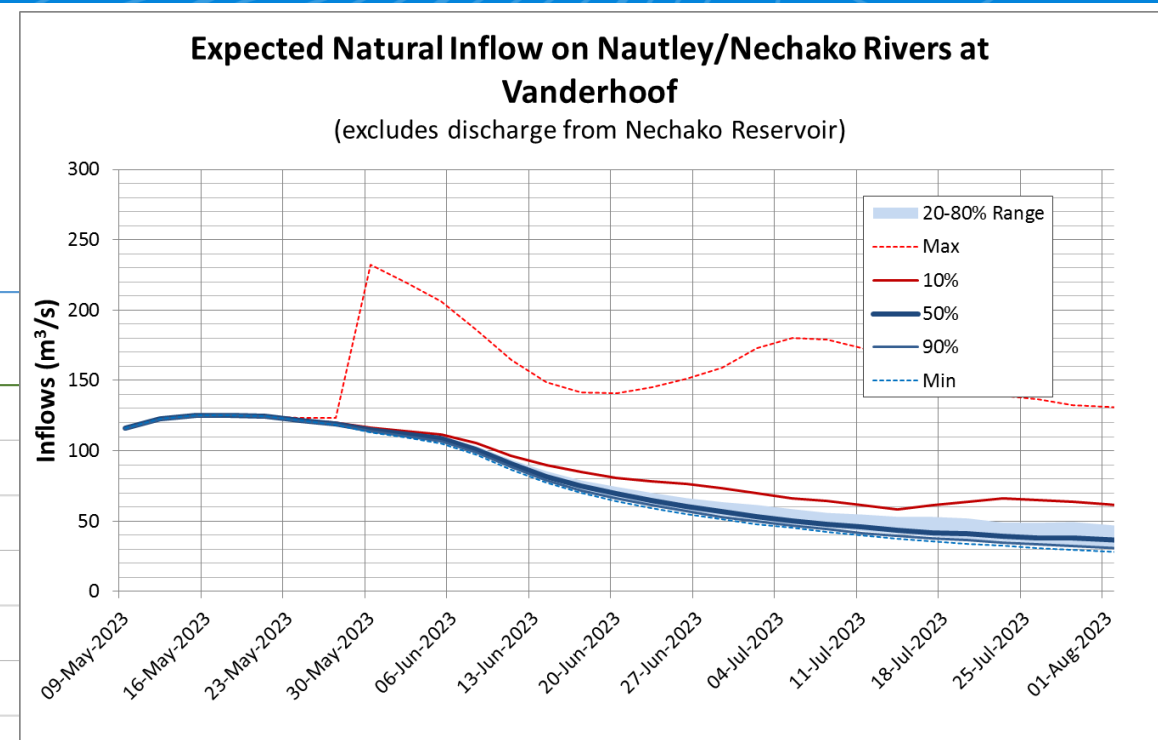
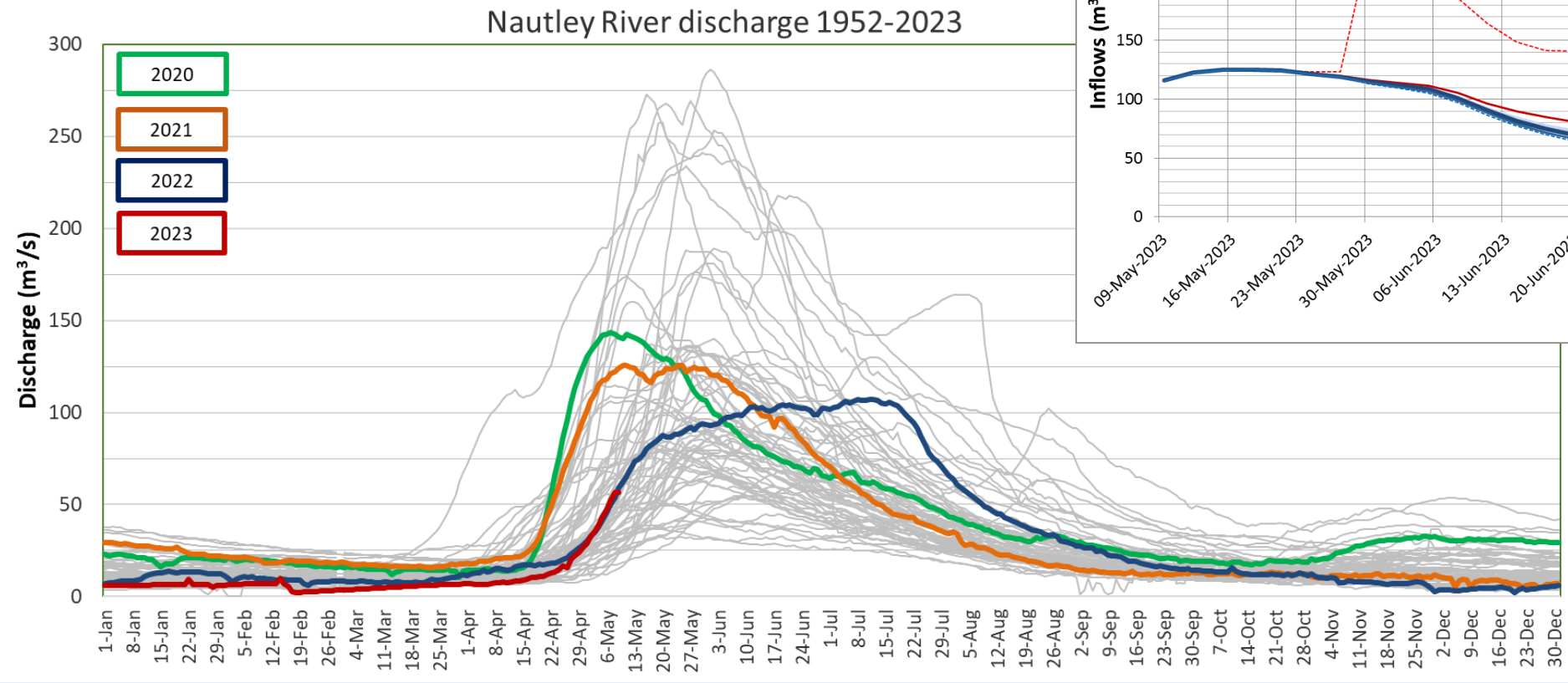


Skins Lake Spillway Release Forecast

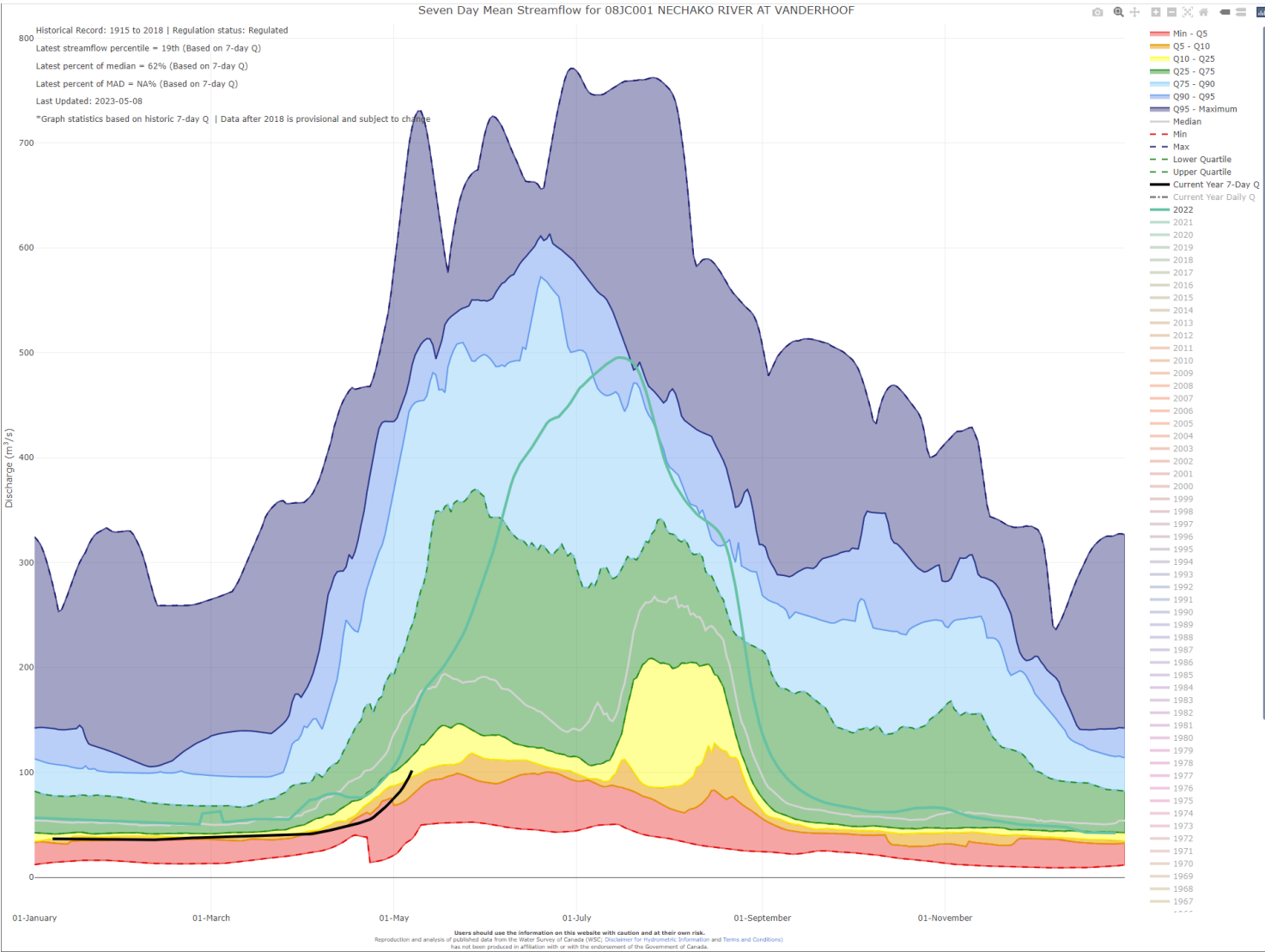
- Current = **~34 m³/s**
- Change to 49 m³/s imminent
- Conditional on Inflows, alternative spillage scenario is under consideration.



Nautley River Flows, Forecast

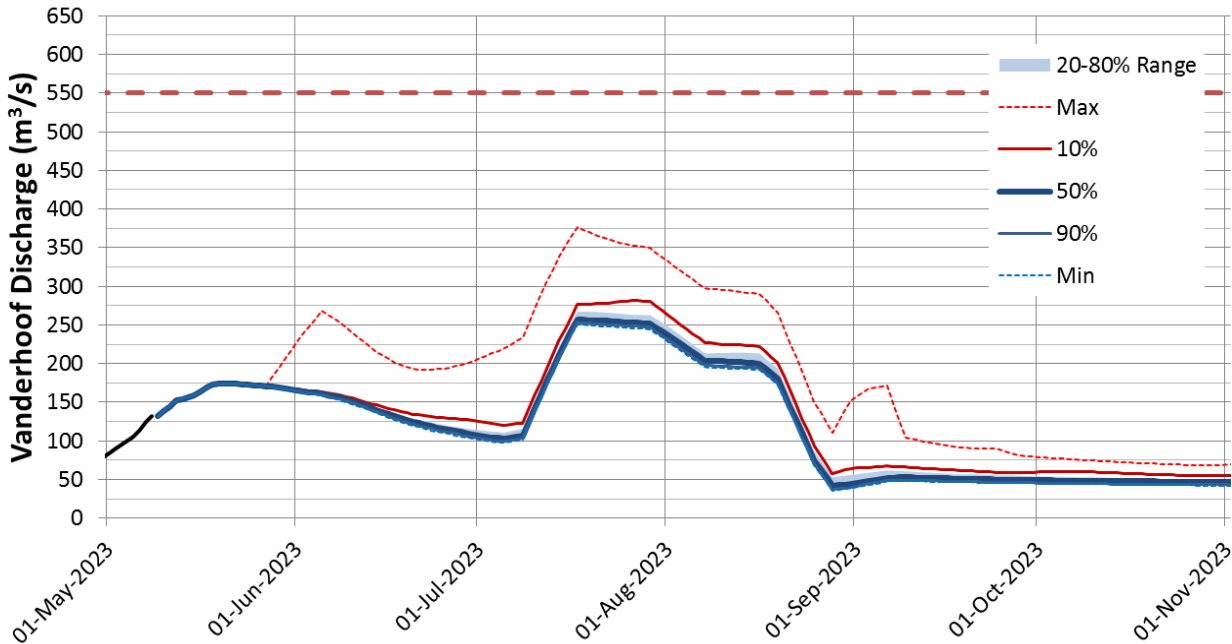


Vanderhoof

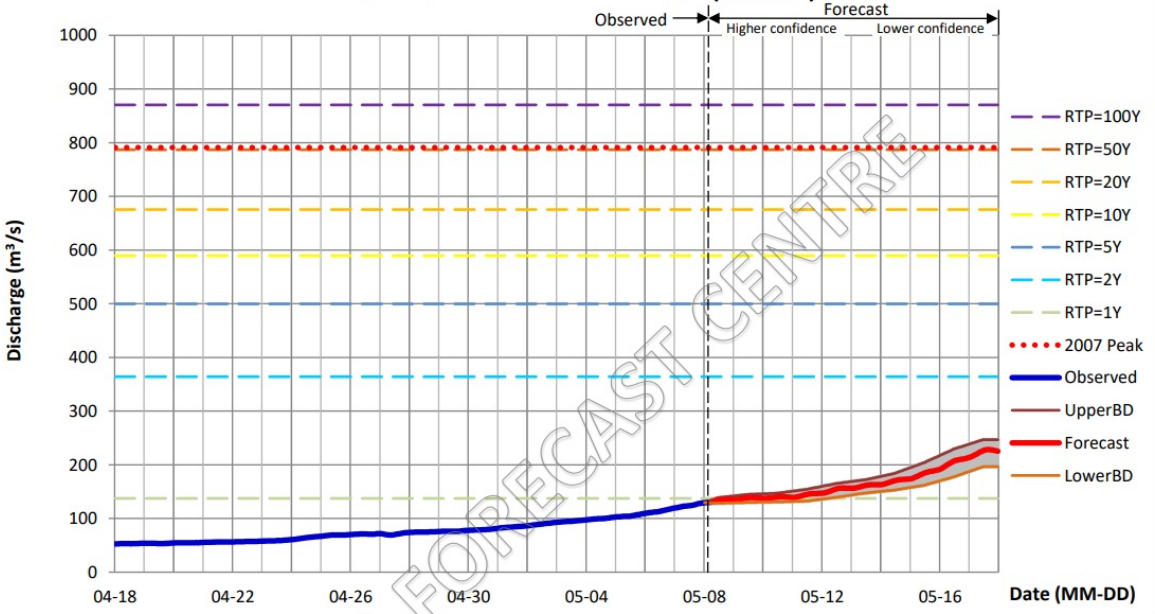


Forecast – Vanderhoof

Expected Total Discharge at Vanderhoof



NECHAKO RIVER AT VANDERHOOF (08JC001)

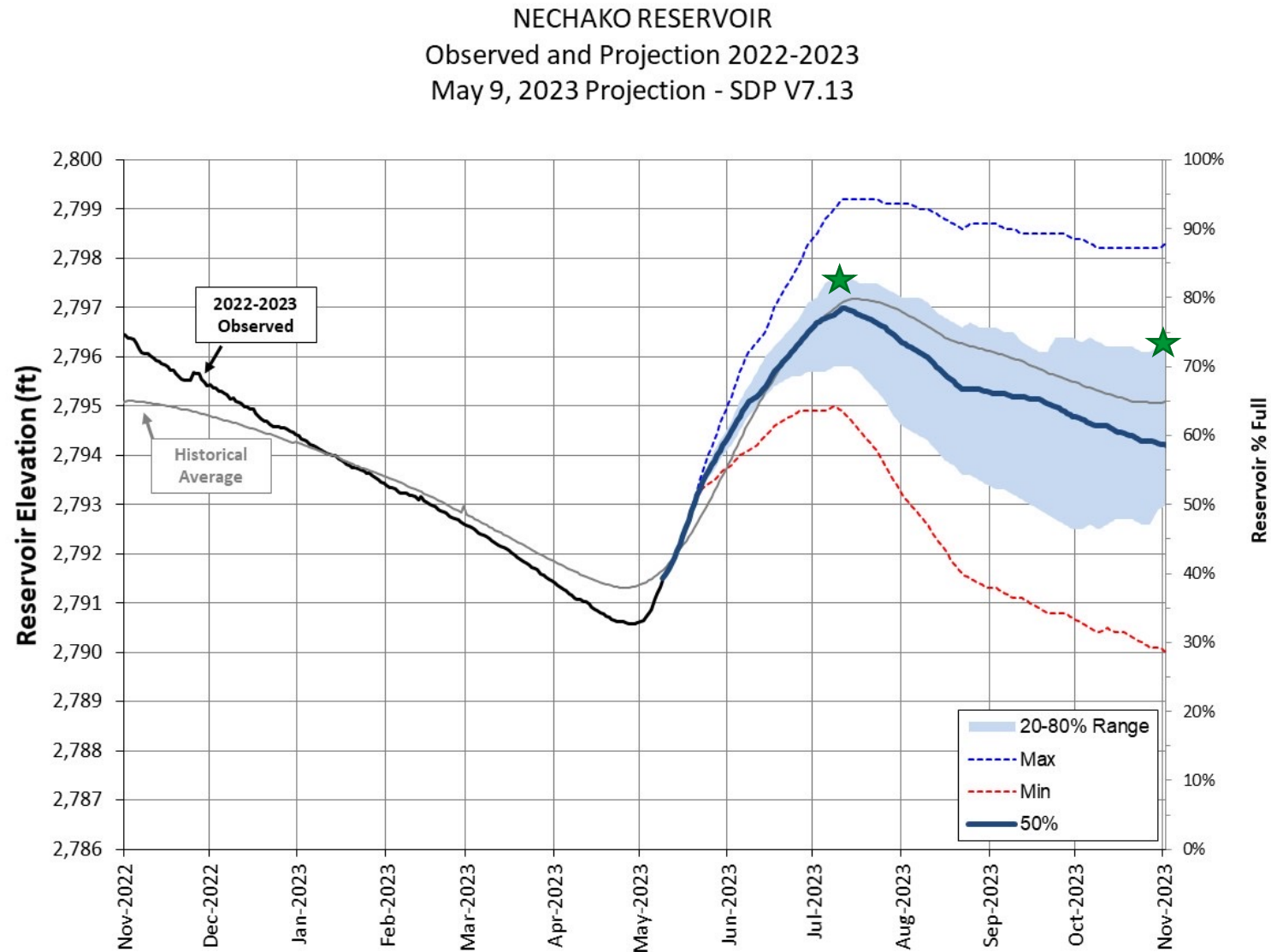


Reading at 08 AM (m³/s) Mon 2023-05-08	Forecast Daily Discharge (m³/s): AVERAGE									
	UPPER BOUND					LOWER BOUND				
	Mon 2023-05-08	Tue 2023-05-09	Wed 2023-05-10	Thu 2023-05-11	Fri 2023-05-12	Sat 2023-05-13	Sun 2023-05-14	Mon 2023-05-15	Tue 2023-05-16	Wed 2023-05-17
131.0	138.7	144.7	146.9	154.1	164.9	172.2	184.1	204.0	229.1	246.8
	134.5	137.6	139.2	144.0	153.5	160.7	169.6	183.6	204.9	223.7
	128.5	130.0	131.0	132.4	139.4	147.5	153.2	162.1	177.5	196.7

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

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



Expected reservoir peak : 2797.0 ft

★ Projected median on April 21

Feedback & Reflections

