



RioTinto

Nechako Reservoir / River / Freshet Information Sharing – Community Leaders

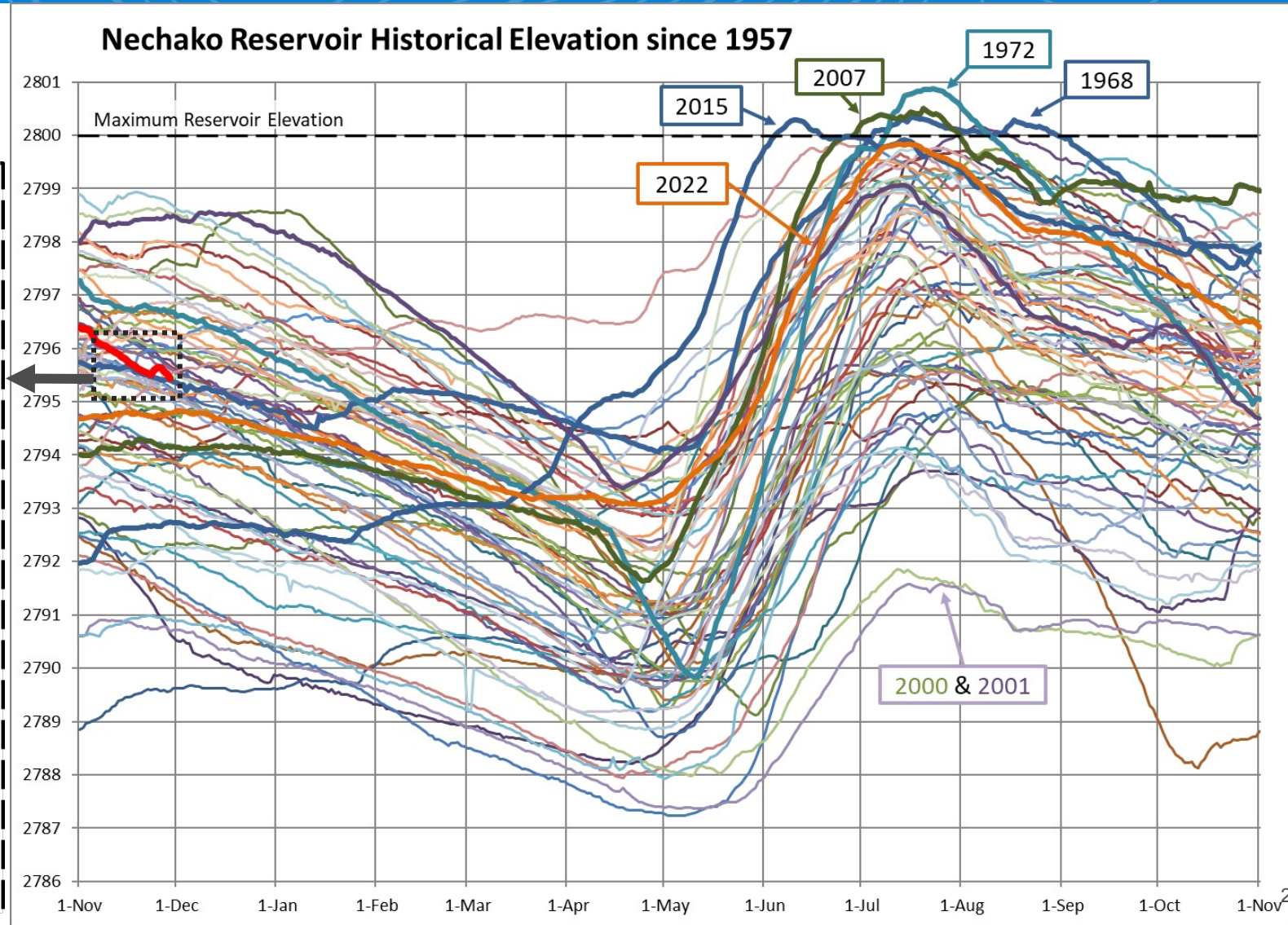
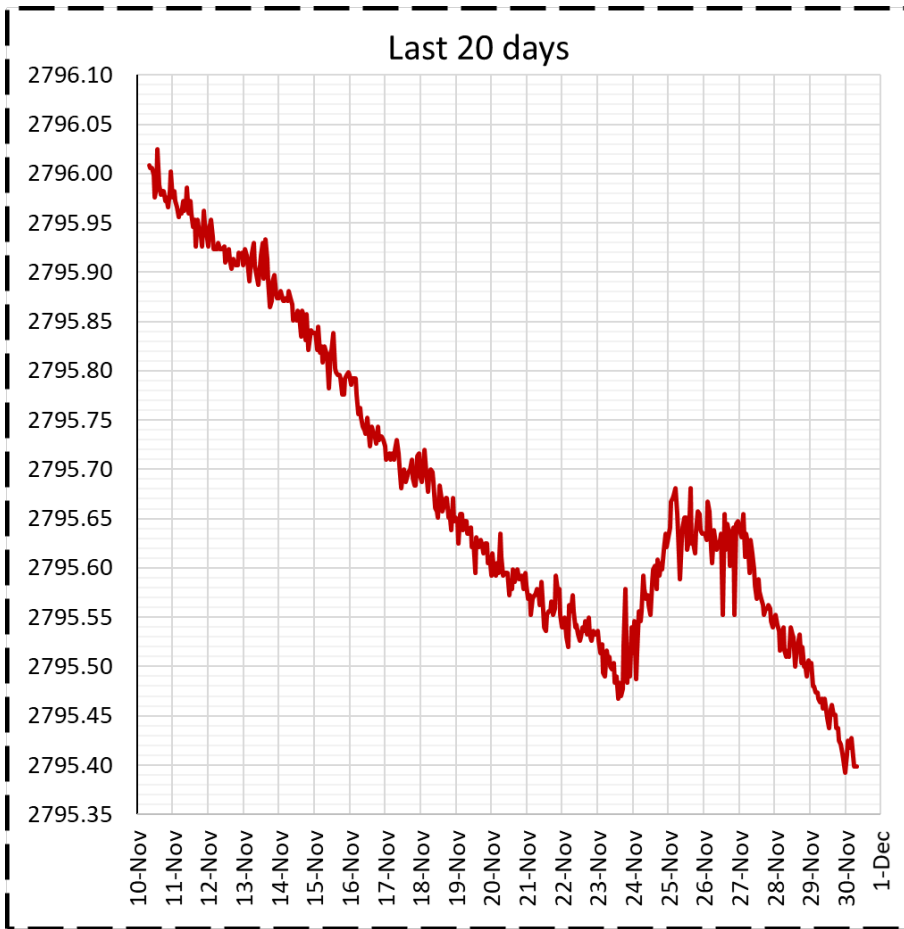
30 November 2022

Prepared by Andrew Czornohalan & Simon Matte

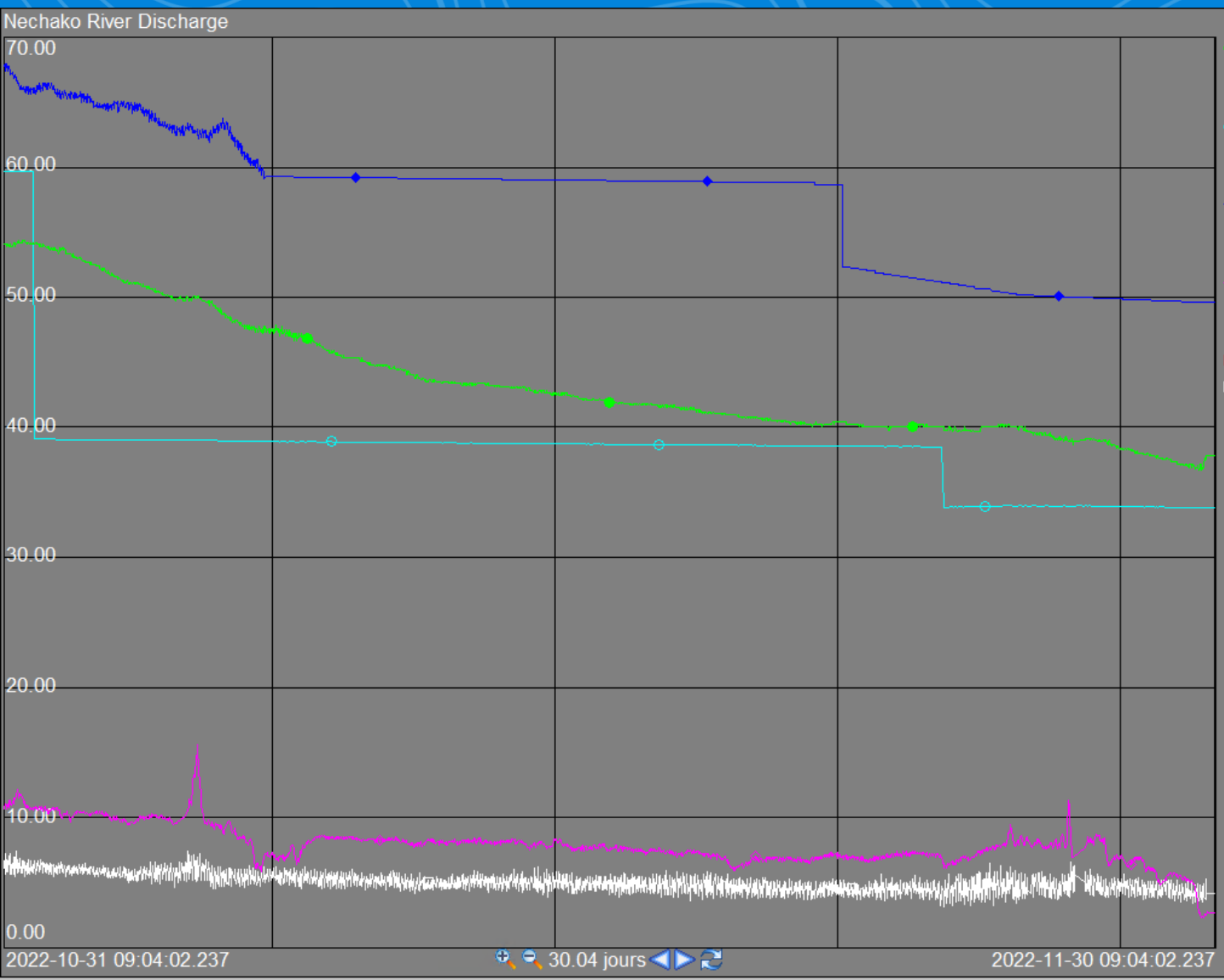
Reservoir Elevation - Last 20 days

Current reservoir level:

2795.40 ft



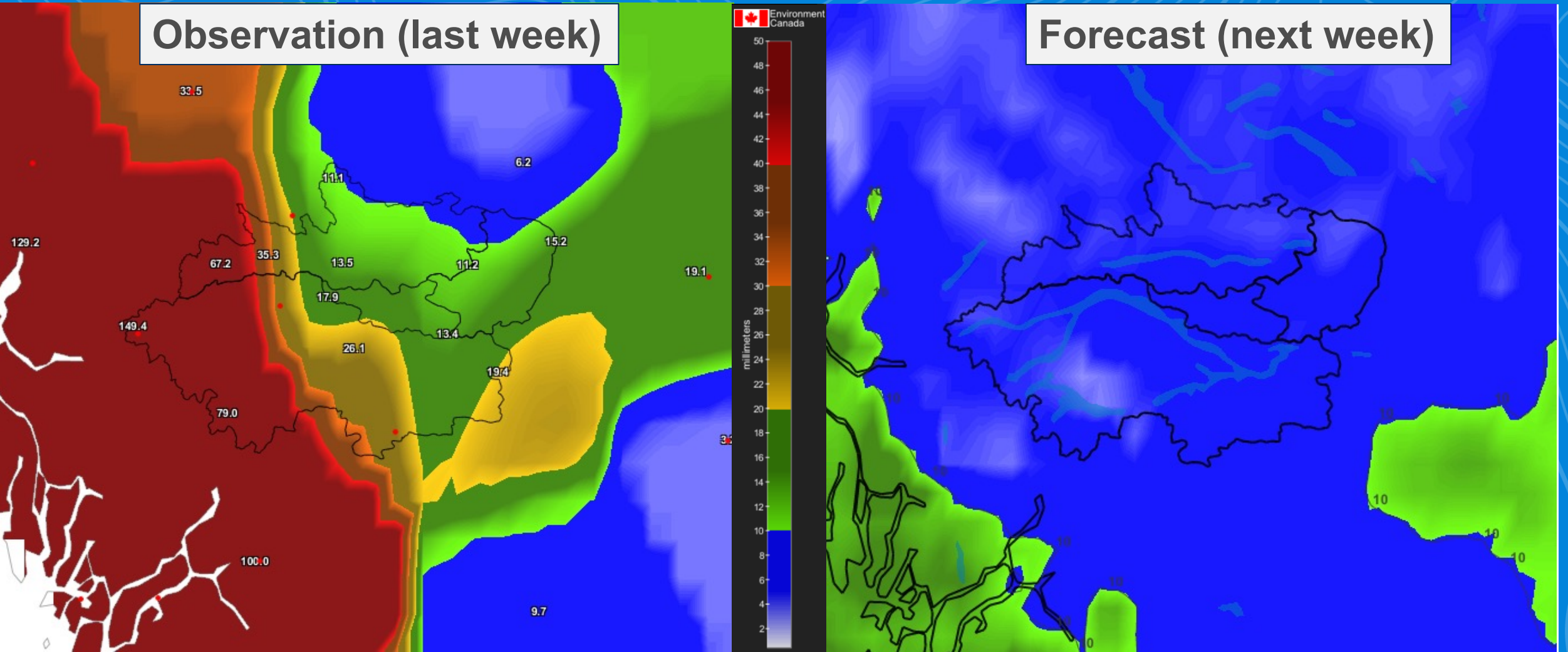
Flows - Last 30 days



| Current values (m³/s) | |
|-----------------------|-----|
| Vanderhoof | 50* |
| Skins Lake | 34 |
| Cheslatta Falls | 38 |
| Nautley | 5 |
| Stellako | 4 |

*Approx. Presence of ice on the Nechako River at Vanderhoof

7 days cumulative precipitation

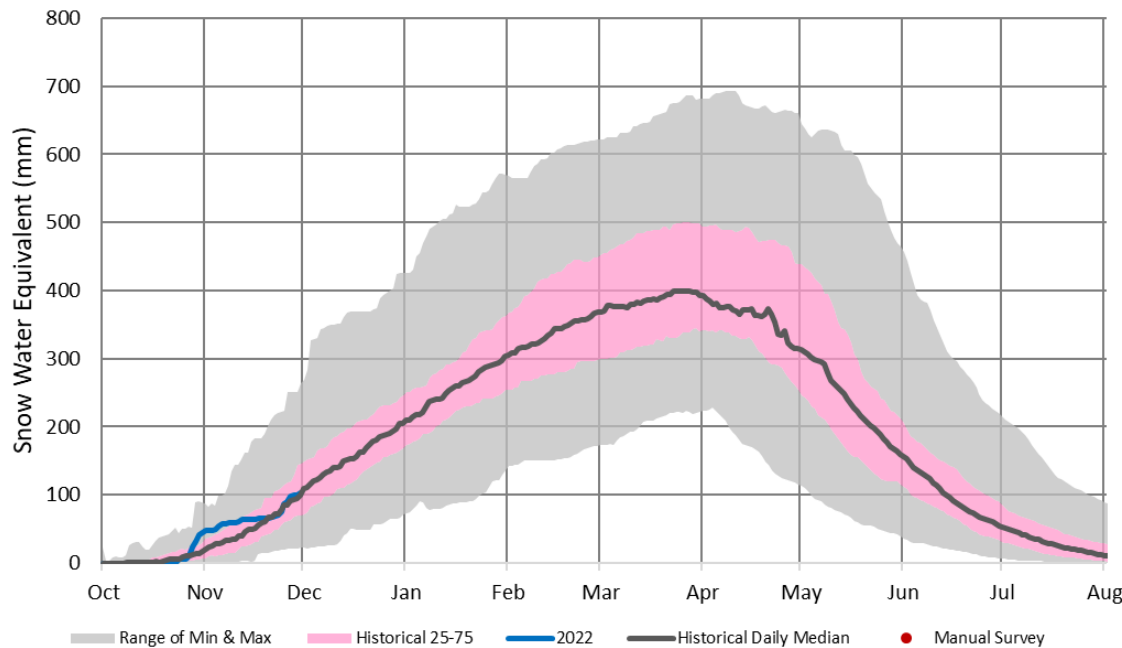


Nechako Reservoir watershed area-average = 63 mm

Nechako Reservoir watershed area-average = ~5 mm

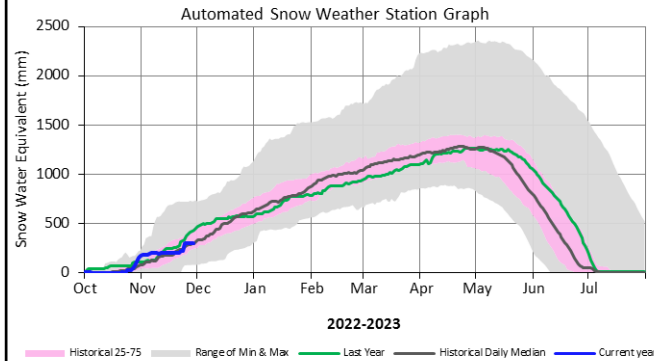
Current Snowpack

Nechako Reservoir Snowpack

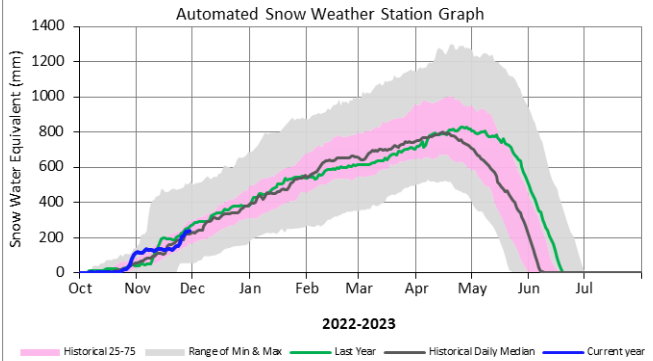


102 mm (94% LTA; 32rd/64)

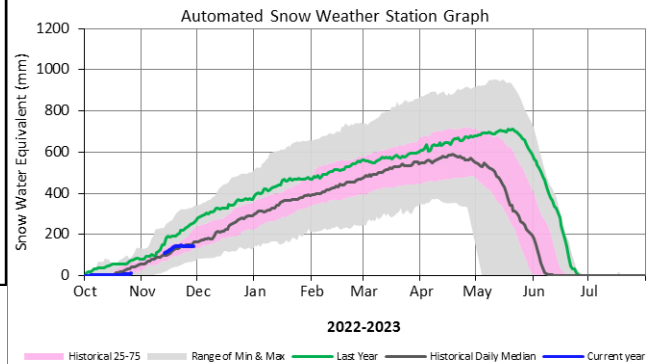
Tahtsa Lake



Mount Pondosy



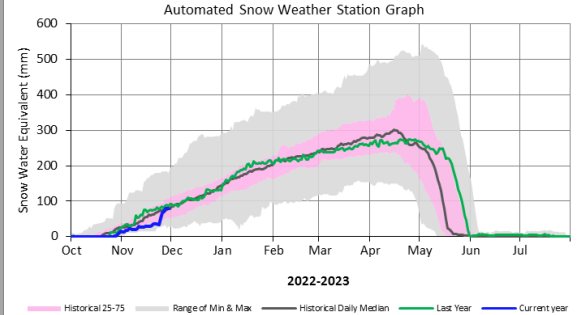
Mount Wells



| Station | Current Value (mm) | LTA* (mm) | %LTA* | Percentile Rank* |
|---------------|--------------------|-----------|-------|------------------|
| Tahtsa Lake | 297 | 343 | 87% | 48% |
| Mount Pondosy | 241 | 224 | 107% | 52% |
| Mount Wells | 145 | 182 | 80% | 37% |

* (1992-2022)

Lu Lake



| Station | Current Value | %LTA* |
|---------|---------------|-------|
| Lu Lake | 79 | 95% |

* (1997-2022)

Weather Forecast



Marilla Weather

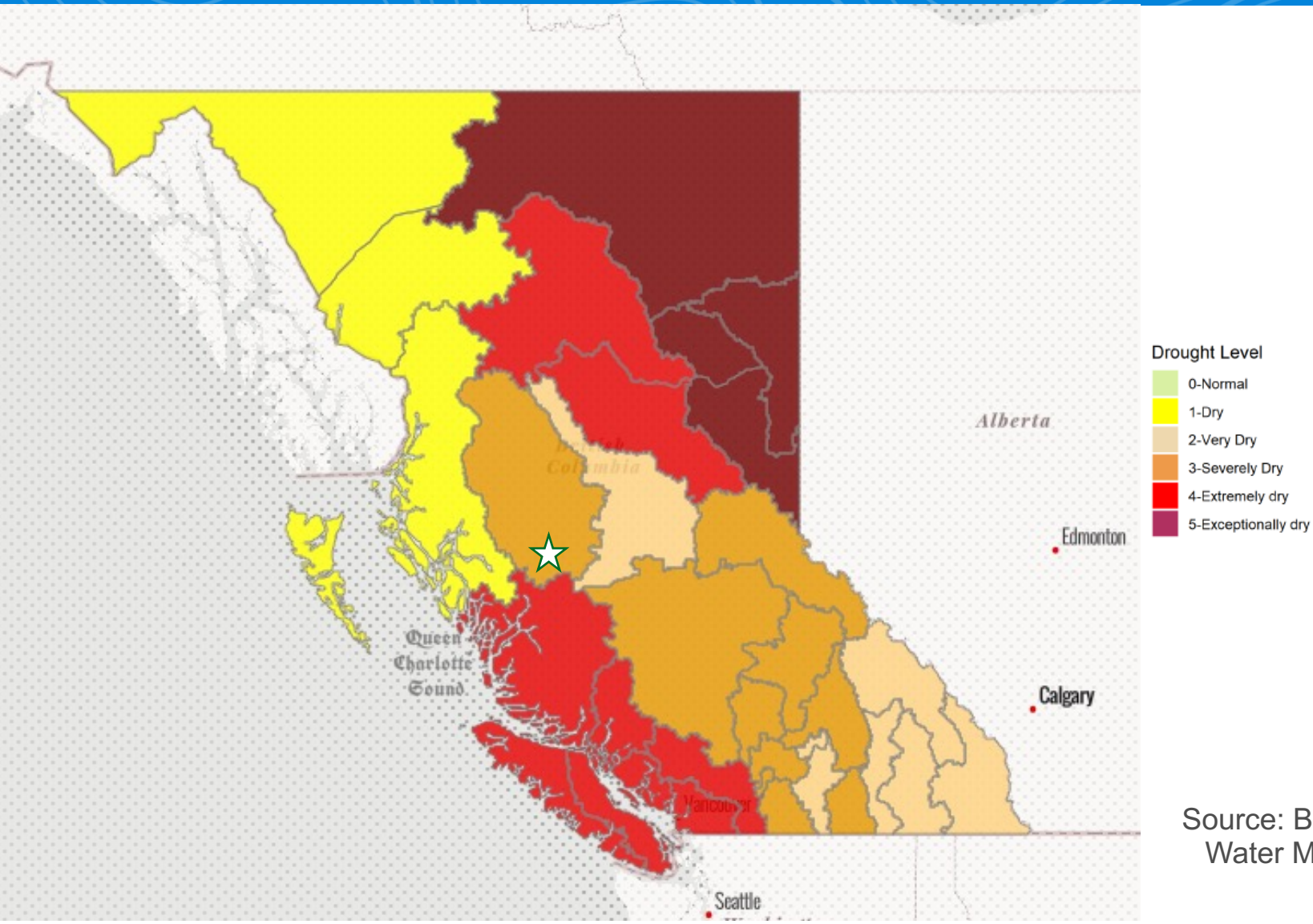
Next 7 Days



| | Thu 12/01 | Fri 12/02 | Sat 12/03 | Sun 12/04 | Mon 12/05 | Tue 12/06 | Wed 12/07 |
|------------------|--------------|--------------------------|--------------|-------------------------|-------------------------|---------------|--------------------|
| | Mainly sunny | Cloudy with sunny breaks | Mainly sunny | A mix of sun and clouds | A mix of sun and clouds | Mainly cloudy | Scattered flurries |
| | | | | | | | |
| | -17° | -16° | -15° | -13° | -13° | -11° | -7° |
| Feels like | -23 | -20 | -16 | -13 | -14 | -14 | -11 |
| Night | -19° | -20° | -16° | -17° | -15° | -12° | -9° |
| POP | 20 % | 30 % | 20 % | 30 % | 20 % | 30 % | 40 % |
| Wind (km/h) | 9 E | 9 NE | 5 E | 3 E | 5 s | 5 SE | 9 s |
| Wind gust (km/h) | 14 | 14 | 8 | 5 | 8 | 8 | 14 |
| Hrs Of Sun | 6 h | 2 h | 5 h | 2 h | 3 h | 1 h | 2 h |
| 24 Hr Snow | - | - | - | - | - | - | 1-3 cm |

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

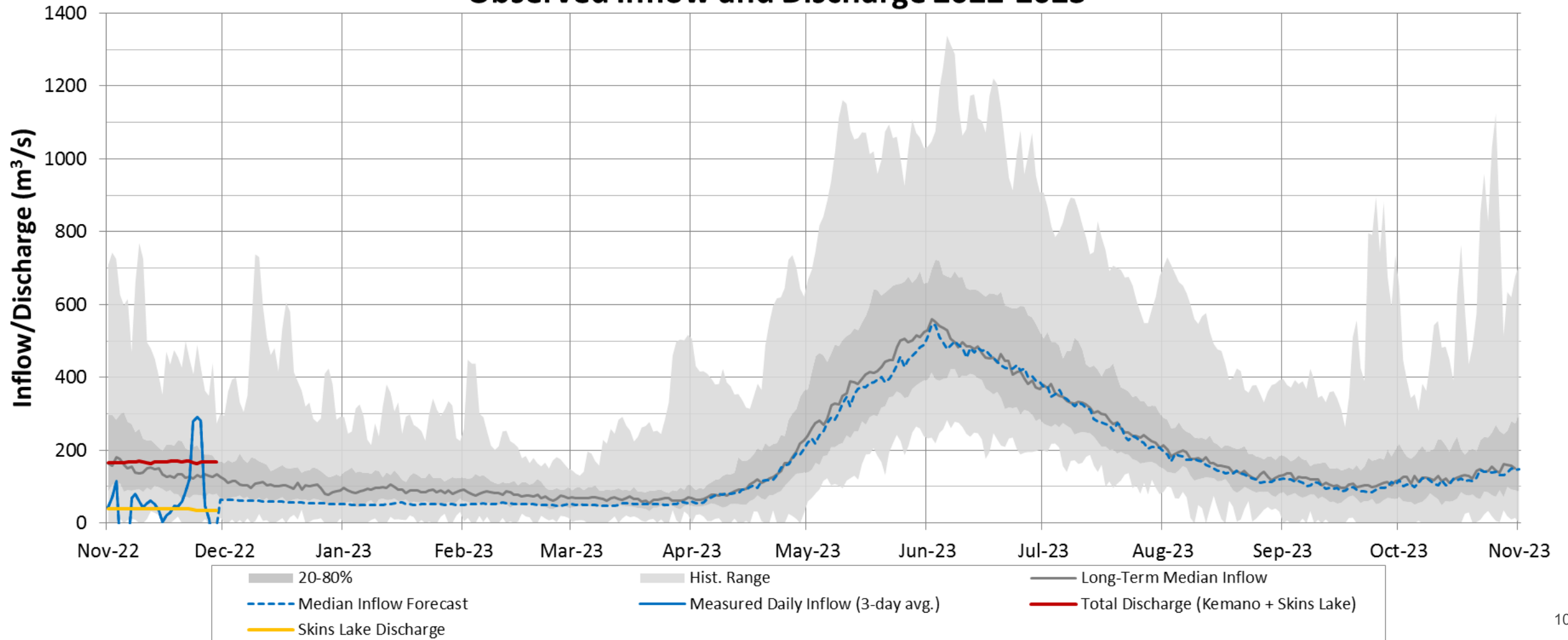
Provincial Drought Advisories



Source: British Columbia Drought Information Portal
Water Management Branch – Ministry of Forests
November 24th, 2022

Observed Inflows & Discharge vs Historical

Nechako Reservoir Operation
Observed Inflow and Discharge 2022-2023

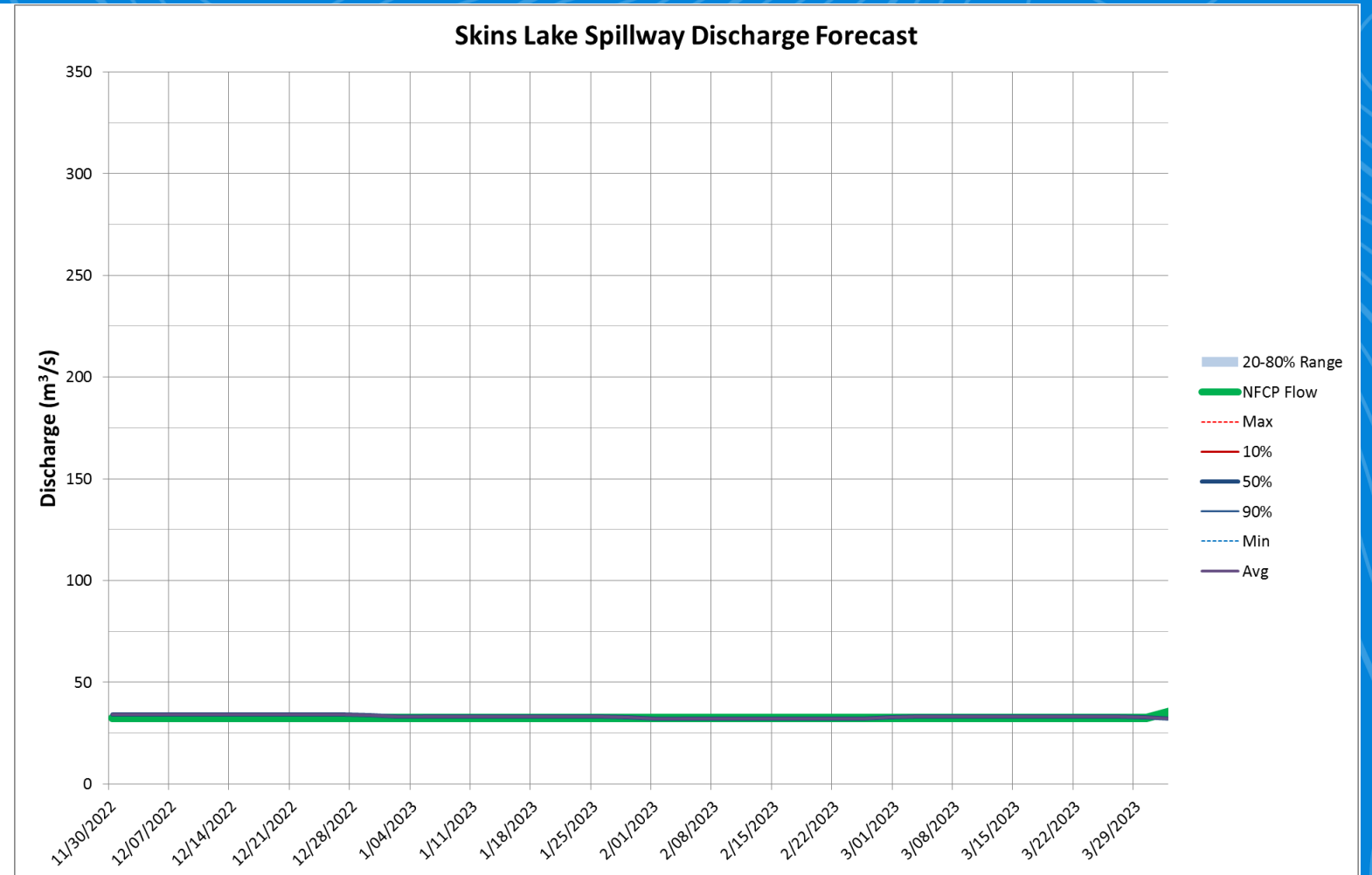


Skins Lake Spillway Release Forecast

Gate Change (November 1st) = **39 m³/s**

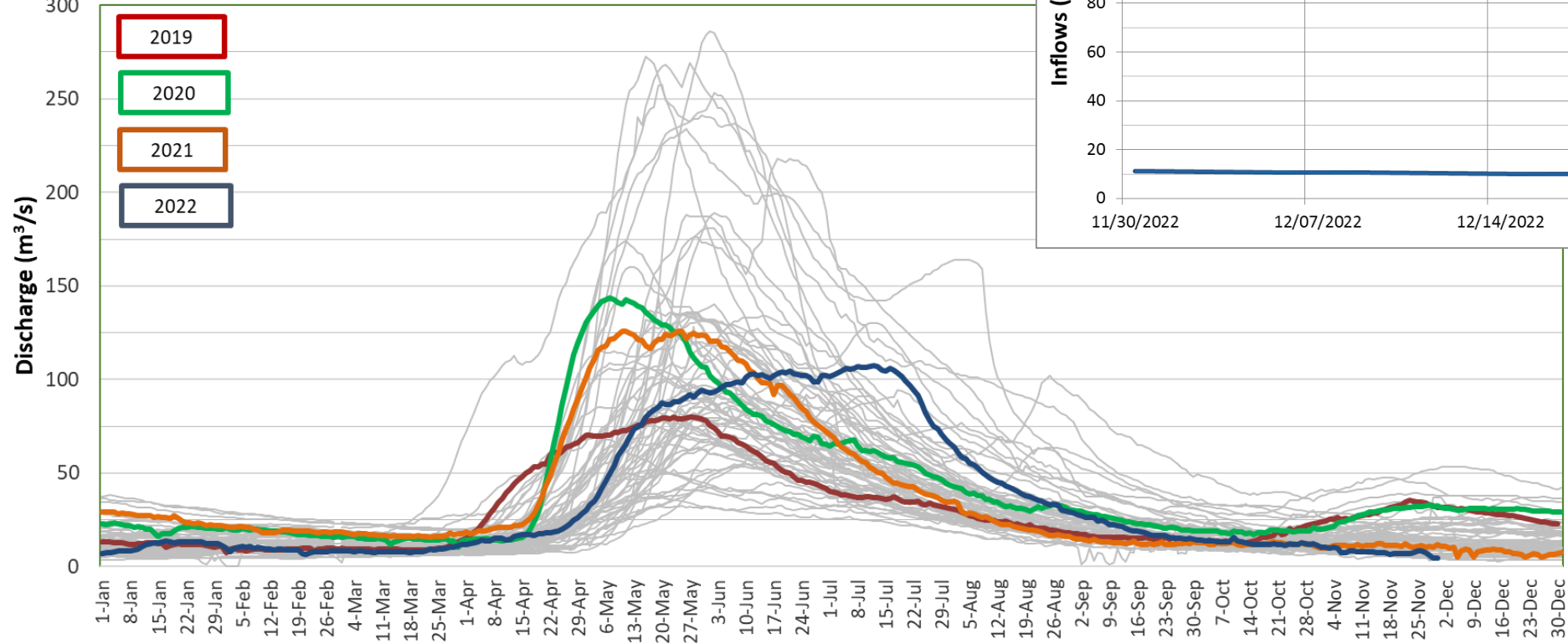
Gate Change (November 23rd) = **34 m³/s**

Winter minimum = **32 m³/s**



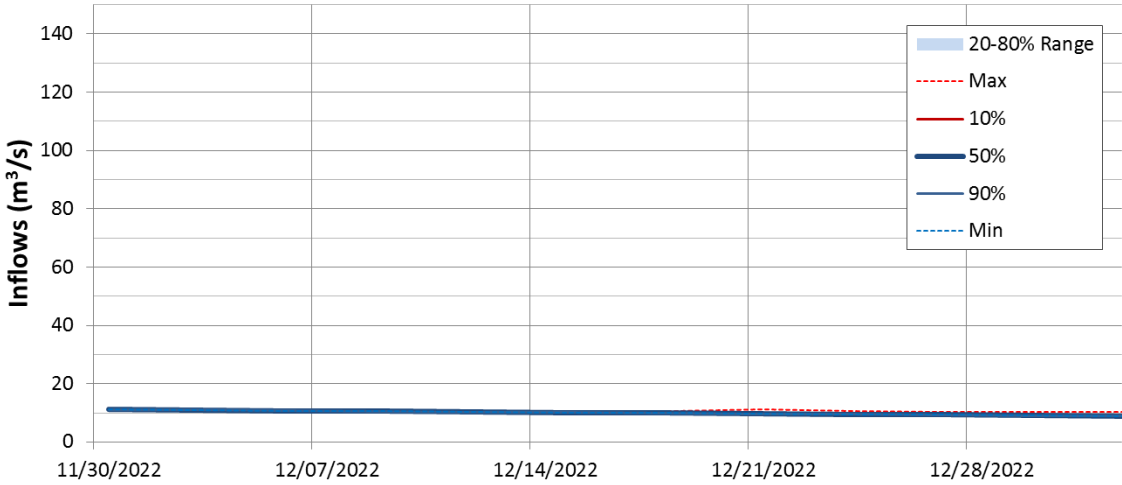
Nautley River Flows, Forecast

Nautley River discharge 1952-2022



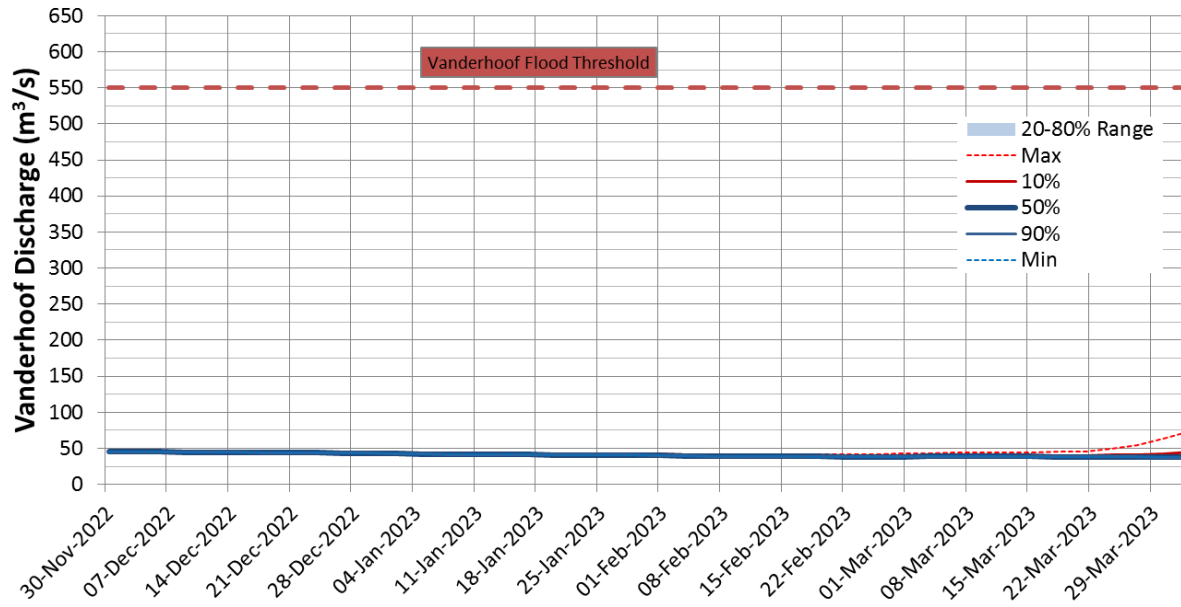
Expected Natural Inflow on Nautley/Nechako Rivers at Vanderhoof

(excludes discharge from Nechako Reservoir)

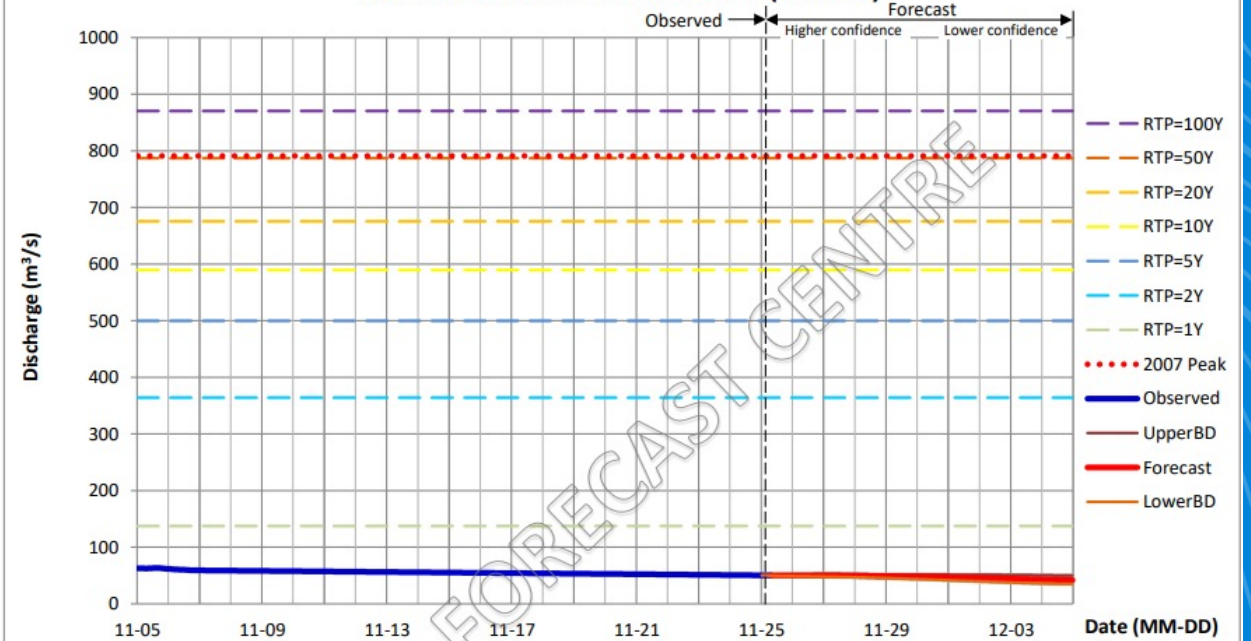


Forecast – Vanderhoof

Expected Total Discharge at Vanderhoof



NECHAKO RIVER AT VANDERHOOF (08JC001)

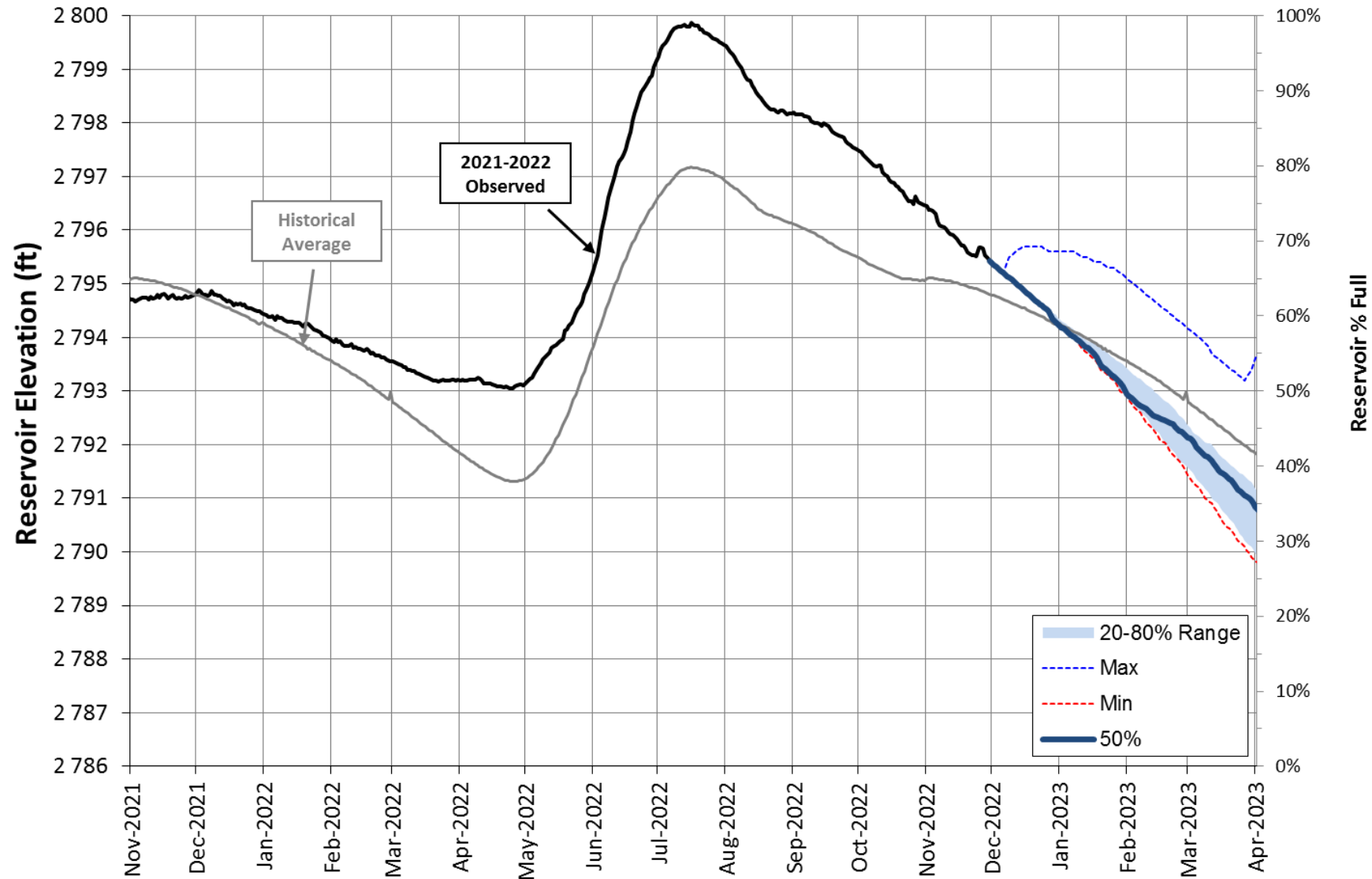


| Reading at 08 AM (m³/s) Fri 2022-11-25 | Forecast Daily Discharge (m³/s): AVERAGE | | | | | | | | | |
|--|--|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| | UPPER BOUND | | | | | LOWER BOUND | | | | |
| | Fri | Sat | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
| 2022-11-25 | 2022-11-25 | 2022-11-26 | 2022-11-27 | 2022-11-28 | 2022-11-29 | 2022-11-30 | 2022-12-01 | 2022-12-02 | 2022-12-03 | 2022-12-04 |
| 50.3 | 50.8 | 51.9 | 52.5 | 52.0 | 51.9 | 51.6 | 51.4 | 51.1 | 50.7 | 50.0 |
| | 50.2 | 50.3 | 50.0 | 49.2 | 48.2 | 47.1 | 46.0 | 44.8 | 43.7 | 42.5 |
| | 49.6 | 48.7 | 47.5 | 46.4 | 44.6 | 42.7 | 40.7 | 38.7 | 36.8 | 35.1 |
| 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) | | | | | | | | | | |

Color Scheme for Return Periods:

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 2021-2023
30-nov-2022 Projection - SDP V7.13.26

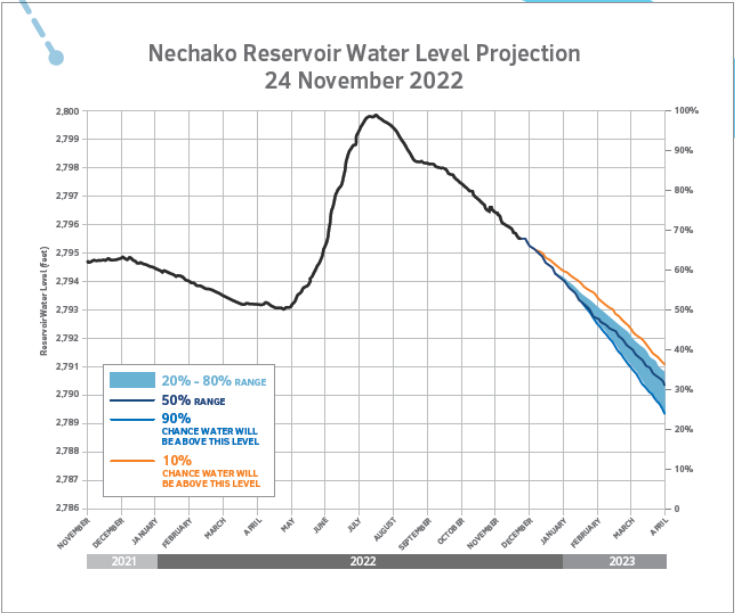
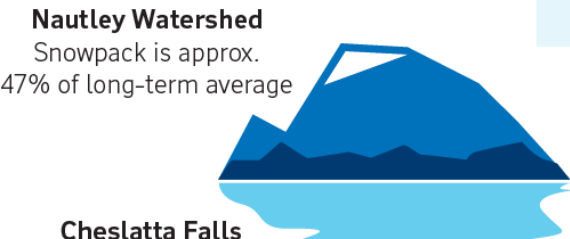
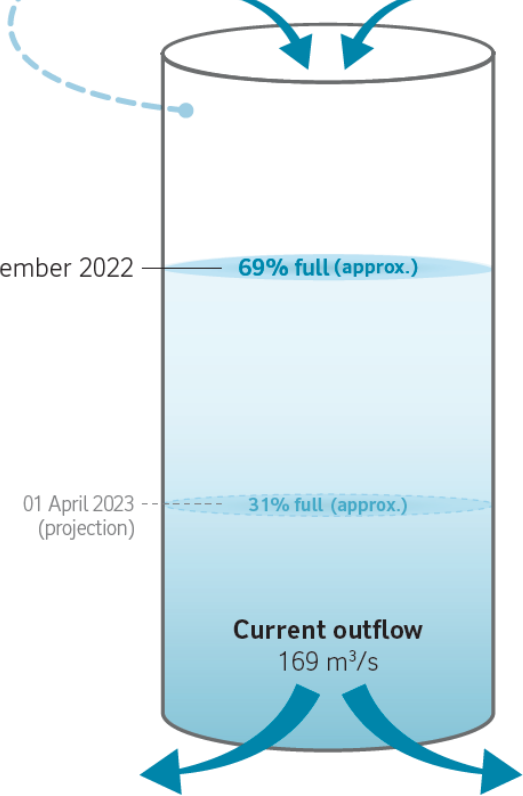
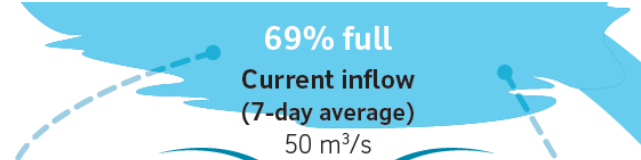
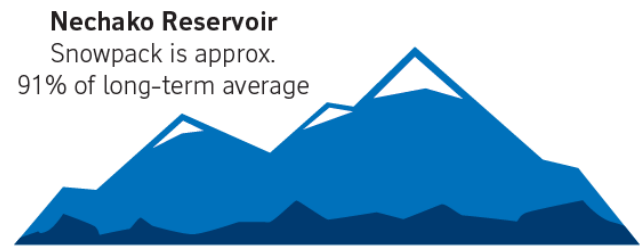
Next Steps – Actions



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 – **Propose**
(3w) **December 21st,**
(4w) **December 28th,**
(5w) **January 4th, or**
(6w) **January 11th.**

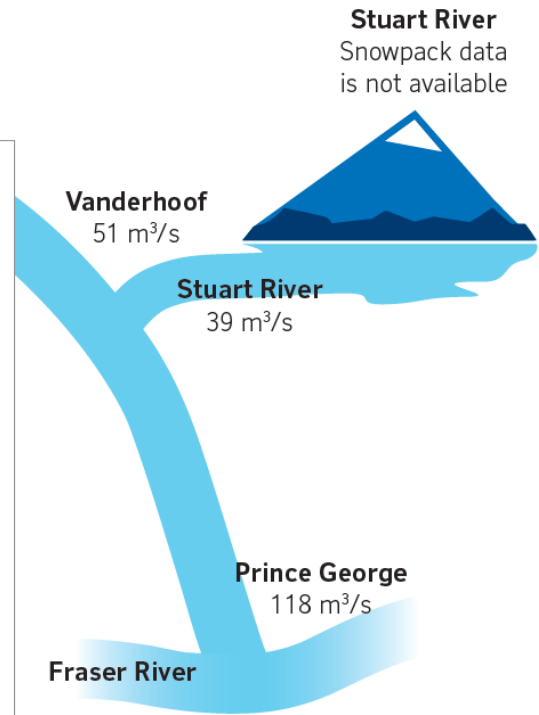
Presentations are available on the Get Involved Nechako website under 'Our Operations'. Recordings can be requested up to 30 days following the meeting

Current Conditions - 24 November 2022



Nechako Reservoir operations update

- Skins Lake Spillway discharge was recently reduced from ~40 m³/sec to 34 m³/sec. Discharge will likely 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

