Okanagan Basin WATER BOARD
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MEMORANDUM

To: OBWB Directors

From: Sandra Schira, Water Science Specialist

Date: March 26, 2025

Subject: Weather and Water Rates Survey Update

Okanagan Basin Water Board
Regular meeting
April 1, 2025
Agenda No: 6.4

Weather Update

Snowpack was low at the start of March, but some small recovery was seen. As of March 1, the Okanagan snowpack was at 82% of normal[1] – the third lowest in the last ten years (Figure 1). This followed a normal snowpack in January (102%) and a low snowpack in February (84%) for the Okanagan. The March 1 value matched the overall low snowpack conditions across the province. Since March 1 the Okanagan has received precipitation which translated to a small recovery in the snowpack for some locations (Figure 2)[2]. By March 24, Brenda Mines and Silver Star Mountain had both seen a slight recovery in snowpack compared to March 1. Mission Creek had not seen much of a recovery. Snowpack across the Okanagan remains on the lower end but is no longer currently near historical lows.

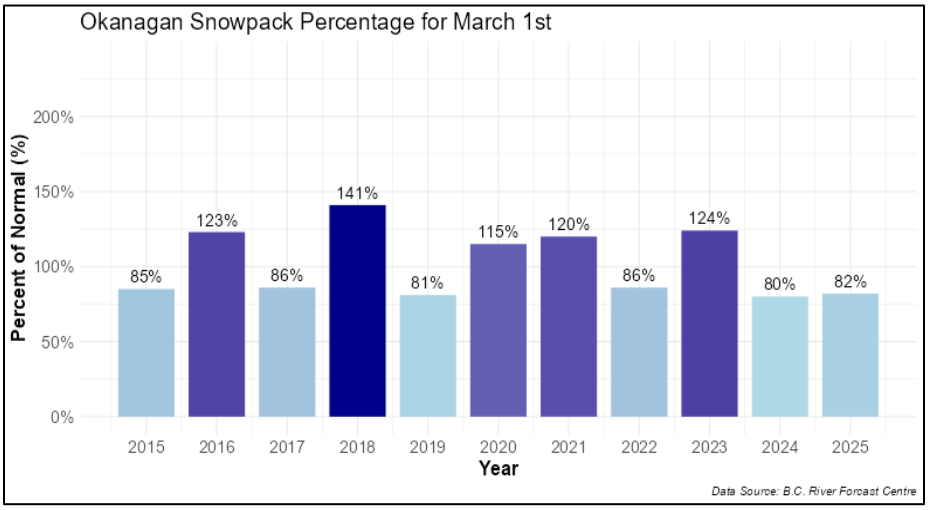

Figure 1 Comparison of March 1 snow index over the last ten years in the Okanagan. Graph from the February Snow Supply Bulletin.

[1] March 2025 Provincial Snow Bulletin. B.C. River Forecast Centre. https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/river-forecast/2025_mar1.pdf (Accessed 24.03.2025)
[2] Snow Survey Interactive Map. B.C. River Forecast Centre. https://governmentofbc.maps.arcgis.com/apps/webappviewer/index.html?id=c15768bf73494f5da04b1aac6793bd2e (Accessed 24.03.2025)

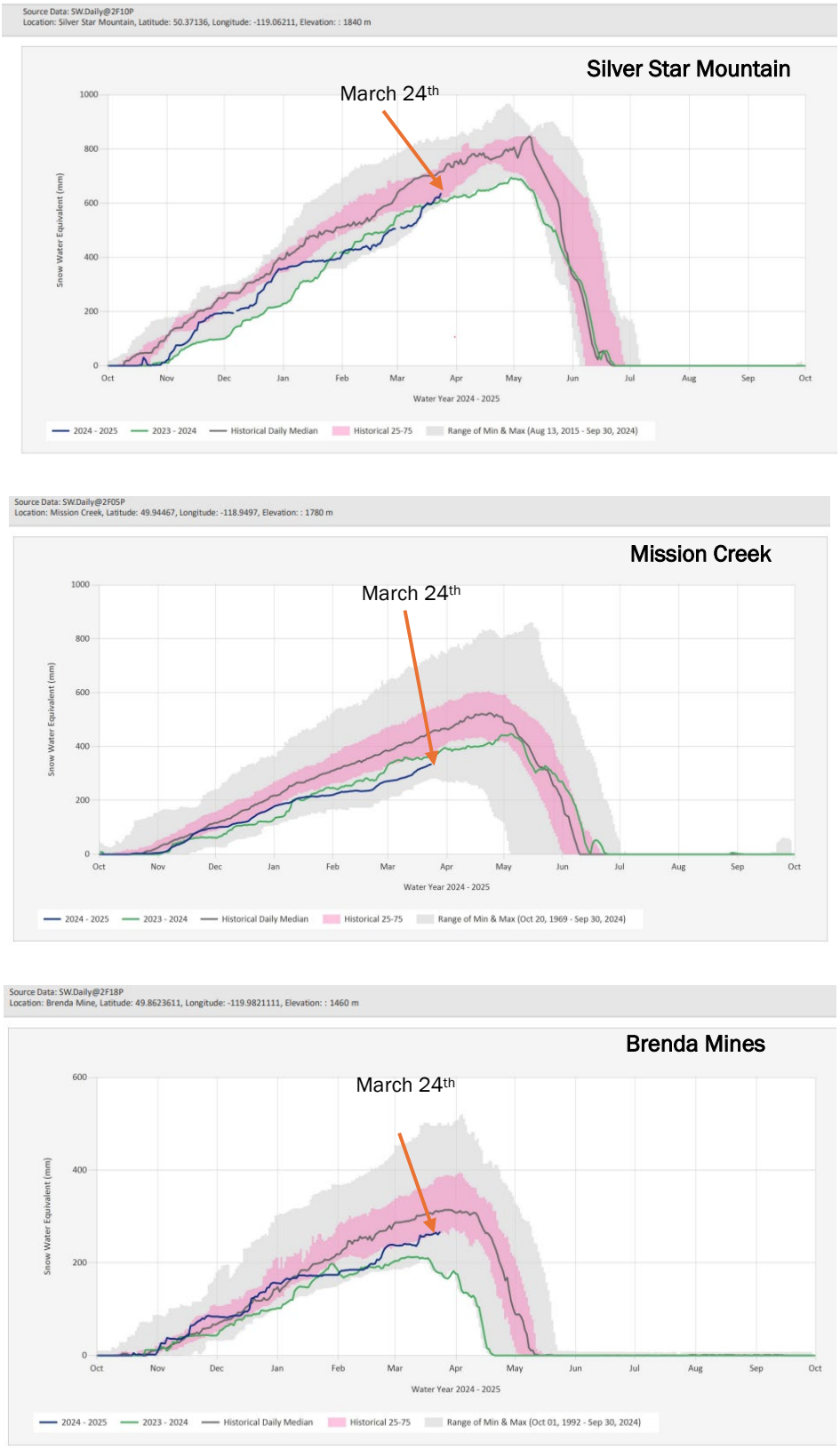

Figure 4 Weekly Snowpack Accumulation Across the Okanagan as of March 24. Data from the Province of B.C.

Precipitation was higher in March. As of March 24, the major cities across the Okanagan had already surpassed the average precipitation for March (Figure 3). In particular, Vernon and Kelowna were well over the 1991-2020 average. Additionally, after a dry start to February – as reported at last month's meeting – the final week of February saw enough precipitation to put the February totals in line with average values. It is still too early to know the drought outlook for the spring and summer, but after several years of dry conditions, significant and long-term precipitation is needed to fully recharge the watershed. It is also too early for freshet and flood outlook; however, by next month, that should be clearer.

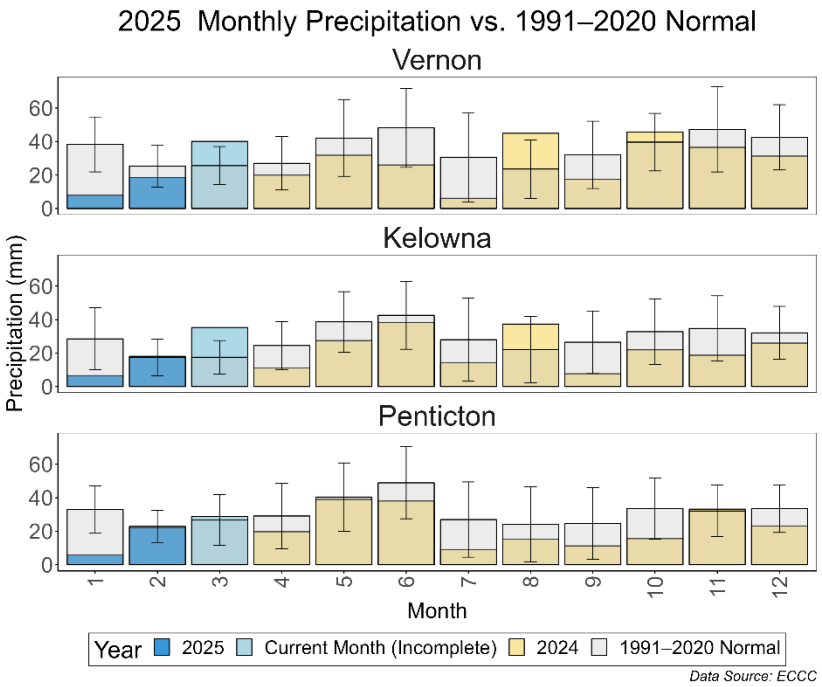

Figure 3 Monthly Precipitation in the Okanagan as of March 24. Compared to 1991 to 2020 range. Data retrieved from Environment and Climate Change Canada

Temperatures across the Okanagan are slightly above or around normal. After the cold spell in February, temperatures returned to warmer than usual for several weeks (Figure 4). The week of the 18th saw near-normal or cool temperatures as precipitation hit the region.

Seasonal forecasts indicate no clear trend for the Okanagan. Long-term forecasts suggest that we will likely move out of the weak la Niña to a more neutral ENSO condition in the next few months. The Environment and Climate Change Canada[3] long-term seasonal forecast shows a slight possibility of temperatures above normal in Okanagan over the next three months. For precipitation, no clear trend was present in the forecast, with all scenarios having an equal likelihood (Figure 5). Seasonal forecasting is highly challenging, so disagreement between models or variations from projections is not uncommon. Seasonal forecasts are, therefore, used to provide a sense of likely future conditions but should not be taken as 100% certain.

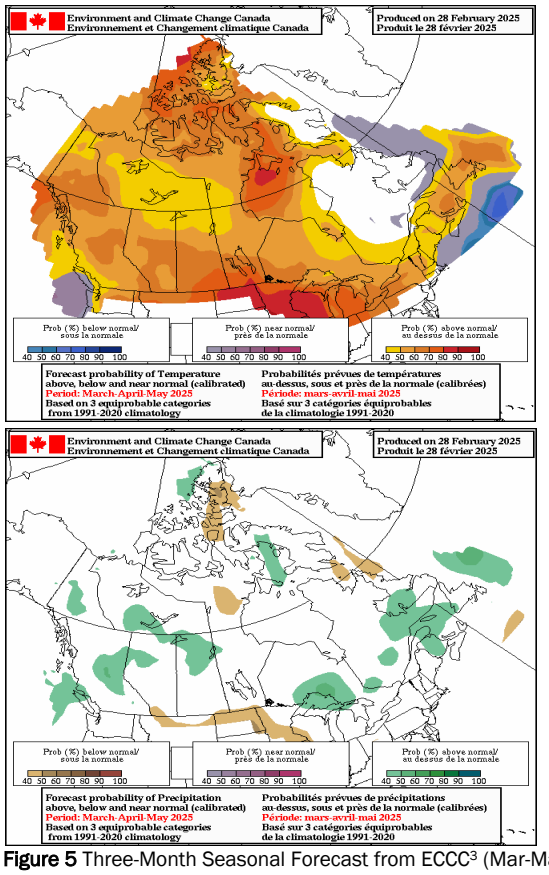

Figure 5 Three-Month Seasonal Forecast from ECCC[3] (Mar-May).

[3] ECCC Seasonal forecasts. https://climate-scenarios.canada.ca/?page=cansips-prob (Accessed 24.03.2025)

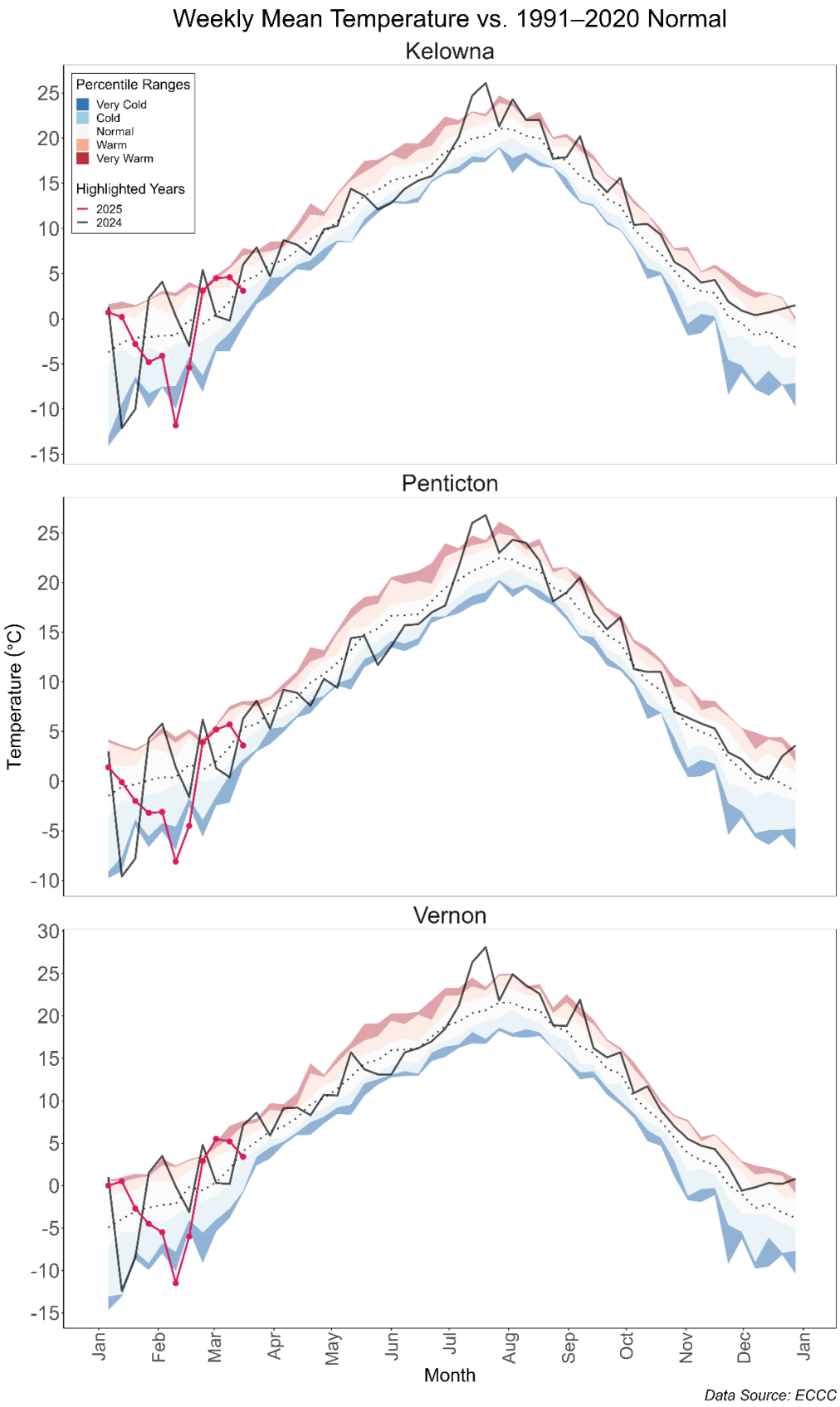

Figure 4 Weekly Average Temperature Across the Okanagan as of March 24th compared to 2024 and 1991 to 2020 range. Data retrieved from Environment and Climate Change Canada.

Okanagan Lake levels remain around normal. As of March 24, lake levels were slightly above the mean but within the normal range (Figure 6), managed by the operator of the Okanagan Dam in Penticton. With the precipitation seen across the valley, a slight increase in lake levels is viable, but as the lake is managed by the province, changes tend to be smoothed out.

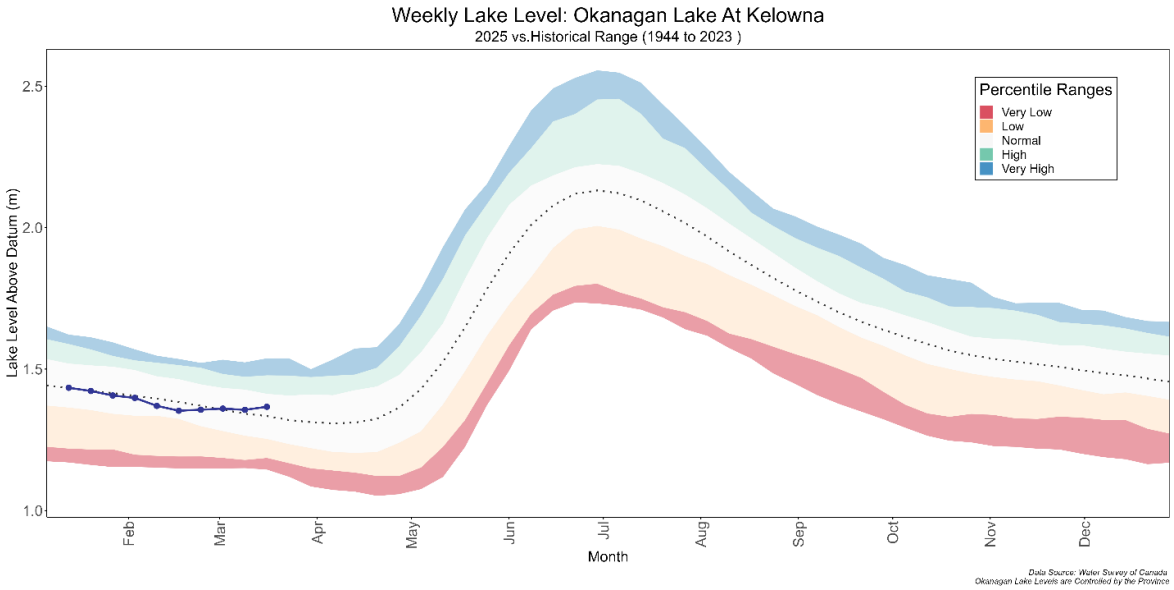

Figure 6 Weekly Lake levels for Okanagan Lake at Kelowna compared to the 1944 – 2023 range. Data is retrieved from the Water Survey of Canada

Water Rates Survey Update

I am writing a report on the types of water rates used by significant water providers across the Okanagan. The report will provide an update to a similar survey conducted in 2017. I contacted 15 water suppliers to participate in the survey. The results are intended to provide an understanding of the metering practices and pricing structures of residential and agricultural water across the valley. Of the utilities contacted, 11 participated in the survey, and for the additional 4, OBWB staff reviewed the current relevant water rates Bylaw. The full report is still in progress, but some preliminary findings are presented here.

Since 2017, almost all water providers have shifted to metering their residential customers. Once meters were in place, the providers have typically moved to some form of consumption-based pricing. The exact rate and consumption structure vary significantly between providers, but there were some trends. The most common form of residential water pricing is for a provider to charge a flat base fee and an additional charge per m^3 consumption rate. In some cases, the per m^3 increases with consumption; in others, it is flat. No communities had a specific drought pricing policy but used the consumption rate to encourage water conservation.

Agricultural metering was more varied, with not all suppliers metering their farming customers. Only five of the suppliers had 100% metering in place for agricultural users. Here, too, pricing varied, but the most common form was to charge a per-acre allocation rate once a year and then an overconsumption rate should the customer surpass their allotment. The most common billing rate was quarterly, but this varied by location.