



MEMORANDUM

To: OBWB Directors

From: Melissa Tesche, Executive Director,

Nelson Jatel, Senior Director, Water Science & Stewardship,
and Sandra Schira, Water Science Specialist

Date: Oct. 5, 2026

Subject: Drought Report

Okanagan Basin Water Board
Regular meeting
Oct. 6, 2026
Agenda No: 7.5

Summary

As of Oct. 1, 2026, drought conditions remain severe across the Okanagan, with multiple indicators continuing to show sustained water stress. September rains improved streamflow and temperature conditions but did not materially replenish storage in lake levels or groundwater levels. Despite the rain, the basin remains vulnerable through the remainder of the irrigation season and will remain vulnerable well into the next year. Continued water conservation and close monitoring this winter are warranted.

Precipitation

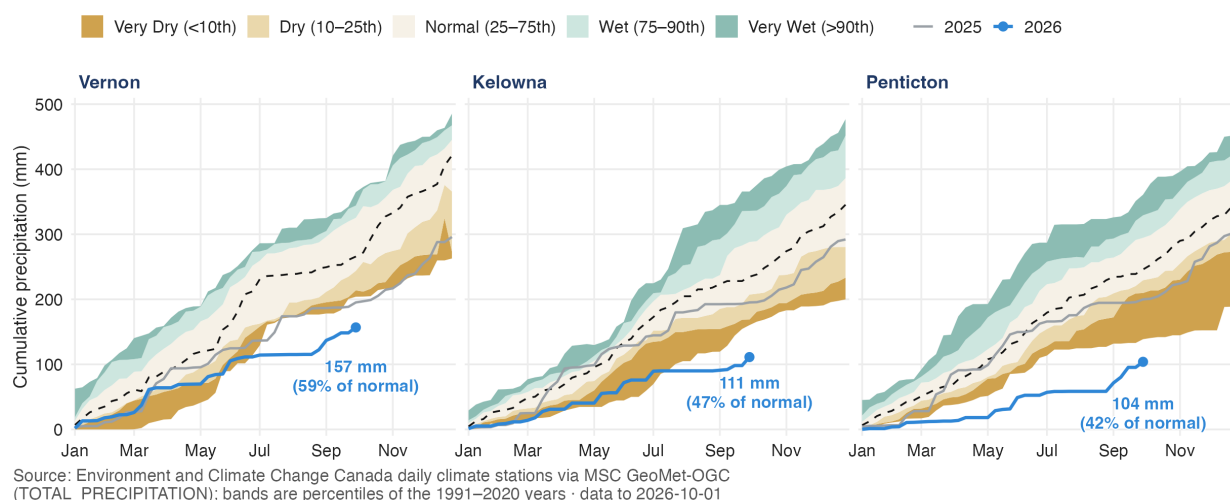


Figure 1. Cumulative precipitation from Jan. 1 to Oct. 1, 2026, at Vernon, Kelowna, and Penticton, shown alongside historical normal precipitation for each location. Data source: Environment and Climate Change Canada.

Precipitation deficits remain pronounced across the Okanagan, even with the fall rains that communities have received. Cumulative precipitation through Oct. 1, 2026 was approximately 157 mm in Vernon, 111 mm in Kelowna and 104 mm in Penticton, representing about 59%, 47% and 42% of normal, respectively. The deficit gets worse from north to south. Even with fall precipitation received, cumulative precipitation across all three regions is historically low. The prolonged precipitation deficit is an important underlying driver of the low streamflows, declining lake levels and groundwater stress now being observed throughout the basin.

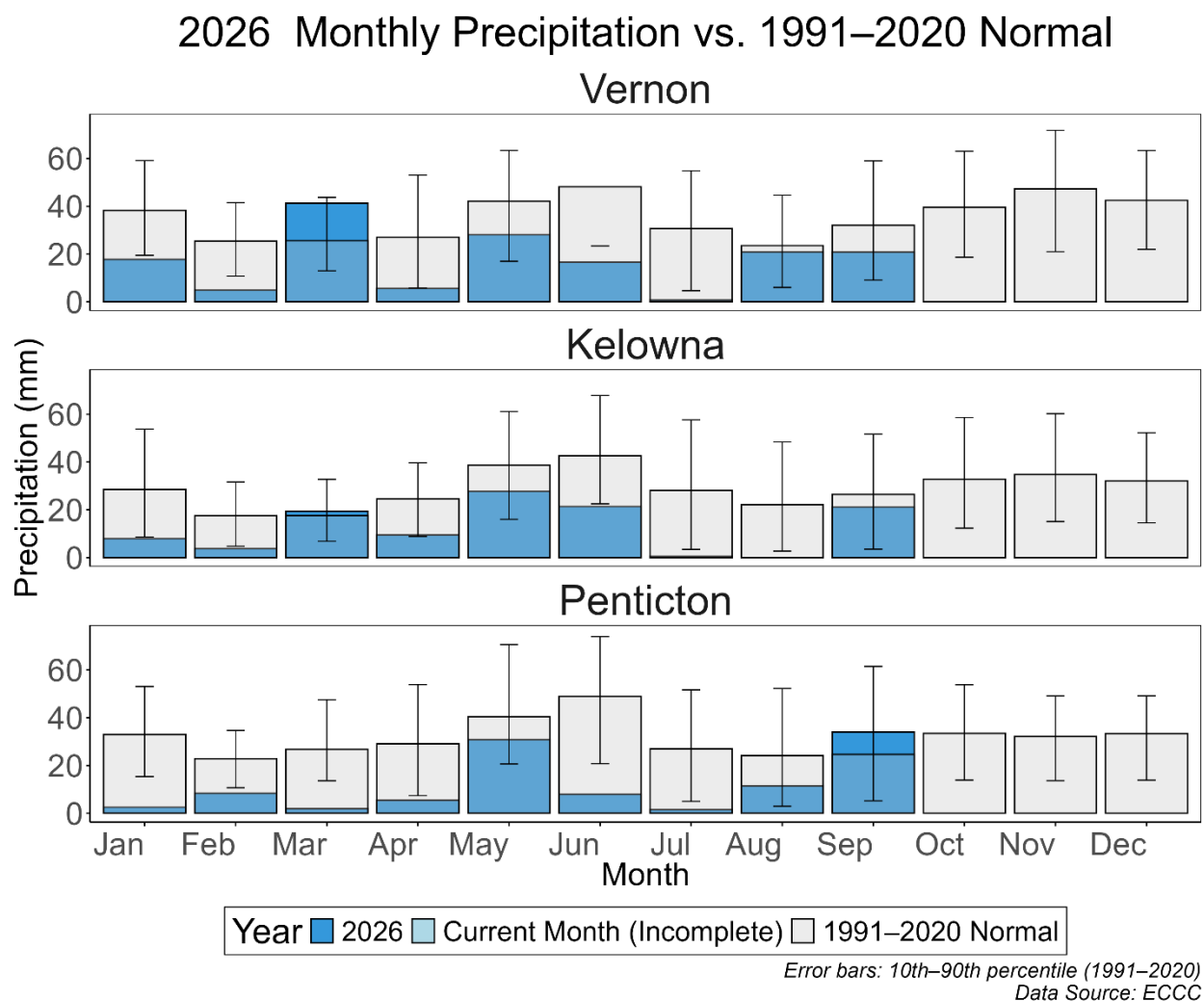


Figure 2. 2026 monthly precipitation compared with 1991–2020 normal at Vernon, Kelowna and Penticton. Error bars represent the 10th–90th percentile range for each month during the normal period. Data source: Environment and Climate Change Canada (ECCC).

Vernon and Kelowna received below average precipitation for the month of September, while Penticton received above average precipitation for the month.

Temperatures

With the exception of one very warm spell in Vernon and Kelowna, weekly mean temperatures were around normal through September and into October 2026.

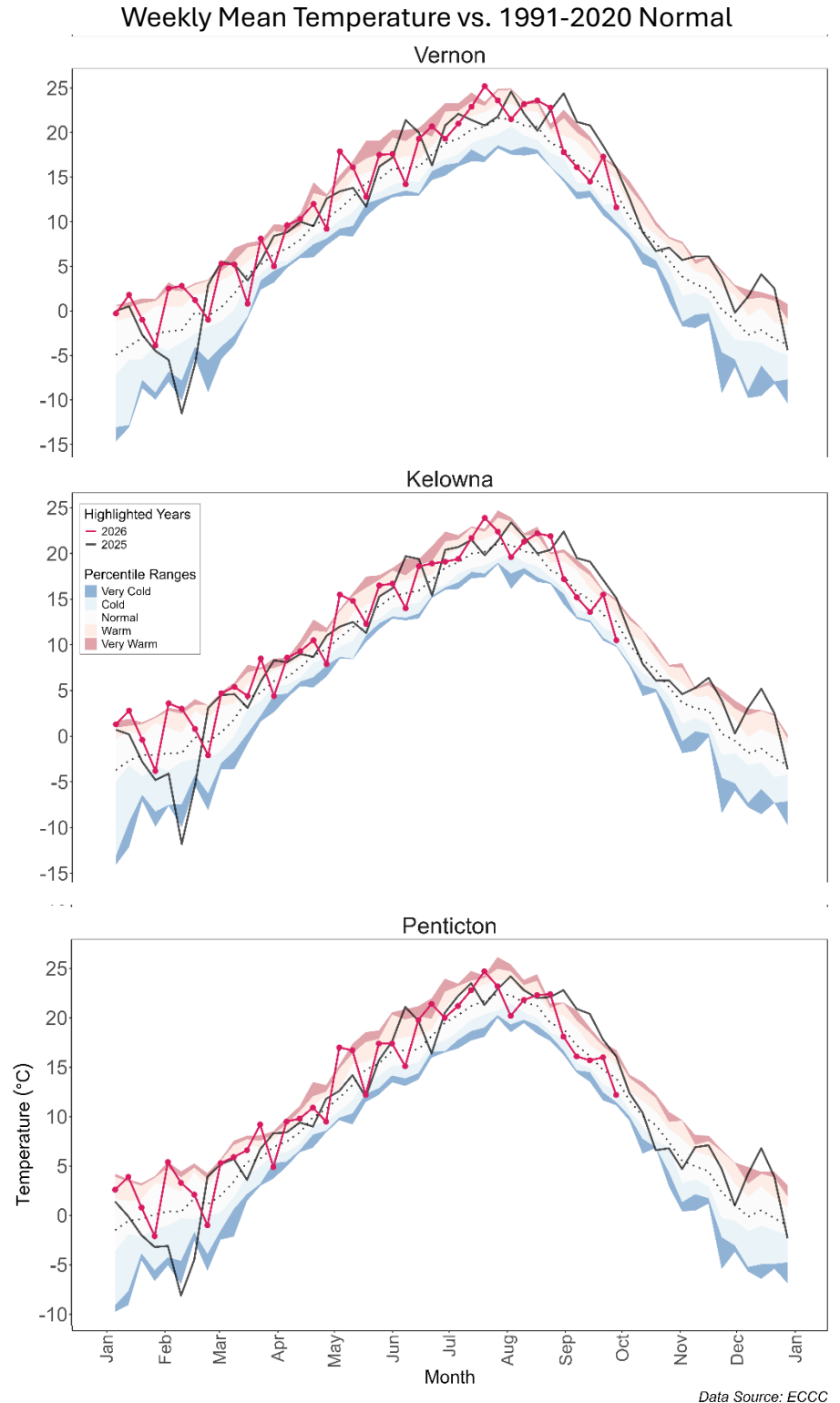


Figure 3. Weekly mean temperatures as compared to the 1991-2020 normal range. Data source: Environment and Climate Change Canada.

Streamflows

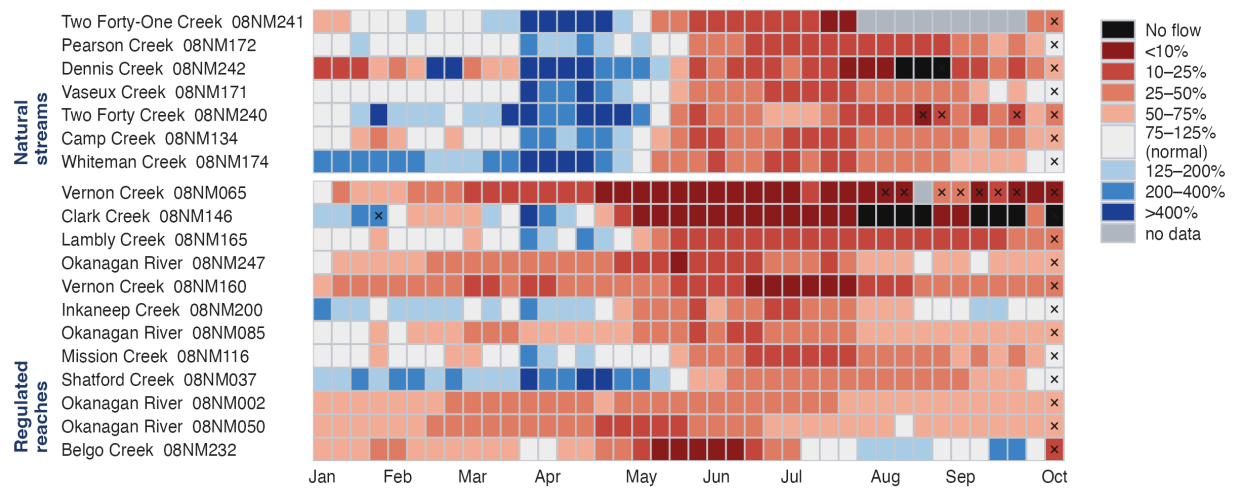


Figure 4. Weekly average streamflow conditions at monitored locations across the Okanagan, expressed relative to the historical range for each station. Data source: Water Survey of Canada and Okanagan Basin Water Board hydrometric monitoring stations, as of Oct. 1, 2026. This figure includes provisional data that is automatically transmitted and may be subject to change following review for quality assurance.

Streamflows generally increased through September as rain contributed to streamflow. Most streams, however, continue to have below normal flows for this time of year. Many monitored streams transitioned from near- or above-normal conditions earlier in the year to below-normal flows during late spring, with flows remaining depressed through July and August. By late summer, numerous natural streams were within the lowest historical percentile ranges, while many regulated reaches were also substantially below normal. The persistence and geographic extent of these low flows are particularly important because they reduce available aquatic habitat, increase sensitivity to elevated water temperatures, and narrow the margin available to balance environmental flow needs with domestic and agricultural water demands.

Water Temperatures

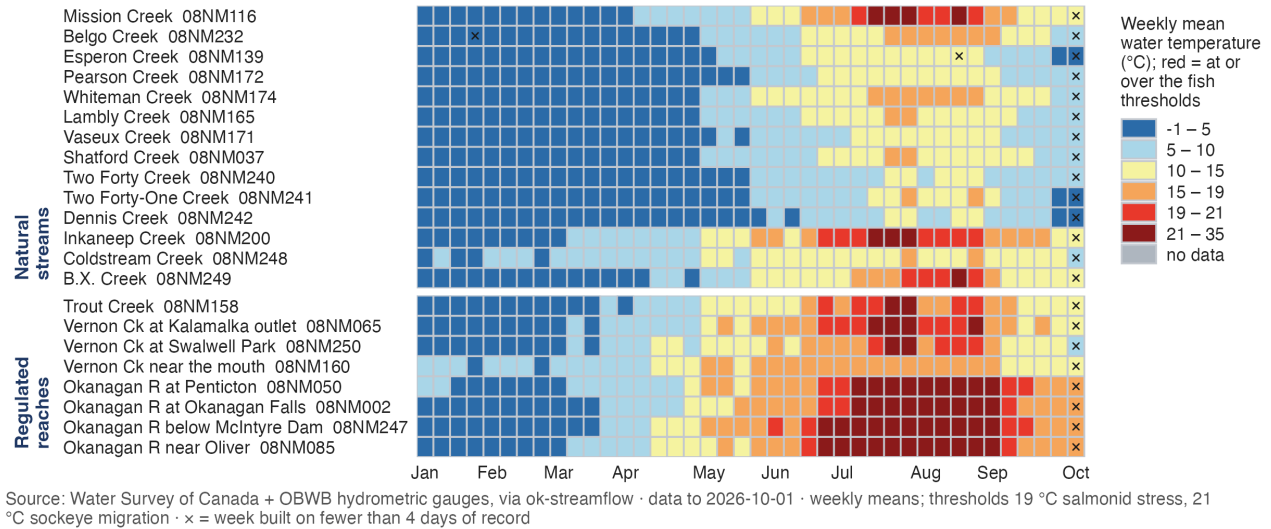


Figure 5. Weekly average water temperatures at monitored locations across the Okanagan. Data source: Water Survey of Canada and Okanagan Basin Water Board hydrometric monitoring stations, as of Oct. 1, 2026. This figure includes provisional data that is automatically transmitted and may be subject to change following review for quality assurance.

Fall rains and cooler temperatures helped cool water temperatures in streams across the valley.

Groundwater

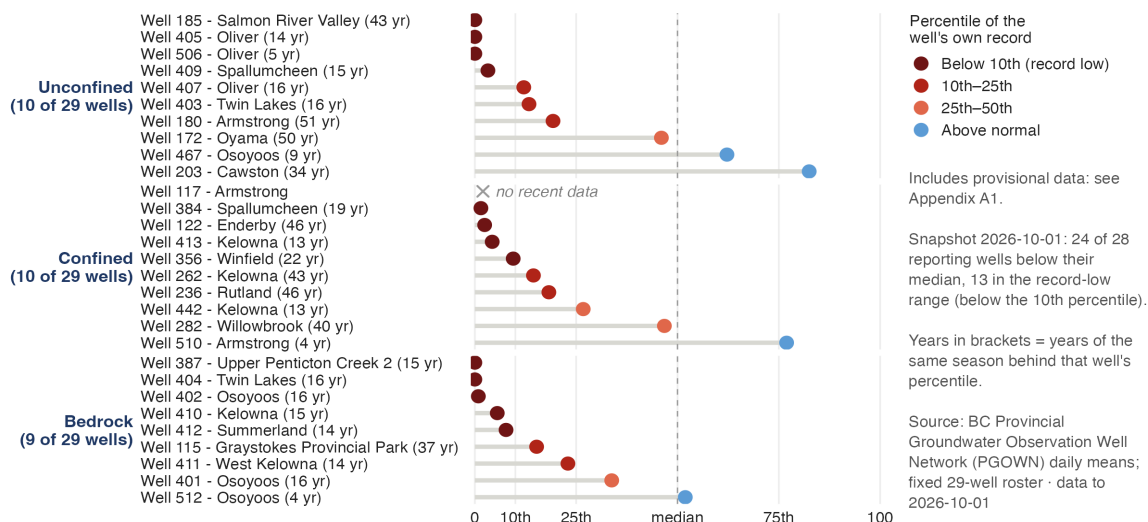


Figure 6. Groundwater levels measured on Oct. 1, 2026, at provincial observation wells in the Okanagan, expressed as historical percentiles and grouped by aquifer type. Data source: B.C. Provincial Groundwater Observation Well Network.

Groundwater monitoring continues to indicate widespread stress across the region. Most of the observation wells shown in the report are below their historical median for this time of year, with numerous wells in unconfined, confined and bedrock aquifers falling within the lowest historical percentile ranges. The broad distribution of low groundwater levels indicates that drought impacts are not limited to surface-water systems and may also affect groundwater-dependent water supplies and groundwater contributions to stream baseflow.

Lake Levels

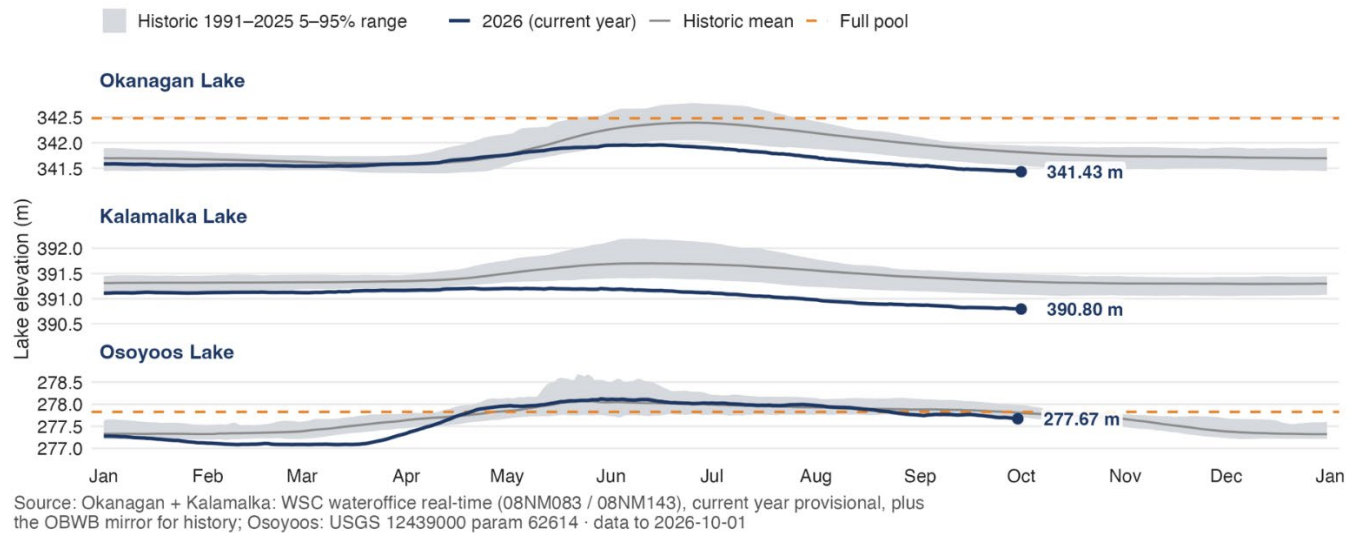


Figure 7. 2026 water levels in Okanagan, Kalamalka and Osoyoos lakes plotted against their historical ranges to show current lake elevations in seasonal context. Data source: Water Survey of Canada.

Mainstem lake levels remain extremely low for this time of year. As of Oct. 1, 2026, Okanagan Lake was approximately 341.43 m, Kalamalka Lake 390.80 m and Osoyoos Lake 277.67 m. Okanagan Lake is at a historic low for this time of year. The low levels in Okanagan and Kalamalka lakes reflect both the limited water carried into the system by the 2026 freshet and continued summer losses, leaving less stored water available entering the fall and winter recharge period.

Net Inflow

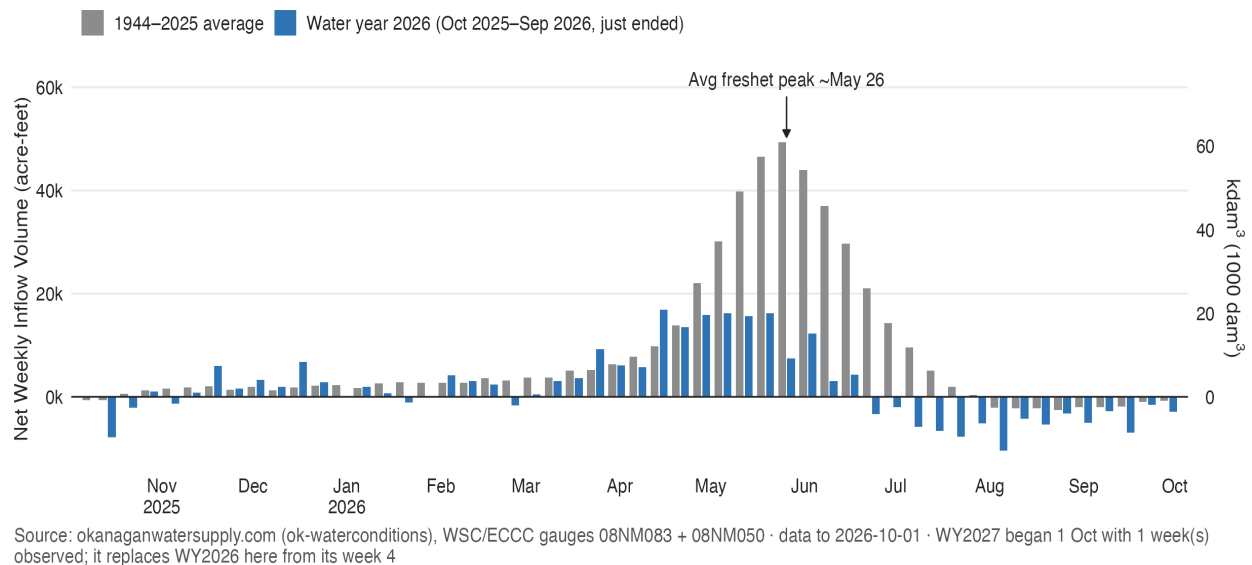


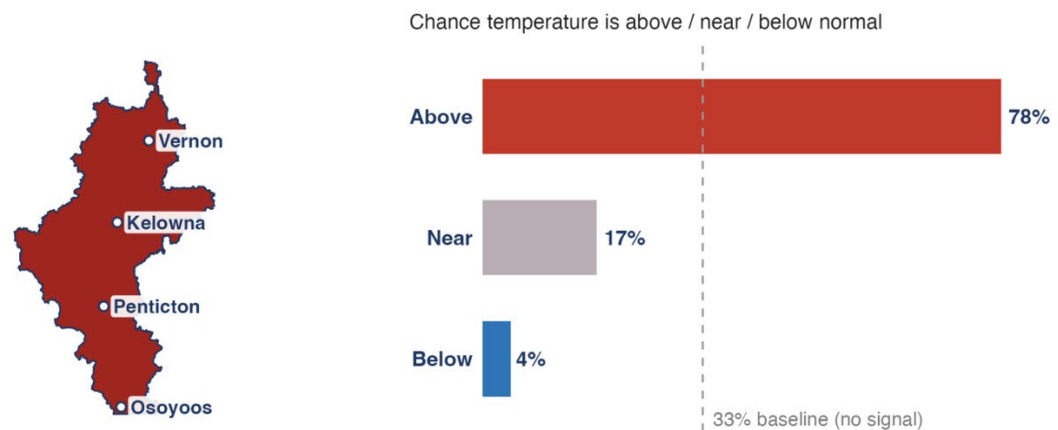
Figure 8. Weekly net inflow to Okanagan Lake during Water Year 2026 compared with the historical weekly average, illustrating the timing and magnitude of water entering and leaving the lake system, with Oct. 1 data from the current water year. Water Year Data source: WSC and ECCC.

Net inflow provides one of the clearest indications of the magnitude of the 2026 water-supply deficit. The spring freshet was well below half of normal, peaking and ending very early. Weekly net inflow during the late-May period reached only roughly 15,000–17,000 acre-feet, compared with an average freshet peak approaching 50,000 acre-feet per week. Net inflows turned negative and the lake level started dropping by the end of June. In an average year, net inflows turn negative in August. Even with the precipitation received in September, the net inflow was more negative than normal for this time of year.

Forecast

Seasonal Temperature Outlook — Okanagan Basin

October–November–December 2026 · 78% chance warmer than normal



Source: Environment and Climate Change Canada, CanSIPS 100 km seasonal forecast, issued October 2026 (MSC datamart), vs the model's own climatology; mean of the 4 grid cells over the basin · data to 2026-10-01 · MODEL OUTPUT, NOT OBSERVED DATA — the only forecast in this brief

Figure 9. Environment and Climate Change Canada's probabilistic seasonal temperature outlook for October through December 2026, showing the likelihood of below-normal, near-normal and above-normal temperatures across Canada. Data source: Environment and Climate Change Canada.

Environment and Climate Change Canada's (ECCC) October–November–December outlook shows a 78% probability of above-normal temperatures for the Okanagan, compared with a 17% probability of near-normal and only a 4% probability of below-normal temperatures. Warmer fall temperatures can prolong evapotranspiration and outdoor water demand and may delay the seasonal reduction in water losses normally associated with cooler autumn conditions.

El Niño Outlook

El Niño develops as sea-surface temperatures in the central and eastern tropical Pacific become warmer than normal, altering atmospheric circulation and influencing weather patterns across North America. ECCC notes that El Niño's strongest and most consistent effects in Canada generally occur during winter and spring. However, the Government of Canada's summer drought outlook specifically identified the developing El Niño as increasing confidence in a warmer and drier seasonal pattern across much of British Columbia, with southern B.C. among the areas showing the strongest signal for above-normal temperatures and elevated risk of drought intensification. For the Okanagan, the developing El Niño therefore adds to concern that existing precipitation deficits, low streamflows and depleted water storage could persist into the fall in the absence of substantial precipitation.

Okanagan Drought and Water Scarcity Levels Through 2026

Date	Drought Level	Okanagan Water Scarcity Level				
		Okanagan Mainstem	Okanagan North West	Okanagan North East	Okanagan South West	Okanagan South East
May 28	5	-	-	-	-	-
Jun 4	4	-	-	-	-	-
Jun 11	3	-	-	-	-	-
Jun 18	4	-	-	-	-	-
Jun 25	4	-	-	-	-	-
Jul 2	4	-	-	-	-	-
Jul 9	4	-	-	-	-	-
Jul 16	4	-	-	-	-	-
Jul 23	4	-	-	-	-	-
Jul 30	5	HIGH	HIGH	HIGH	HIGH	HIGH
Aug 6	5	HIGH	HIGH	HIGH	HIGH	HIGH
Aug 13	5	HIGH	HIGH	HIGH	HIGH	HIGH
Aug 20	5	HIGH	HIGH	HIGH	HIGH	HIGH
Aug 27	5	HIGH	HIGH	HIGH	HIGH	HIGH
Sept 3	4	HIGH	HIGH	HIGH	HIGH	HIGH
Sept 10	4	HIGH	HIGH	HIGH	HIGH	HIGH
Sept 17	4	HIGH	HIGH	HIGH	HIGH	HIGH
Sept 24	4	HIGH	HIGH	HIGH	HIGH	HIGH
Oct 1	4	HIGH	HIGH	HIGH	HIGH	HIGH

Table 1. Progression of Provincial Drought Levels and Okanagan Water Scarcity Levels Through the 2026 Drought Season. Data from BC Drought Portal, exported on Oct. 1, 2026.