**Consent Agenda**
August 19, 2024

# DROUGHT MANAGEMENT WATER STATISTICS MONTHLY UPDATE

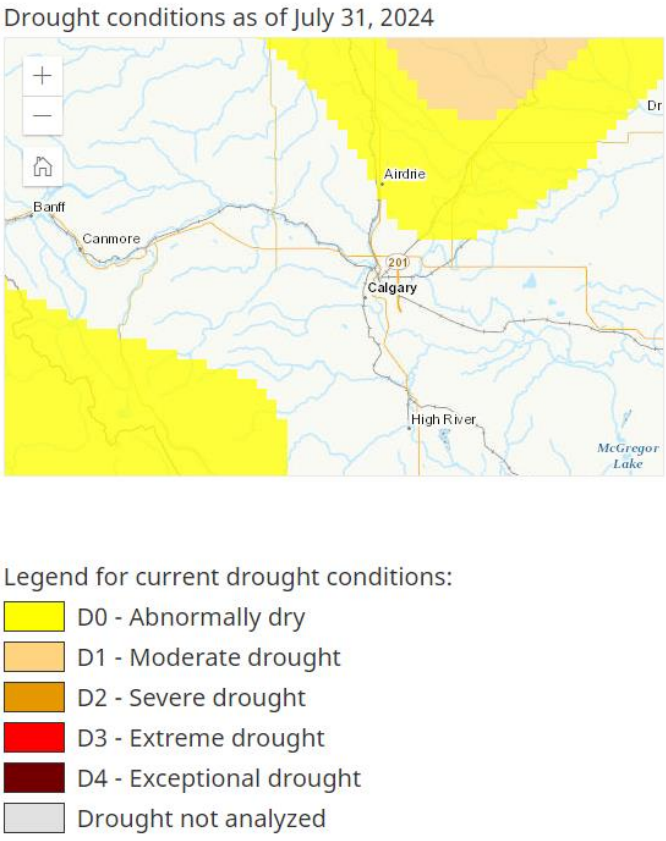
## Issue
The Drought Management Water Statistics Monthly Update is provided to Council for information.

## Motion Proposed by Administration
That the Drought Management Water Statistics Monthly Update for August 2024 be received as information.

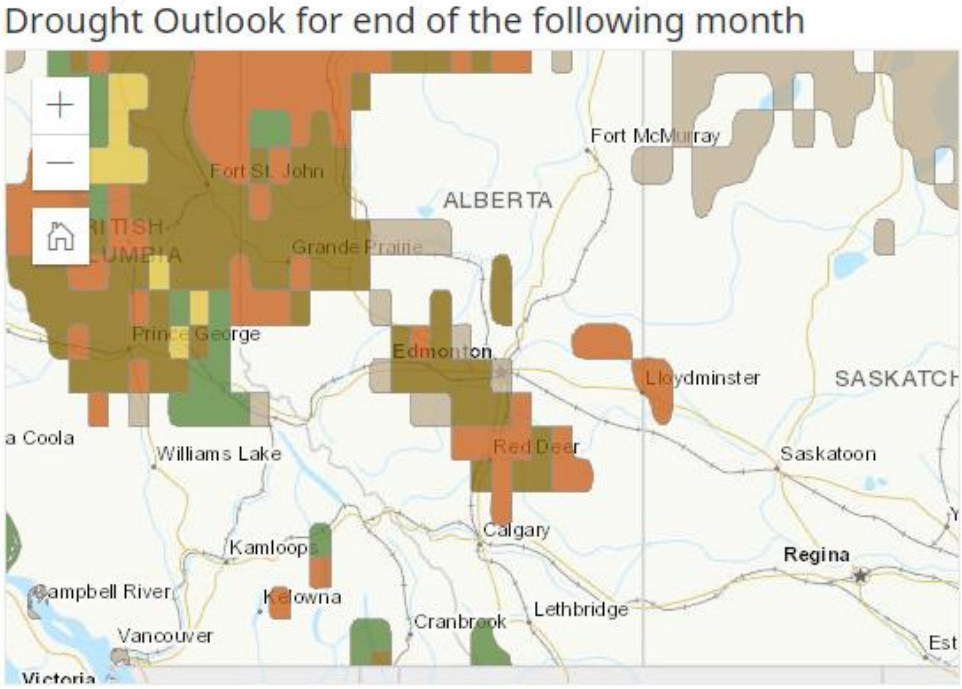
## Report, Analysis and Financial Implications

| Monthly Drought Metrics | Result |
|---|---|
| Canadian Drought Monitor (Okotoks region – soil conditions) | No Drought Conditions Identified |
| Drought Outlook (for end of following month) | No Forecasted Drought Conditions |

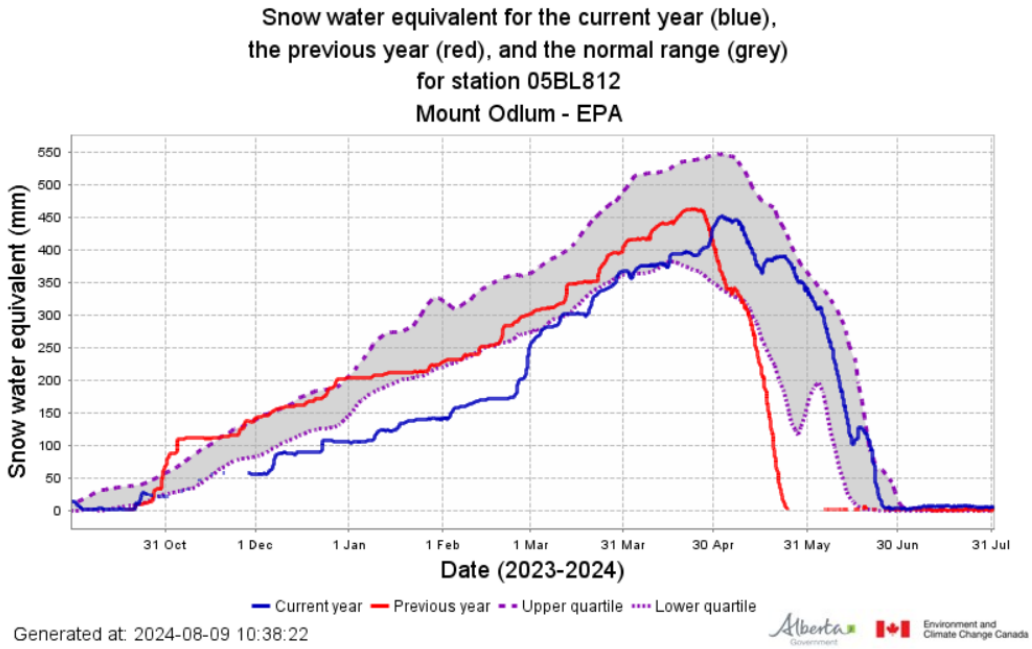
Drought Map # 1 – Current as of August 2024



Drought Map # 2




| | |
|---|---|
| Mountain Snowpack - Mount Odlum Monitoring Station | August 9, 2024 – 0mm |




| | |
|---|---|
| Mountain runoff forecasts – Bow River Basin | <u>Runoff Forecasts are average as of July.</u><br>*Note: This is an improvement from May (Below average to average).* |
| Sheep River flows (taken from Diamond Valley and Threepoint Creek flow stations) | <u>River Flows as of August 9, 2024:</u><br>Combined Flow – 7.85 m3/sec<br>Instream Objective – 3.55 m3/sec<br>Note: 'Combined Flow' is Black Diamond + Threepoint Creek. *At present, there is a water shortage advisory issued for Threepoint Creek. As of August 9, 2024 we are still not in Instream Objectives for the Sheep River at Black Diamond or Threepoint Creek.* |
| Well Production Capacity vs Water Demand | Production Capacity**:** 11.0-12.0 mega litres per day (MLD)<br>Water Demand: 8.0 – 12.0 MLD (August 1 – 8) |
| Reservoir Levels (as of May 8, 2024) | 90-95% |

References

*Canadian Drought Monitor*

**Classification scheme**

| Drought categories are based on precipitation percentiles that generally relate to the statistical return period. | |
|---|---|
| D0 - Abnormally Dry | 1 in 3 year event |
| D1- Moderate Drought | 1 in 5 year event |
| D2 – Severe Drought | 1 in 10 year event |
| D3 – Extreme Drought | 1 in 20 year event |
| D4 – Exceptional Drought | 1 in 50 year event |

https://agriculture.canada.ca/en/agricultural-production/weather/canadian-drought-monitor

*Mountain Snowpack*

Measured in "snow water equivalent" (mm), compared with the historical average (% of historical average).
https://rivers.alberta.ca/

*Mountain Runoff Forecasts*

Based on predicted stream flows for the period of March – September (2024).
https://rivers.alberta.ca/

*Sheep River Flows*

Information relating to Sheep River flow rates (taken from Diamond Valley & Threepoint Creek flow stations). Includes any posted water advisories and instream objectives (during spring/summer months).

*Well Production Capacity vs Water Demand*

Current total well production capacity (raw water supply) compared with water demand (treated water to distribution). Based on seven (7) day average, measured in mega litres per day (MLD). Total well production is influenced by groundwater levels (i.e. production increases or decreases with groundwater levels).

*Reservoir Levels*

Operating levels across three main reservoirs: South Reservoir, Zone 2 North and Zone 3/4 North.

**Strategic Plan Goals**

| | | | |
|---|---|---|---|
| ☐ | Responsibly Managed Growth | ☒ | Demonstrated Environmental Leadership |
| ☐ | Strong Local Economy | ☐ | Enhanced Culture & Community Health |
| ☐ | Organizational Excellence | | |

**Equity/Diversity/Inclusivity Impacts and Strategy**

n/a

**Environmental Impacts**
In the years 2022 to 2023, several river basins in Alberta faced critical water shortage conditions attributed to below-average precipitation, diminished snowpack, and elevated temperatures. These conditions have persisted into 2024, worsened by a robust El Niño winter forecast, anticipated above-normal temperatures, and minimal precipitation projections.

Alberta is currently in water shortage management stage 4 (out of 5). However, there continues to be improvements observed across the province, particularly in the Foothills area towards Calgary. Further to this, the Calgary region is currently out of a drought state as per Environment Canada (as of August 2024). Specific data on precipitation levels, temperature anomalies, and snowpack measurements can provide additional context for understanding the severity of the situation.

Concurrently, efforts to mitigate the impacts of the water shortage through conservation measures and sustainable water management practices are underway, with recommendations for individuals and communities to participate in water-saving initiatives.

**Community Engagement Strategy**
n/a

**Alternatives for Consideration**
n/a

**CAO Comments**
This monthly monitoring report is provided for information.

**Attachment(s)**
n/a

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