



DROUGHT MANAGEMENT WATER STATISTICS – MARCH 2024

Council/Governance Issue

In preparation for the 2024 drought season, the Drought Management Report is provided monthly for Council’s information.

Recommendation

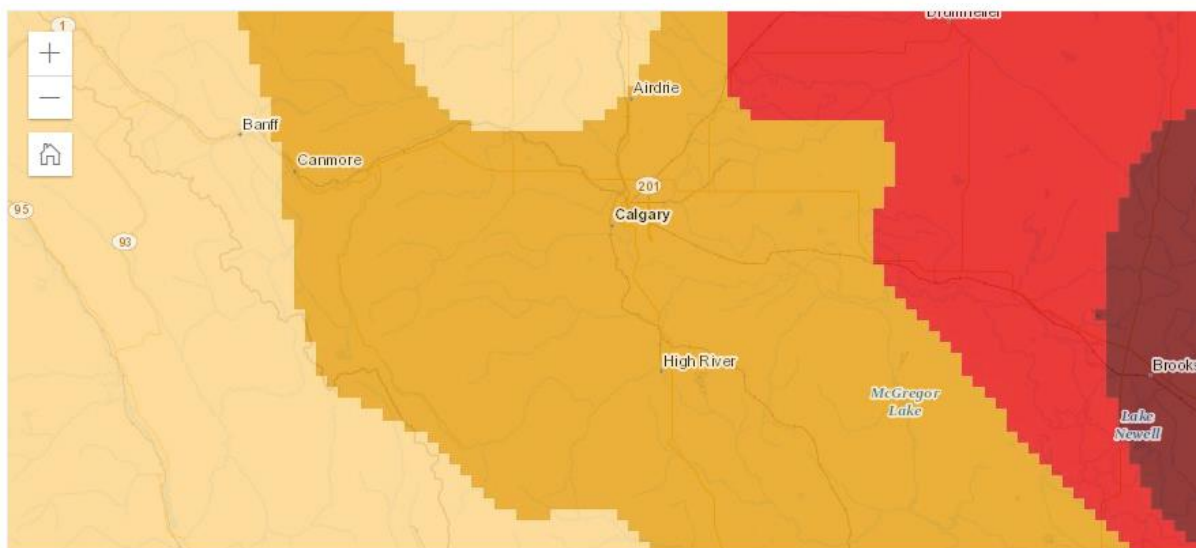
That the Drought Management Monthly Update for March 2024 be received as information.

Background and Considerations

Monthly Drought Metrics	Result
Canadian Drought Monitor (Okotoks region – soil conditions)	D2 – Severe Drought (as of February 29 th , 2024). See map 1 below.
Drought Outlook (for end of following month)	No change in drought. See map 2 below.

Drought Map # 1

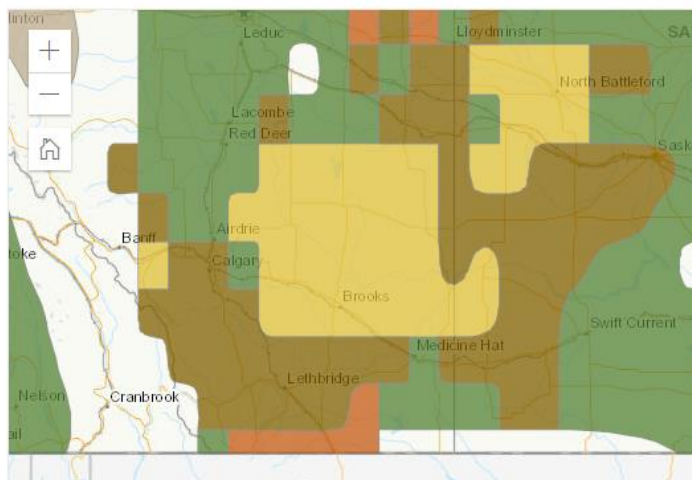
Drought conditions as of February 29, 2024



- D0 - Abnormally dry
- D2 - Severe drought
- D4 - Exceptional drought
- D1 - Moderate drought
- D3 - Extreme drought
- Drought Not Analyzed

Drought Map # 2

Drought Outlook for end of the following month



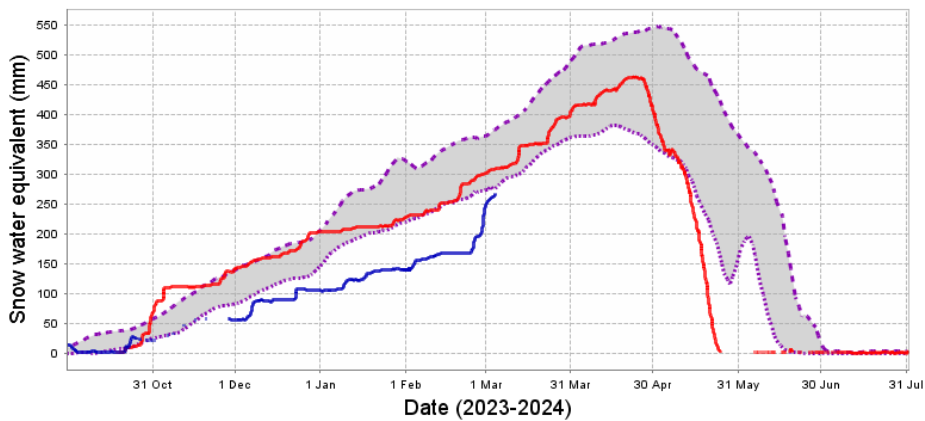
Legend for drought outlook:

- Drought Removal
- Drought Improves
- Drought Develops
- No change in drought
- Drought Worsens

Mountain Snowpack - Mount Odlum Monitoring Station

Mar 4th – 268mm (83% of historical average; increase from 58% on Feb 1st). See graph below.

Snow water equivalent for the current year (blue), the previous year (red), and the normal range (grey) for station 05BL812 Mount Odlum - EPA



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Mountain runoff forecasts – Bow River Basin	Much below average to below average for the March to September 2024 period
Sheep River flows (taken from Diamond Valley and Threepoint Creek flow stations)	Water Shortage Advisory - Low Flow Condition River monitoring not available until April/May
Well Production Capacity vs Water Demand	Production Capacity: 10-11 MLD Water Demand: 7-8 MLD
Reservoir Levels (as of March 4 th , 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 (raw water supply) compared with water demand (treated water to distribution). Based on 7 day average, measured in mega litres per day (MLD).

Reservoir Levels

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