MEETING DATE: MARCH 11, 2025

REQUEST FOR DECISION - TO COUNCIL

SUBJECT

MOISTURE SITUATION UPDATE AS OF FEBRUARY 26, 2025

RECOMMENDATION

THAT the County of Vermilion River receive the Moisture Situation Update as of February 26, 2025 as information.

DETAILS

Background:

The Agricultural Moisture Situation Update is developed by the Government of Alberta drought modelling team and published to provide information regarding the provincial moisture situation.

Discussion:

Synopsis (Maps 1, 2, and 3)

Since the January 15, 2025 report, the agricultural areas of the province have generally received anywhere between 5 to 25 mm of precipitation (**Map 1**). Accumulations were greatest through the North East and Peace Regions of the province, with some areas receiving more than 25 mm of moisture. The northeast, central and the north half of the South Region received 5 to 10 mm of moisture.

Bear in mind late January and February are usually the driest times of the year in Alberta (**Map 2**). Relative to normal, the 30-day precipitation accumulations (**Map 3**) show dryer than normal trends occurring in a triangle that runs along the foothills from north of Claresholm to north of Rocky Mountain House and east to Bonnyville affecting a large portion of Central and North West Regions of Alberta. Across the dry areas, accumulations relative to normal range from once in three to six-year lows to once in six to 12-year lows. The area north of Drayton Valley to the County of Northern Lights and east to the Saskatchewan border as well as southern Alberta are reporting 30-day precipitation accumulations near normal.

Below normal level of precipitation seen last month through the west half of the Central Region continues this month. The below normal accumulations reported through the Northwest and Peace Regions, with the exception of the very north Peace, have helped the region to improve to near normal conditions.

Winter Precipitation Trends (Maps 4 and 5)

Winter (cold season) precipitation accumulation (**Map 4**) and snowpacks (**Map 5),** to date, are near normal across much of the east half of the province, north and east of Edmonton and north into the Peace.

The area including the mountains and the western portions of the Northwest, Central and South Regions continue to report moderately low (once in three to six-year lows), low (once in six to 12-year lows) and very low (once in 12 to 25-year lows) accumulations relative to normal. Some mountain and foothill areas report extremely low accumulations relative to normal (once in 25 to 50-year lows). The area reporting lower than normal conditions has pushed further east since the January report.

365-day Precipitation Trends (Maps 6 and 7)

Looking back over the past 365 days, precipitation accumulations (**Map 6**) continue to remain below normal across a large area from Mountain View County, north to Yellowhead County and then extending east to the Saskatchewan border. Similar below normal conditions are being recorded through much of the Peace Region as well. Once in 25-year lows continue to persist in areas in and around Red Deer with once in six to 12-year lows extending east to the mountains, north of Edmonton, around and west of Grande Prairie, as well as north in the Peace Region to the border with the Northwest Territories. This area is reporting, relative to average, year-over-year precipitation accumulations 70 to 90 per cent of normal (average) with some areas only receiving 50 to 70 per cent of annual average precipitation (**Map 7**).

Conversely, land south and east of a line between Calgary and Lloydminster, extending all the way down to the US border and east to the Saskatchewan border, are reporting moderately higher than normal precipitation accumulations. Here, some areas are reporting accumulations of 110 to 130 per cent of normal (average) along with some relatively small pockets reporting

accumulations of 130 to 150 per cent of normal, which is positive news for those farming in these areas.

Perspective (Map 8)

It is important to emphasize that this last 30-day period, on average, is the driest time of the year. The normal precipitation for the agricultural area running east of the Highway 2 corridor from Bonnyville south to the Saskatchewan border over this time frame, averages 10 to 15 mm. Normal precipitation levels increase as you move north and east of this region to 15 to 20 mm and continues to increase to 20 to 25 mm across the Peace Region. Being the relative dry season, even above average moisture at this time of year is typically not enough to make a significant impact on "year-to-date" moisture deficits, nor would they usually be sufficient to create excess moisture conditions. For example, across the Central Region 15 per cent to 17.5 per cent of the average annual moisture falls during the November to March time period (**Map 8**). However, across the Peace Region, winter moisture tends to be very important for the annual water cycle with at least 25 per cent of its annual moisture falling during this time frame.

Current precipitation trends across some parts of the province, such as the below normal snowpacks in the foothills and throughout much of the Peace Region, are trending on the dry side and these areas have been experiencing dryer conditions for several months now.

The areas of the province reporting higher than normal snowpacks have declined compared to the last report. An increase in below normal snowpack conditions at this time is not abnormal in itself, as February is the driest month of the year, as mentioned earlier. For agriculture, May, June and July remain the most important months for receiving precipitation. The 2025 cropping season is only a few months away. We are beginning to move into what has traditionally been Alberta's wetter period; there is ample time to receive adequate moisture.

Response Options:

THAT the County of Vermilion River receive the Moisture Situation Update as of February 26, 2025 as information.

IMPLICATIONS OF RECOMMENDATION

Organizational: None.

Financial: None.

Communication Required: None.

Implementation: None.

ATTACHMENTS

Map 1 Precipitation received during the past 30 days as of Feb 26 2025.pdf
Map 2 Full Year Monthly_precipitation_patterns_1991-2020.pdf
Map 3 30 Day precipitation accumulations realtive to long term normals as of Feb 26 2025.pdf
Map 4 Cold Season precipitation accumulation relative to long term normal as of Feb 26 2025.pdf
Map 5 Accumulated snow-pack on stuble fields relative to long term normal as of Feb 26 2025.pdf
Map 6 365 day precipitation accumulation relative to long term normal.pdf
Map 7 365 Day precipitation accumulation as a perent of average as of Feb 26 2025.pdf
Map 8 Precipitation_percentage_of_annual_average_from_Nov_to_March_1991-2020.pdf

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DATE: March 5, 2025