

# Agricultural Moisture Situation Update

## May 20, 2024

### Synopsis

Since the last report (May 8, 2024), Alberta was subjected to another widespread precipitation event. This time the moisture was concentrated in the north, with a large area in and around Fort McMurray receiving well over 40 mm of rain (**Map 1**). Here the highest amounts were recorded at the Piccadilly Auto station 138.6 mm, and Birch Mountain Auto station 118.2 mm, both located northwest of Fort McMurray. Additionally, most but not all of the Peace Region received its first meaningful moisture in months with totals ranging from 20 to 50 mm. However, the western portions of the Peace Region still have some dry areas with several stations recording less than 15 mm in recent days.

Elsewhere, the North East Region and much of the eastern portions of the Central Region received upwards of 20 to 30 mm, ranging down as low as 10 to 15 mm through a few isolated pockets. Further moisture was recorded throughout most of the foothills and mountain areas across the south-half of the province with totals ranging from 20 to 50 mm, with one station (White Rabbit Creek), located south-west of Nordegg, hitting the 70 mm mark.

### Growing Season Precipitation Trends

Recent rains come closely on the heels of a widespread wet pattern that has been gripping parts of the province in recent weeks. Since April 1<sup>st</sup>, most of the east-half of the province has received at least 80 mm of moisture and many lands south of the TransCanada Highway have seen well over 100 mm (**Map 2**). This abundance of moisture has also been seen across the mountains and foothills extending from the Yellowhead Highway, down as far as the US Border. In the 50-days since April 1<sup>st</sup>, 11 stations have reported over 200 mm with the highest amounts reported at White Rabbit Creek 286 mm, Spionkop Creek (near Waterton Lakes) 254 mm and Medicine Lodge (Cypress Hills) 245 mm. For the most part, the east-half of the province has had above normal moisture with several pockets of once in 50-year highs located across a wide swath of land, stretching roughly from Fort McKay (north of Fort McMurray), down as far south as Medicine Hat.

In sharp contrast, some areas of the North West and south-western Peace Region are still below normal (**Map 3**) with several pockets in the southern Peace Region receiving less

than 30 mm. The lowest amounts were recorded at the Beaver Lodge station where only 20.6 mm fell since April 1<sup>st</sup>. This is roughly 50% of average. Over the last 180-days, Beaver Lodge recorded only 58 mm, which is 40% of normal (145 mm), representing a once in 50-year dry spell.

### Soil Moisture Reserves

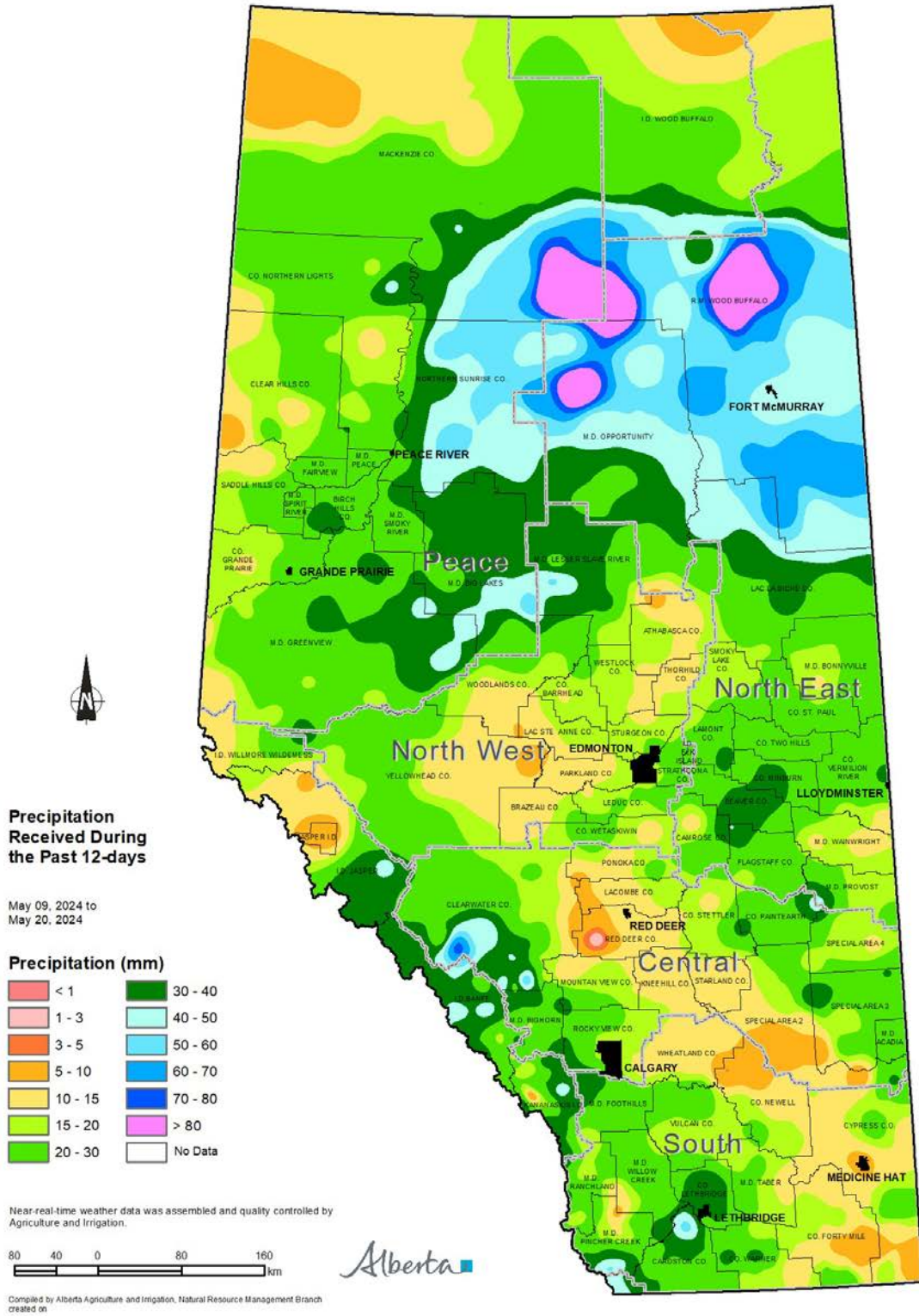
Despite recent rains, much of the Peace Region is still well below normal for soil moisture (**Map 4**) with most of the agricultural areas still suffering from a chronic lack of moisture stemming back to the latter half of 2023. Notable is a large area west of Red Deer that has generally missed out on much of the recent moisture. Fortunately, this area is typically one of the wetter zones of the province and the latter half of May and all of June, July and August are usually relatively wet.

Ample precipitation across the east-half of the province has seen soil moisture reserves trending to at least near normal, and some pockets of once in 50-year highs are emerging across the Southern Region and on lands in and around Slave Lake (**Map 4**). In these areas, continued further sustained rainfall could lead to flooding. **Map 5** shows several areas around Lethbridge and across north central parts of the province where current soil moisture reserves are nearing 160 mm or more (medium blue). These areas have reduced capacity to absorb additional heavy rains and are at a higher risk for local flooding should they come soon or if it continues to be chronically wet.

### Perspective

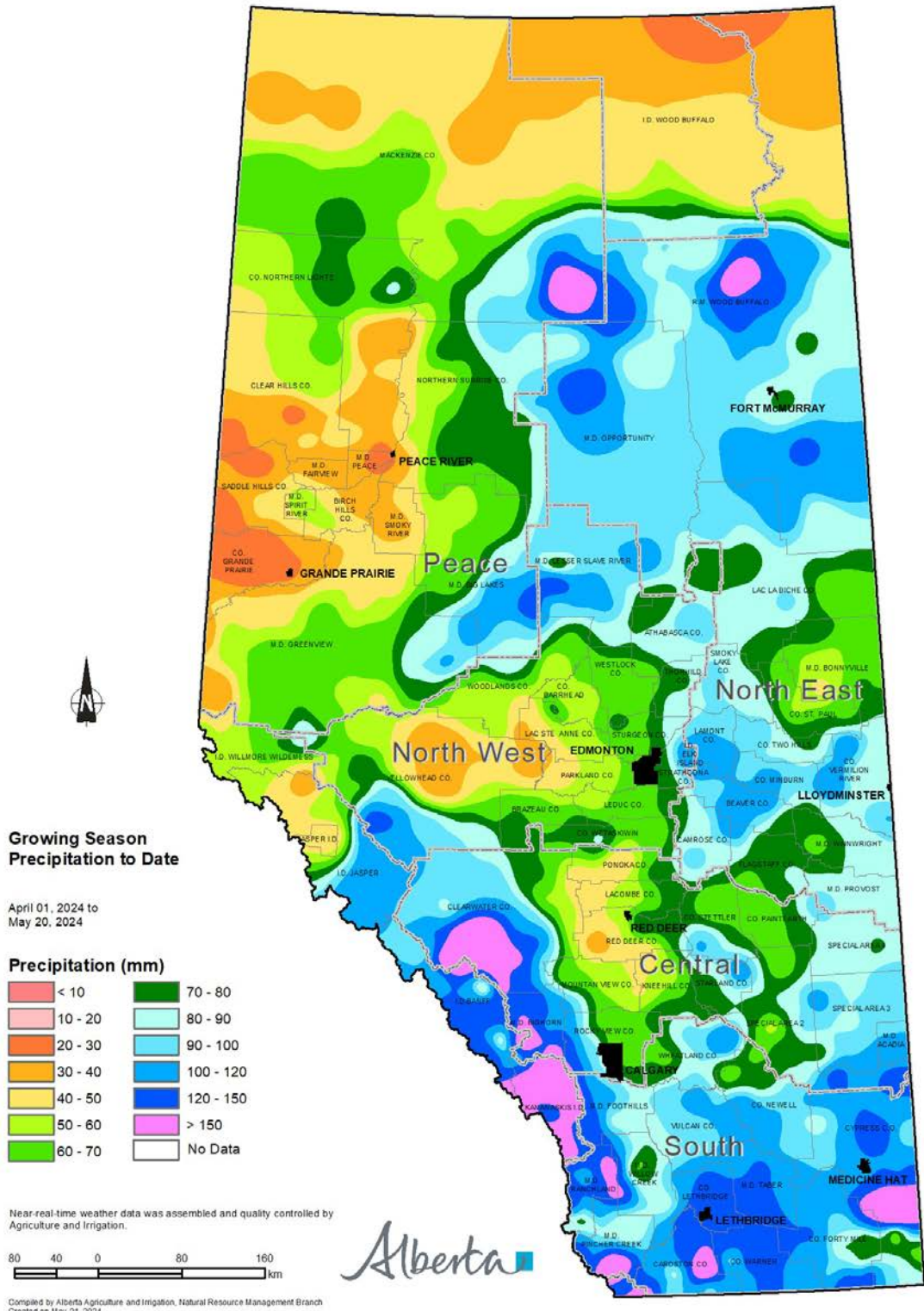
The entire province is now entering the wet season, with rainfall totals historically peaking across the south in June, and across the North West and Peace Regions in July (**Map 6**). Historically, Southern Alberta is particularly vulnerable to overland flooding during June and most of these events are preceded by overly wet conditions that take time to saturate the land and reduce surface storage capacity. We appear to be “priming” the land in some areas and vigilance, with an eye to the sky, would be wise. However, a short spell of warm and dry weather would help mitigate this risk. Note this is not a prediction for flooding; it's only a reminder to be watchful and prepared in the days and weeks ahead.

# Map 1



Visit [weatherdata.ca](https://weatherdata.ca) for additional maps and meteorological data

# Map 2



Visit [weatherdata.ca](https://weatherdata.ca) for additional maps and meteorological data

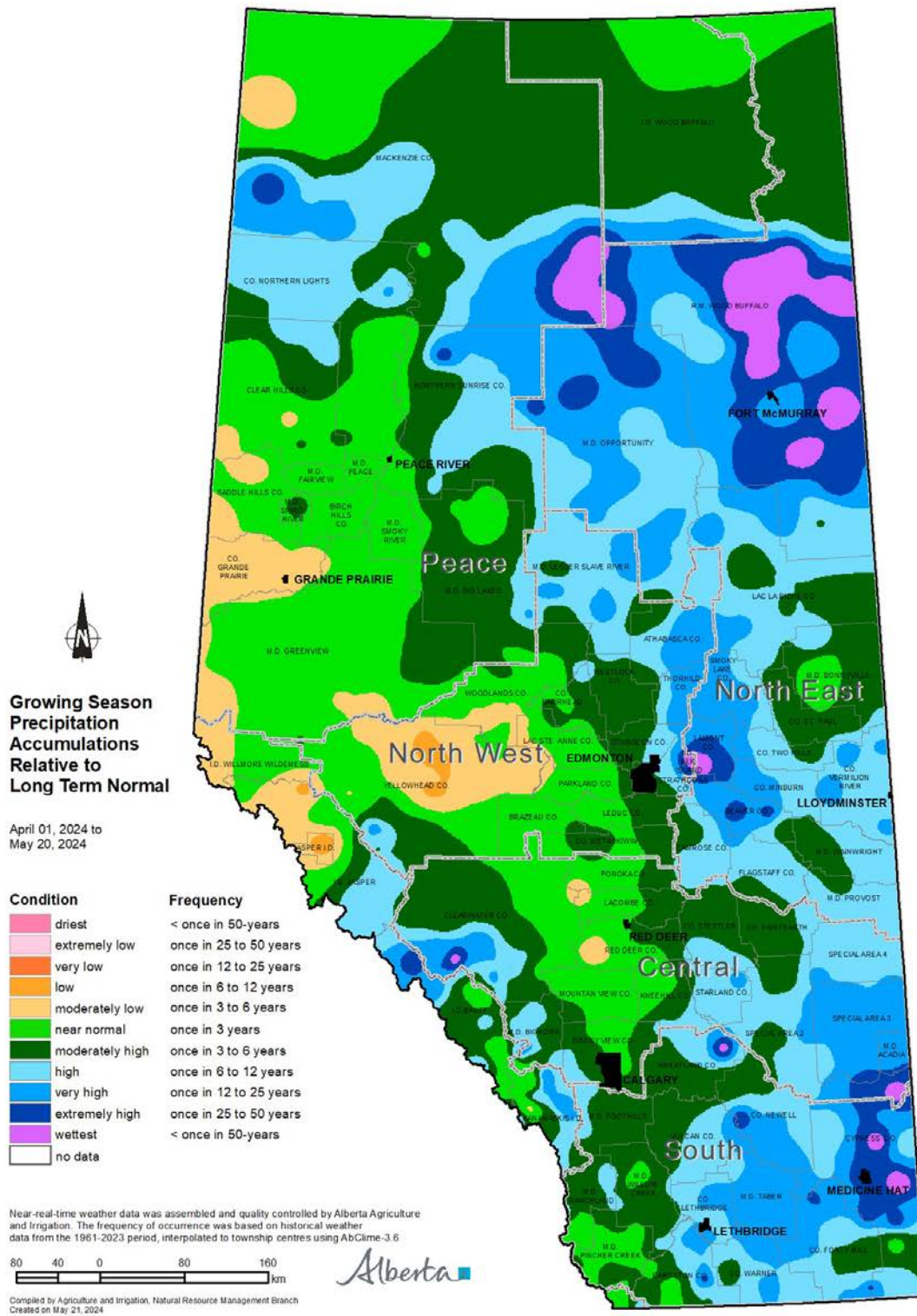
<https://open.alberta.ca/publications/moisture-situation-update>

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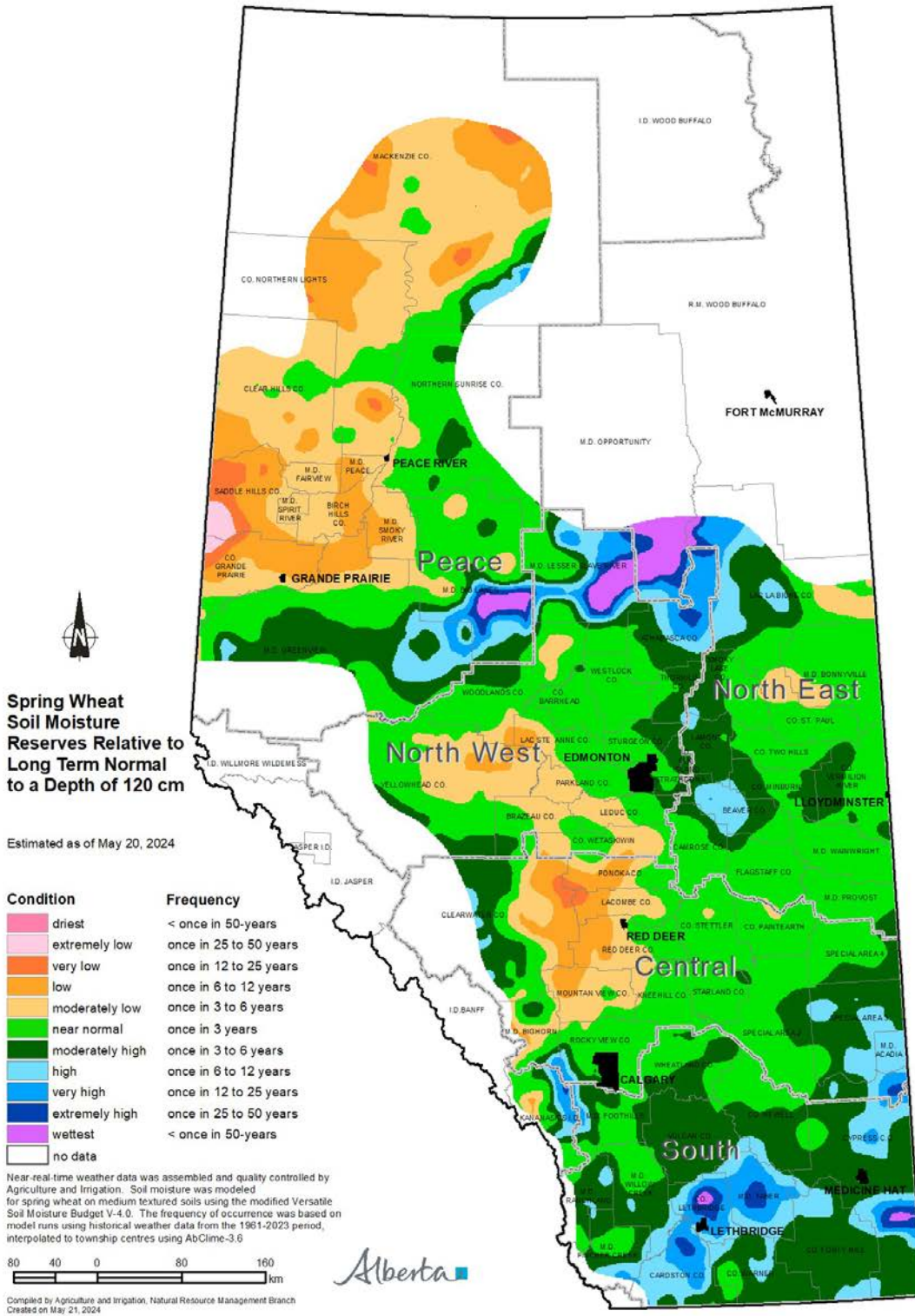


# Map 3



Visit [weatherdata.ca](http://weatherdata.ca) for additional maps and meteorological data

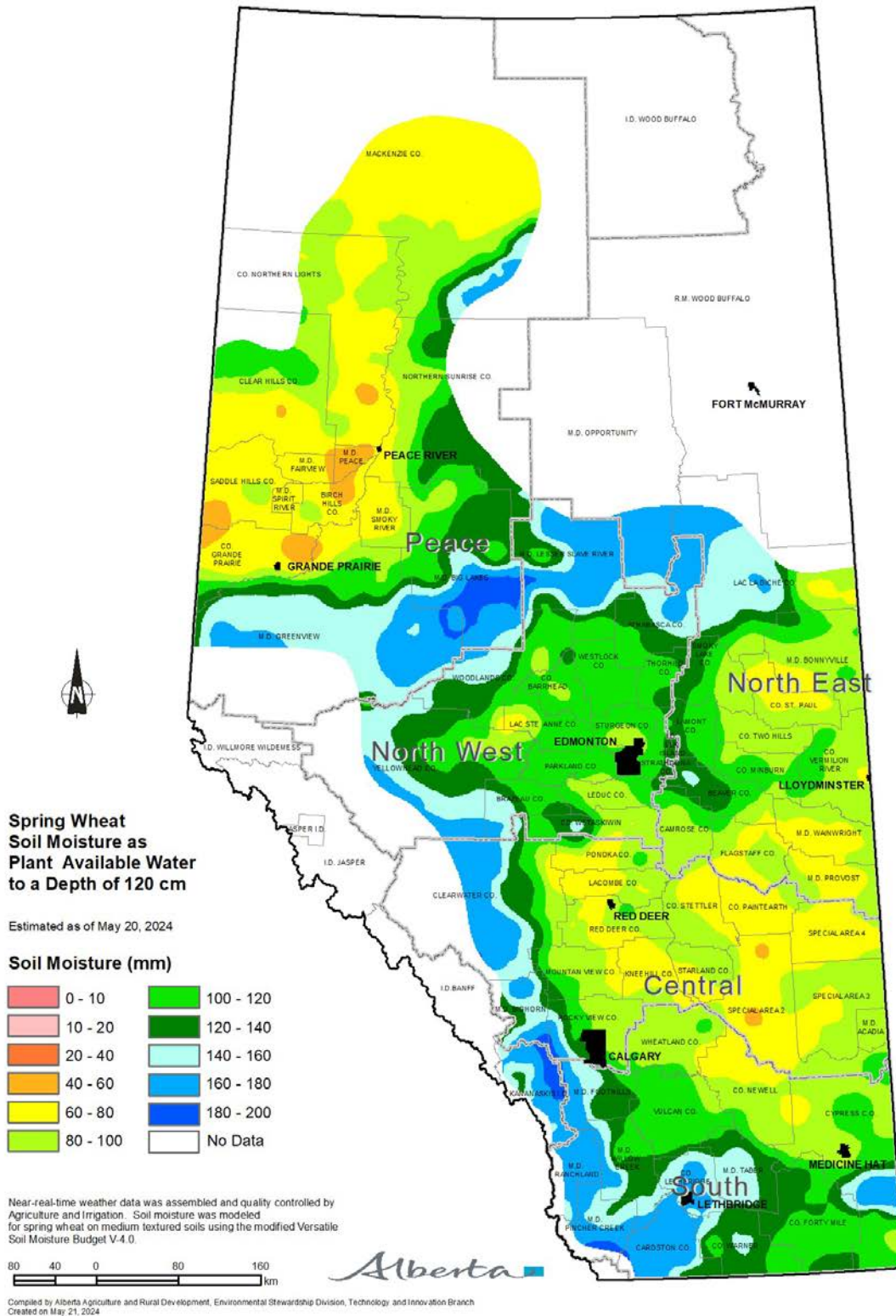
# Map 4



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# Map 5



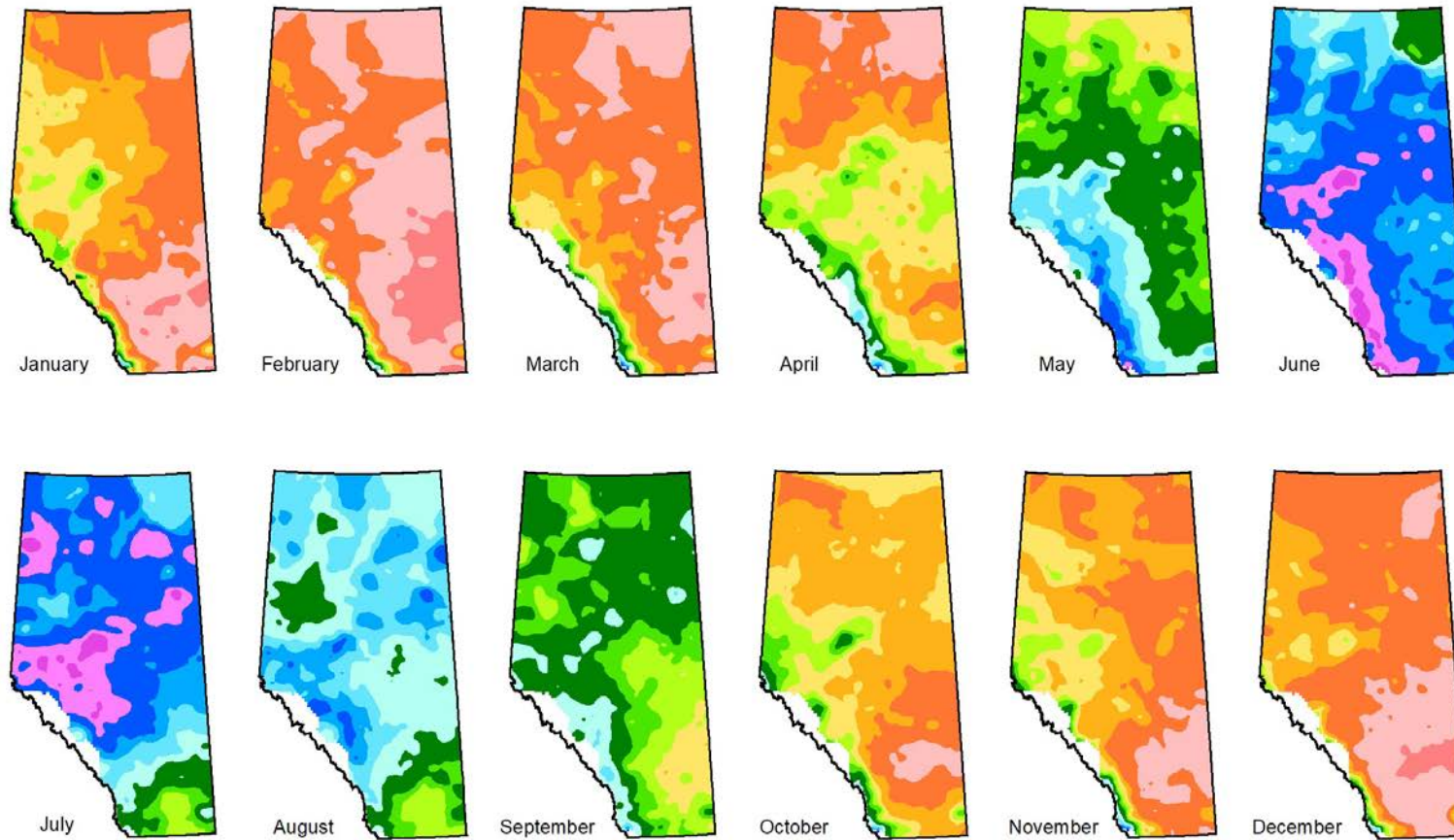
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# Map 6



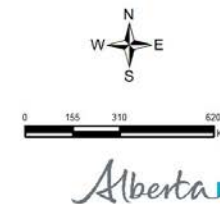
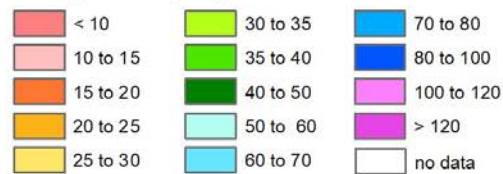
## Normal Monthly Precipitation Accumulations

1991-2020

Weather data was assembled and quality controlled by Agriculture Forestry and Rural Economic Development then interpolated to township centres using AbClime-3.6

Compiled by Agriculture, Forestry and Rural Economic Development, Natural Resource Management Branch  
Created on March 29, 2022

### Precipitation (mm)



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