

# Agricultural Moisture Situation Update

## June 6, 2024

### Synopsis

Since the last report (May 30, 2024), rainfall has been highly variable across the province (**Map 1**). Across parts of the Central and Southern Regions, and in a strip along the foothills, several stations recorded no precipitation. In contrast, most of the north half of the province received useful rains ranging from 5 to 10 mm to well over 50 mm. Similarly, across the Peace Region where drought fears have been building for several months now, many lands received 20 to 40 mm which is a great start to the wet season. However, some lands northwest of Grande Prairie remained relatively dry, with the La Glace AGCM station only recording 2 mm. Since the start of the growing season (April 1), both La Glace and Beaver Lodge have recorded 47 mm of precipitation compared to 70 mm which is normal. However, since May 15<sup>th</sup>, precipitation patterns, even in these previously very dry areas, are now trending to near normal.

Some agricultural lands across the North East received intense thunderstorm activity with a large area southwest of Lloydminster receiving over 40 mm. Most of this occurred over several hours on June 3<sup>rd</sup>. This was part of a particularly intense storm system the spawned a tornado that touched down near Edberg, a small town lying just south of the City of Camrose.

Given recent moisture across the province, and the current trends of near to above normal rainfall patterns, 2024 so far is bringing hope and optimism to our farming communities. With June being the wettest month of the year, this further fuels the hope that we will put the drought of 2023 squarely in the rear-view mirror. All we need now is warmer temperatures, and further timely rains.

Soil moisture reserves in many areas have recovered and crops should be able to withstand short duration dry spells that are common over the growing season.

### Growing Season Precipitation Accumulations

Since the start of the growing season, most areas have received at least near normal moisture (**Map 2**). Exceptions do exist in small pockets in the North East, Central and Southern Regions, along with a relatively large area northwest of Grande Prairie. Across the east half of the province and over much of the northern boreal forests, many areas are experiencing well above normal precipitation. Hopefully this means smoke free skies this summer.

Alberta is long due for a wet year and our rivers, lakes, sloughs, swamps and dugouts still have further capacity to hold more water. Many of the front ranges are still snow-covered, poised to release further runoff to our river systems. However, this early in the season, we are likely not out of the woods yet with respect to drought, or flooding for that matter, and anything can happen. Both droughts and excess wet spells begin and end abruptly. June is a month to be watchful, and those areas where soils are overly wet will have less capacity to absorb excessive rains, should they fall.

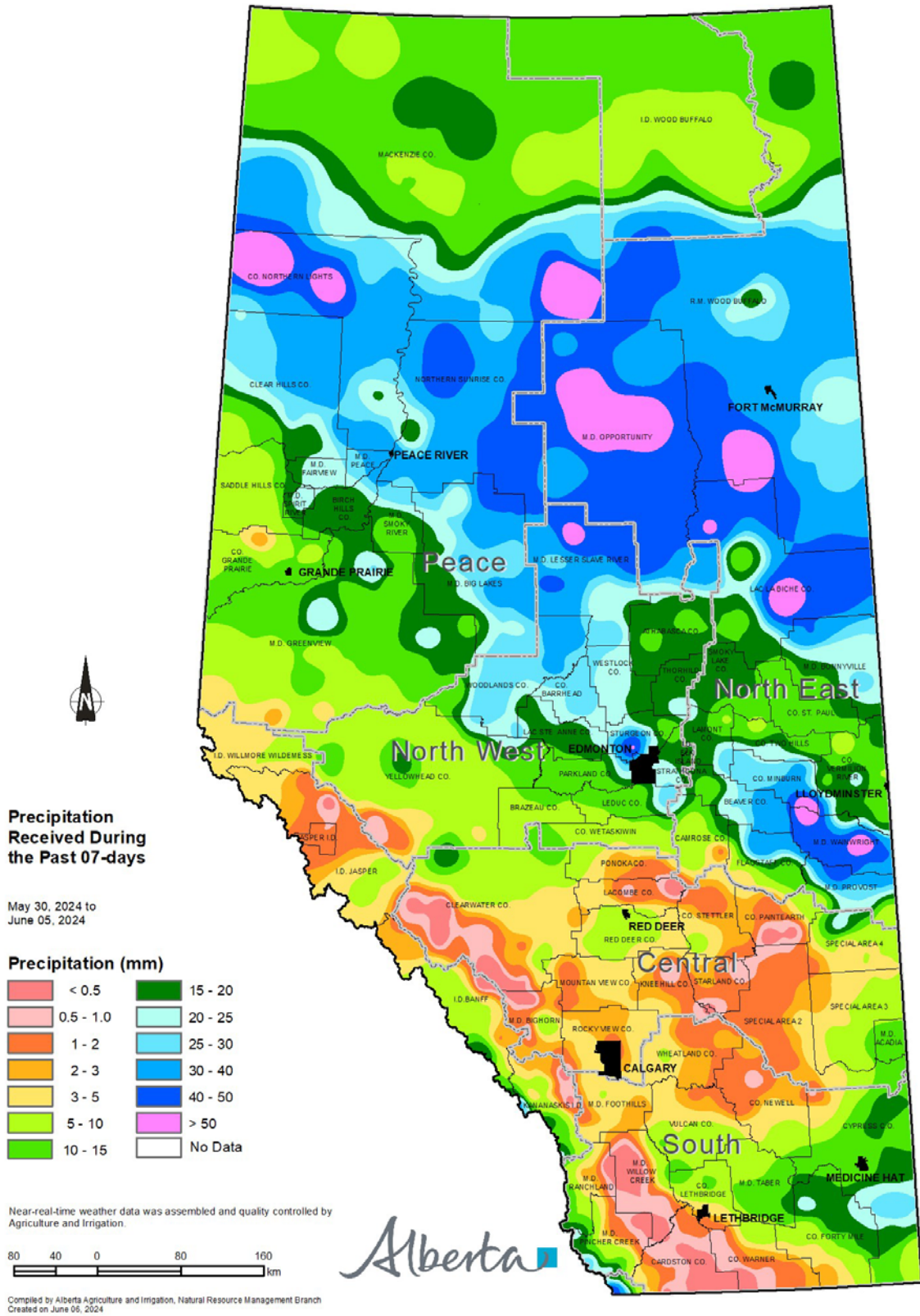
### Soil Moisture Reserves

With recent rains, soil moisture reserves have improved across the North East and through parts of the Peace Region and roughly 70% of the province is at least “near normal” (**Map 3**). However, bear in mind that “normal” on these maps is a relatively wide category, and even some of those areas classified as “near normal” are still below the statistical average.

Dry areas still exist and a small pocket of once in 50-year lows persists northwest of Grande Prairie along with some dry areas extreme northern Peace Region (**Map 3**). Additionally, a large area in the Central Region is trending to at least once in 12 to 25-year lows, and there are some other areas that are still relatively dry in all four regions. But again, June is historically the wettest month of the year (**Map 4**) and soil moisture reserves usually build well into June, and only begin to dwindle as July looms, temperatures warm and plant water demands begin to peak when crops develop efficient root systems that feed thirsty plant canopies.

Total plant available water (PAW) in the root zone (120 cm depth) is shown in **Map 5**. For perspective, actively growing crops need about 25 mm of water a week to sustain optimum growth rates, which increases significantly in extreme temperatures. This water is supplied by both precipitation and stored soil water. Thus, PAW is a critical moisture reserve that sustains plant growth when timely rains are delayed. As PAW increases, the soils capacity to absorb excess rainfall diminishes accordingly. Once the upper end of the scale in **Map 5** has been reached, soils are nearing capacity and have a diminished ability to absorb intense rains. Therefore, those areas that are wet (roughly 160 mm of PAW and above) are currently at higher risk for overland flooding, should excess rains fall.

# Map 1



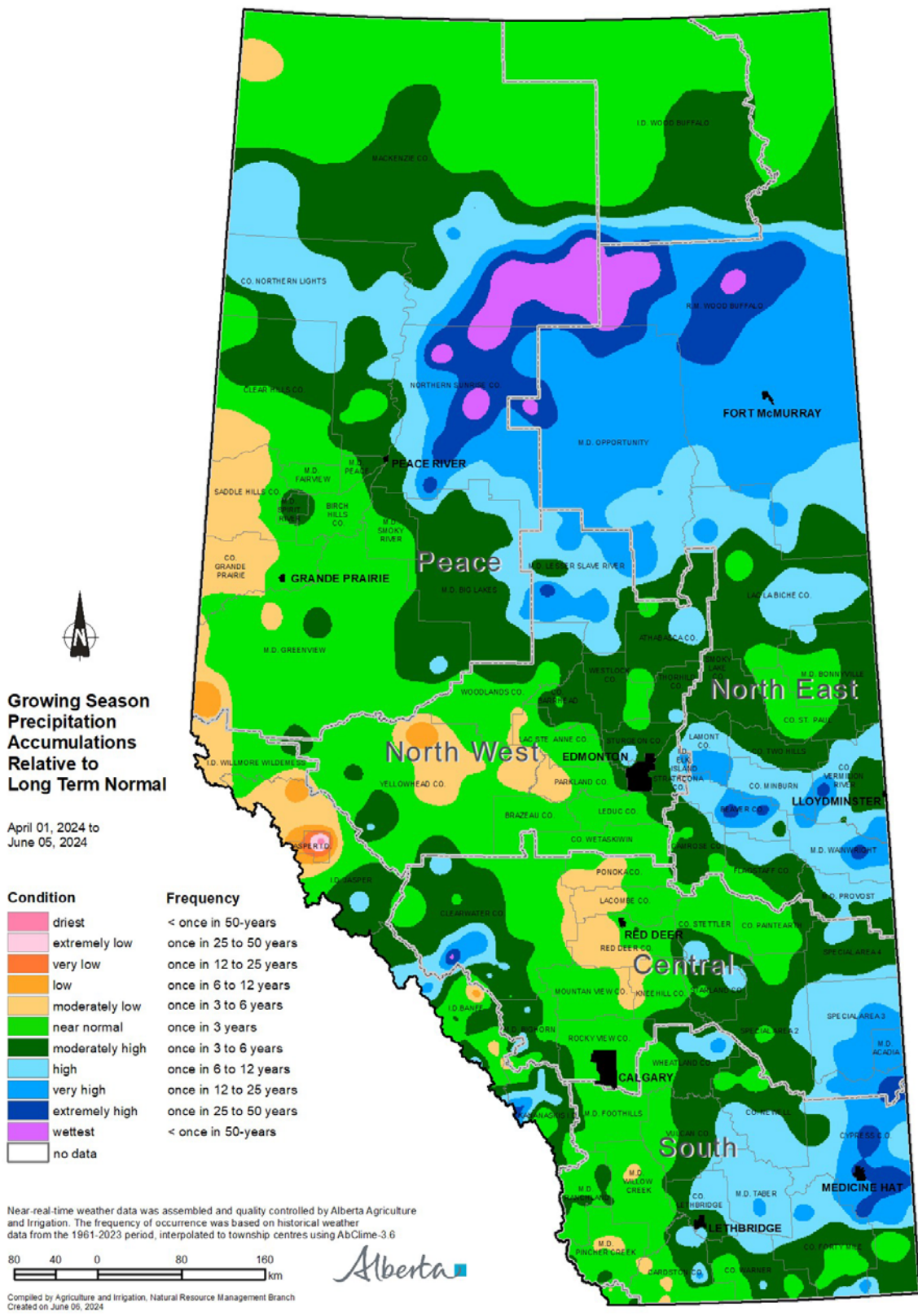
Visit [weatherdata.ca](https://weatherdata.ca) for additional maps and meteorological data

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

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# Map 2



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

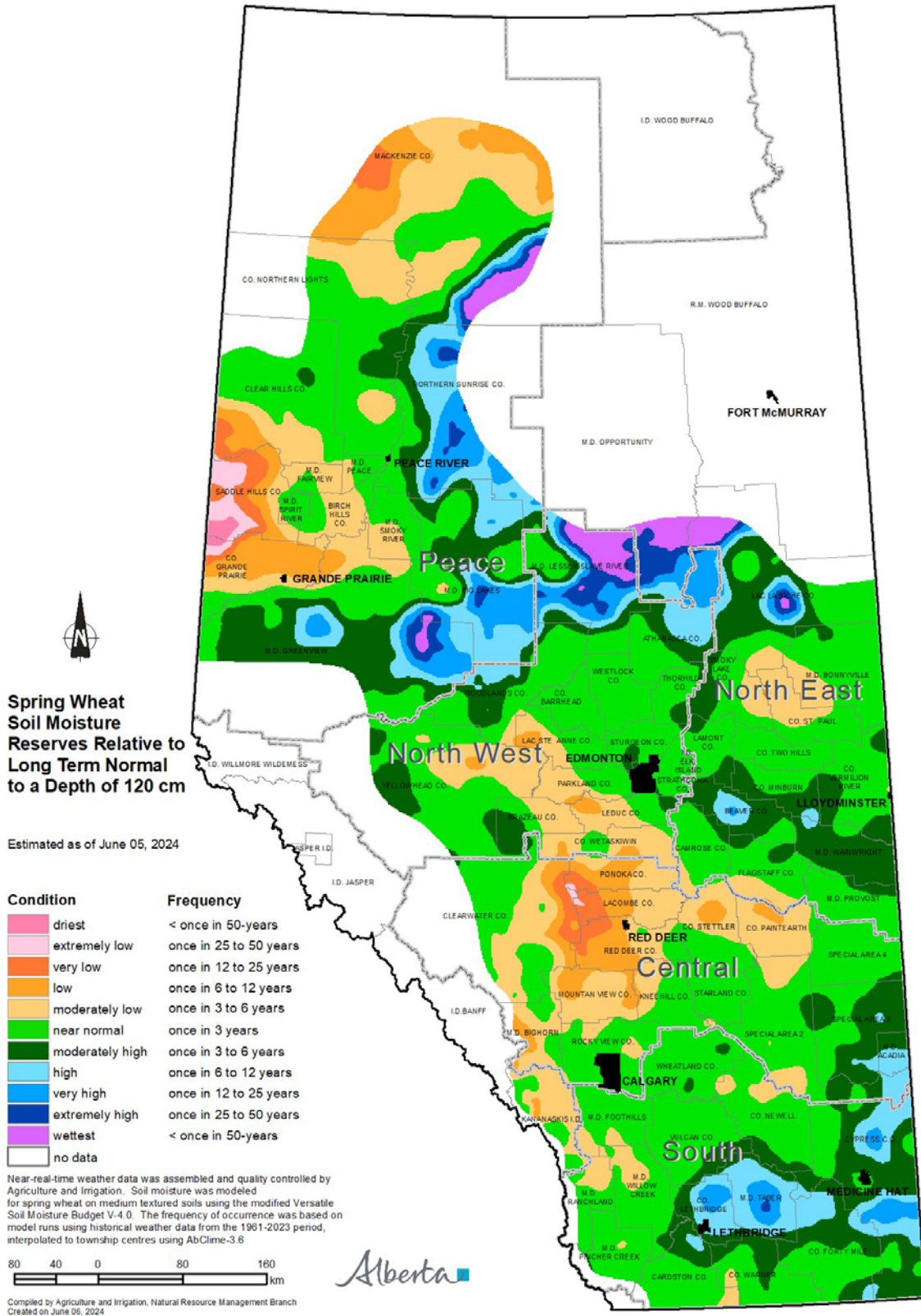
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# Map 3



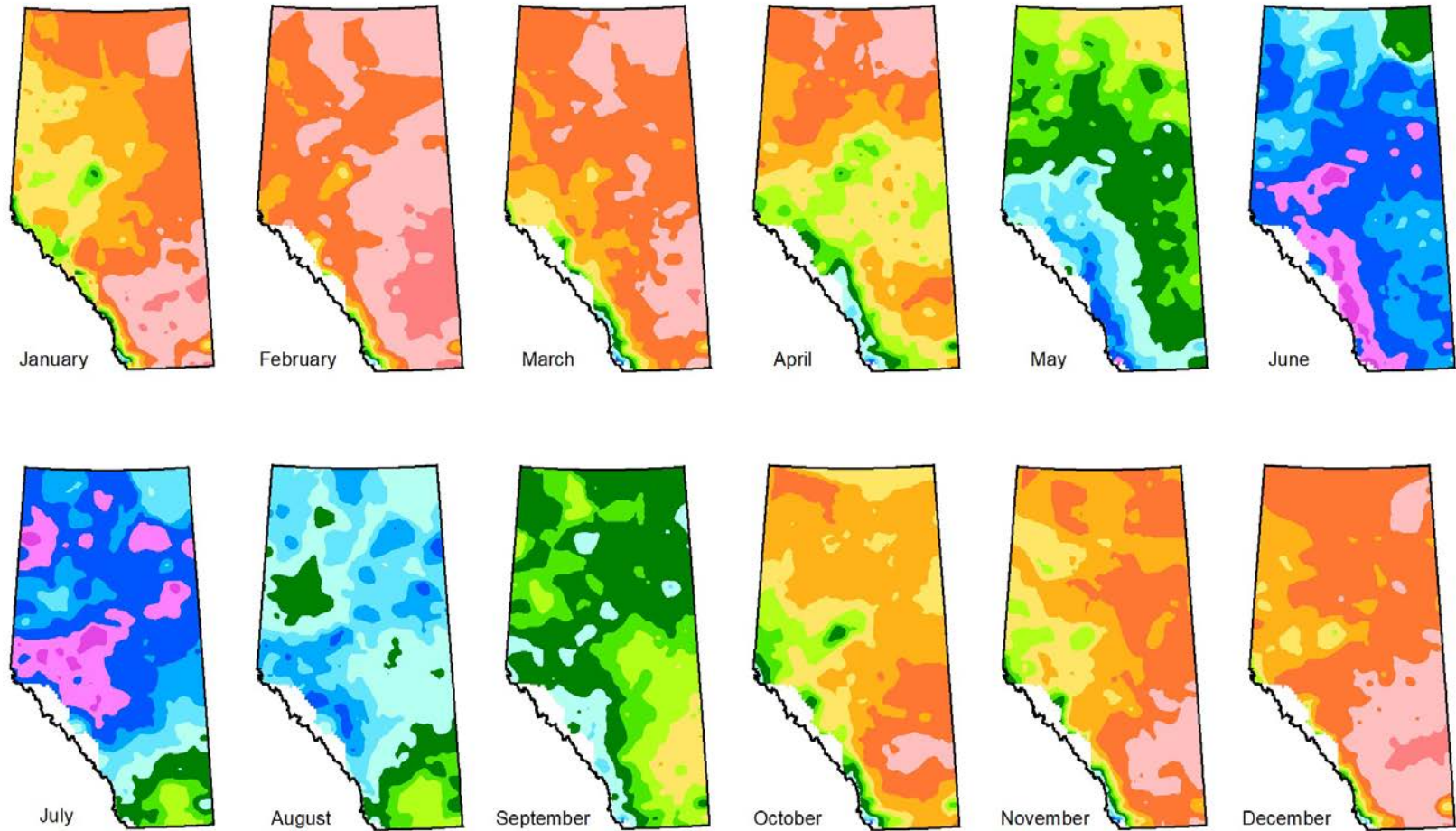
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# Map 4



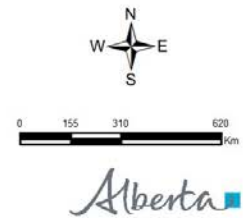
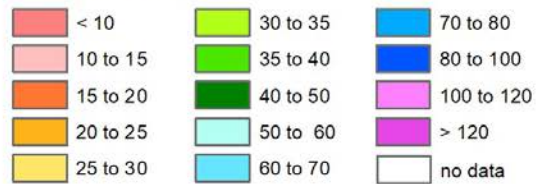
## Normal Monthly Precipitation Accumulations

1991-2020

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

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

### Precipitation (mm)

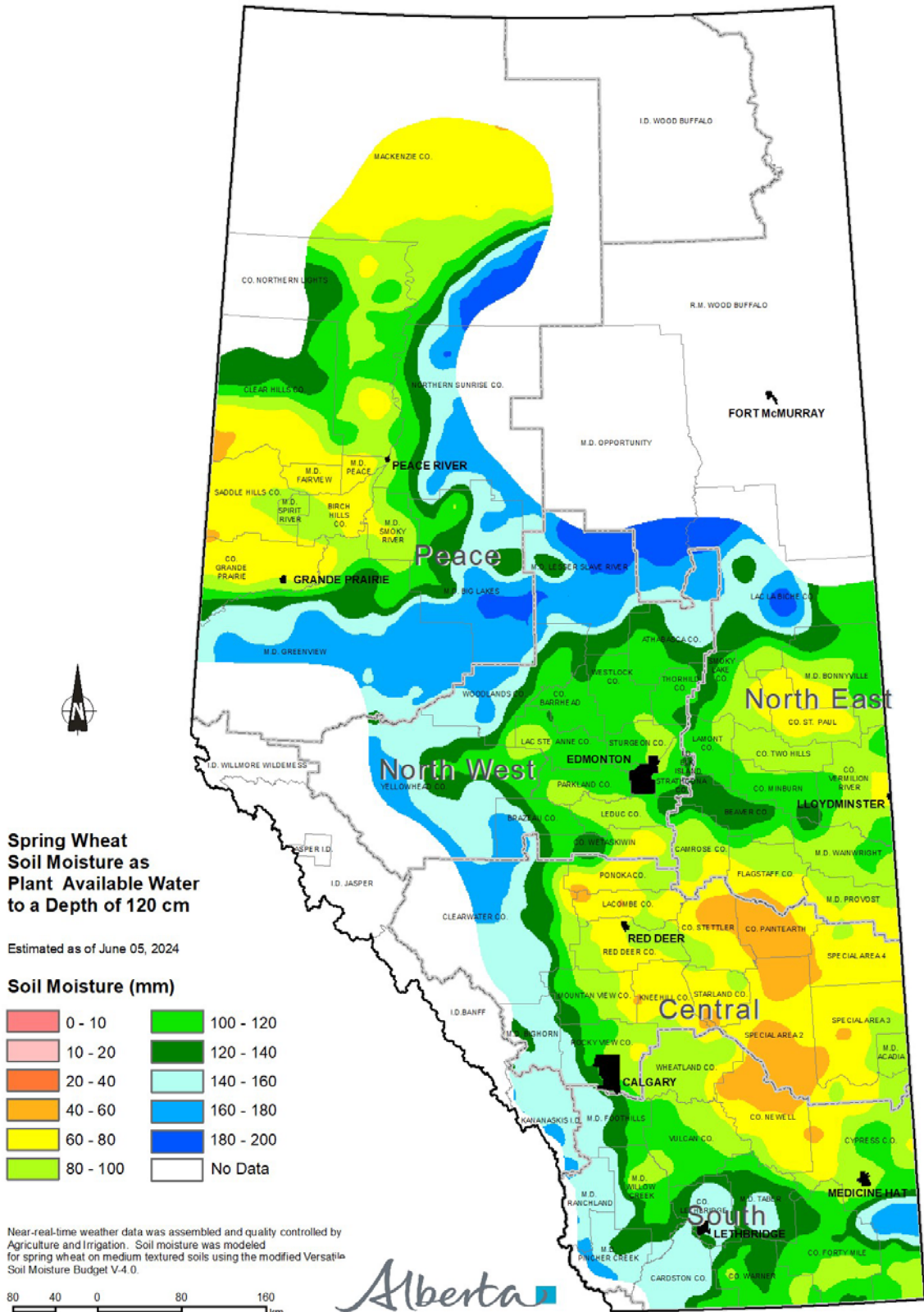


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# Map 5



Compiled by Alberta Agriculture and Rural Development, Environmental Stewardship Division, Technology and Innovation Branch  
Created on June 05, 2024

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