

Agricultural Moisture Situation Update

July 13, 2022

Synopsis

Since the last report issued on July 6, 2022, precipitation has been highly variable across the province (**Map 1**). Since most of the precipitation fell during thunderstorm activity, as such it was very “hit and miss”.

Across the Southern Region many stations reported less than 1 mm of rain. Some of the very dry areas across the Special Areas received much needed moisture ranging from 5 to 15 mm, while others did not.

Following a wet spell in June and early July, many parts of the Central Region received modest rains ranging from 0 to 20 mm. This was welcome as the potential for excess moisture was beginning to become a concern, especially in low lying field areas and lands that are poorly drained.

The central Peace Region remained dry with some areas receiving less than 3 mm, where more rain would otherwise have been appreciated following slightly below normal precipitation patterns since June. However, a wet spring across this area had soil moisture reserves adequately replenished prior June 1 (**Map 2**) and that has helped.

60-day precipitation patterns

Over the past 60 days, most parts of the province received at least 125 mm of rain with many lands through the Central, North East and North West Regions receiving in excess of 200 mm (**Map 3**). Many areas west of Highway 2 between Calgary and Whitecourt had in excess of 250 mm, with some pockets in excess of 300 mm. In contrast, parts of the Special Areas have received less than 100 mm and some lands across the central Peace Region, less than 75 mm.

In general, precipitation over this time frame has been at least normal across most of the provinces growing areas, with some lands in the Central Region estimated to be this wet, less than once in 12 to 25 years (**Map 4**).

The relatively dry areas of the Peace Region are classified as having once in 3 to 6 year lows; however, relatively cool temperatures and adequate spring soil moisture have helped stave off serious moisture stress following the exceptionally hot and dry conditions encountered throughout most of 2021.

Soil Moisture Reserves

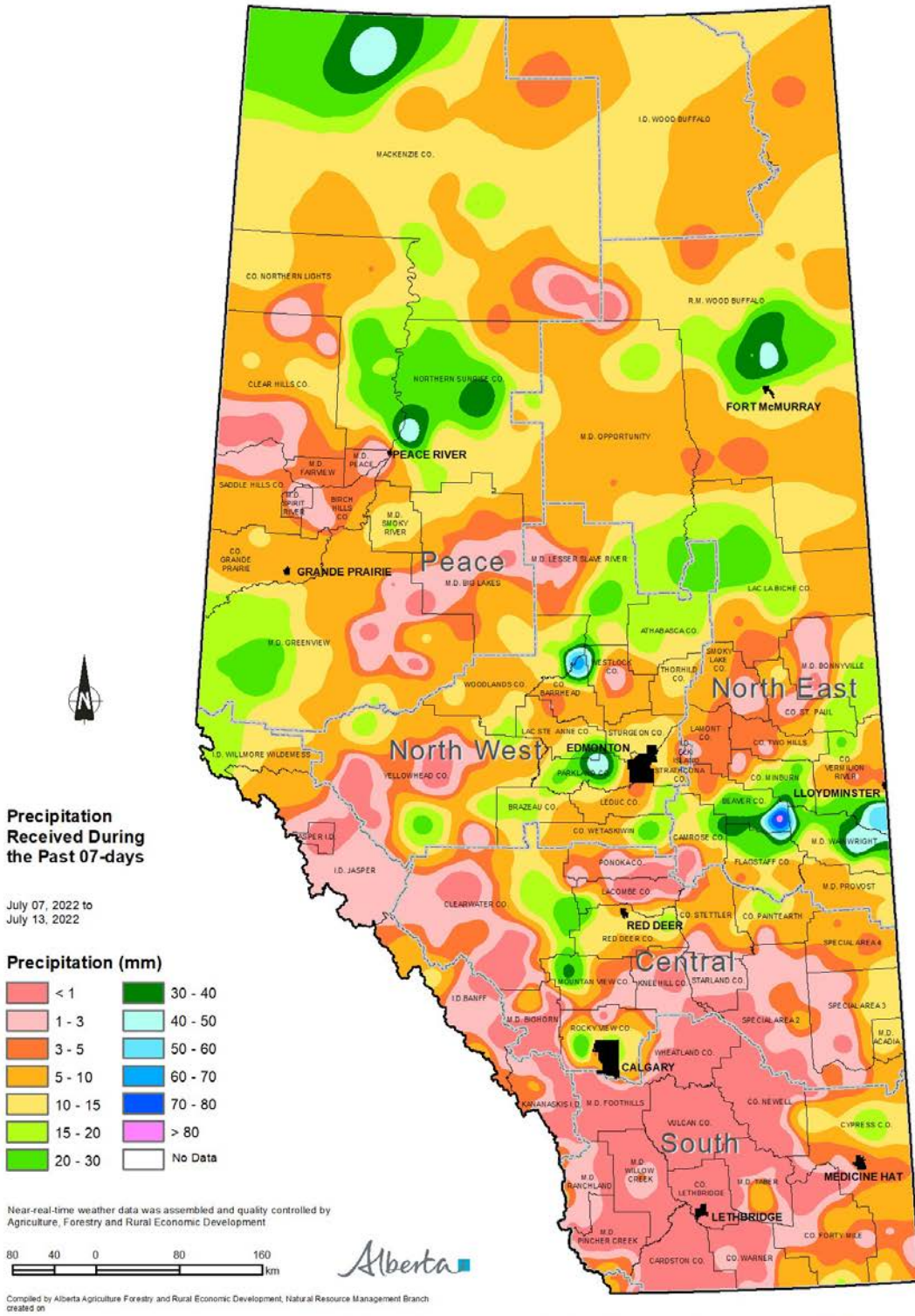
Currently, soil moisture reserves are generally at least near normal across most of the provinces agricultural areas (**Map 5**). Exceptions do exist through Special Area 3, with reserves tending towards one in 6 to 12 year lows. This is significant as on average this area is one of the driest parts of the province, with **long term average** soil moisture levels for this time of year estimated to range only between 20 to 40 mm in a 120 cm depth of soil, under a spring wheat crop (**Map 6**).

Perspective

With the summer heat starting to build, further rains will be needed to help crops achieve least near normal yields. Should hot dry weather persist, lands that are currently at highest risk are the Special Areas, most of the Southern Region and parts of the central Peace Region.

Across the Southern Region, the Special Areas and adjacent lands, typically July marks a drying trend, with average accumulations between July 15 and August 15 ranging only from 25 mm through the south east, to upwards of 50 mm westward as the plains give way to the foothills. Granted, soil moisture reserves are near normal to slightly below here, but this alone will not be adequate for optimum growth ahead of harvest as soils at this time of year in these areas are normally relatively dry. In comparison, across the dry areas of the central Peace Region, for this same time frame average rainfall ranges from 60 to 75 mm, so the chance of receiving adequate moisture is better, provided that a long spell of hot dry weather does not develop in the weeks ahead.

Map 1



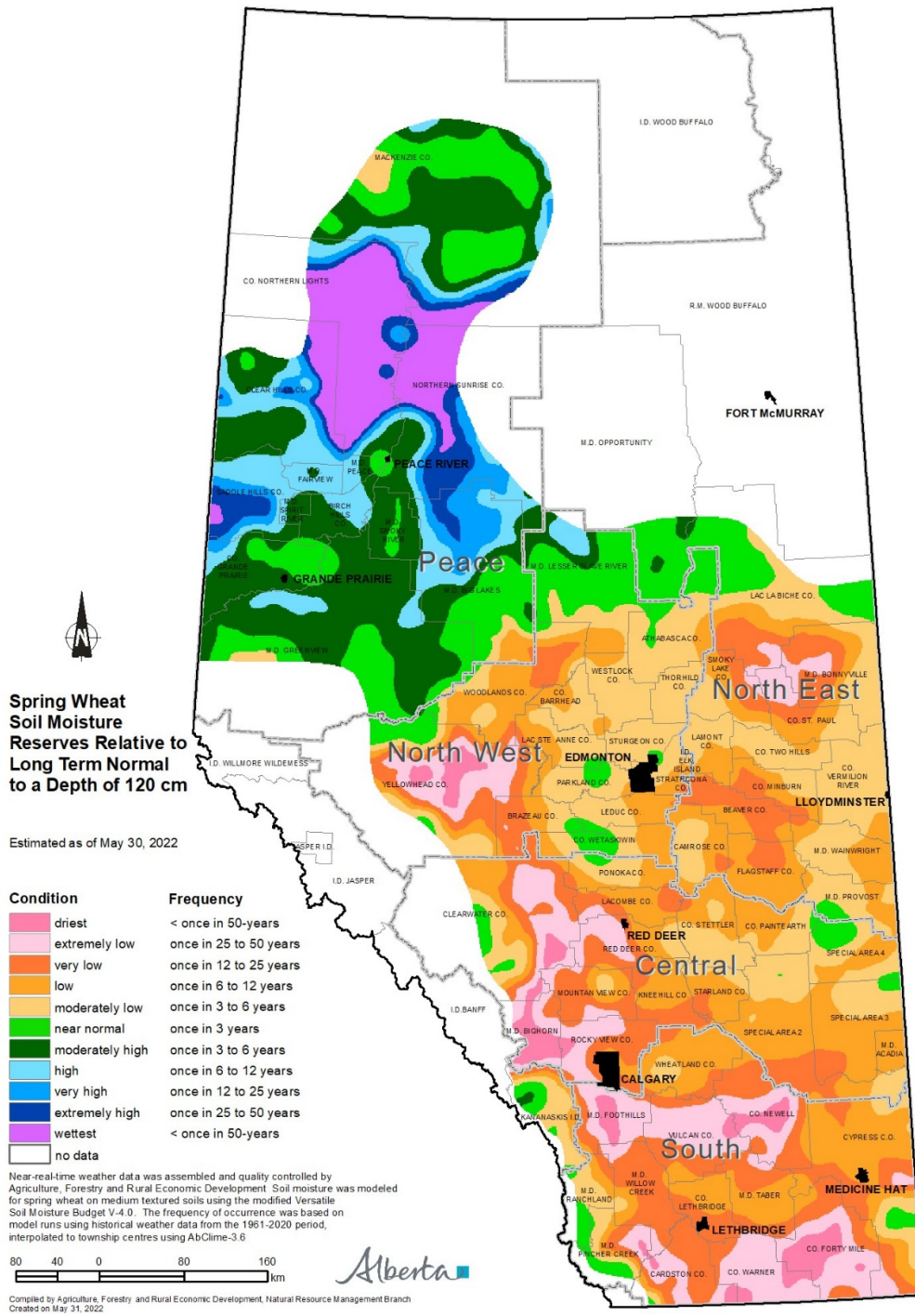
Visit weatherdata.ca for additional maps and meteorological data

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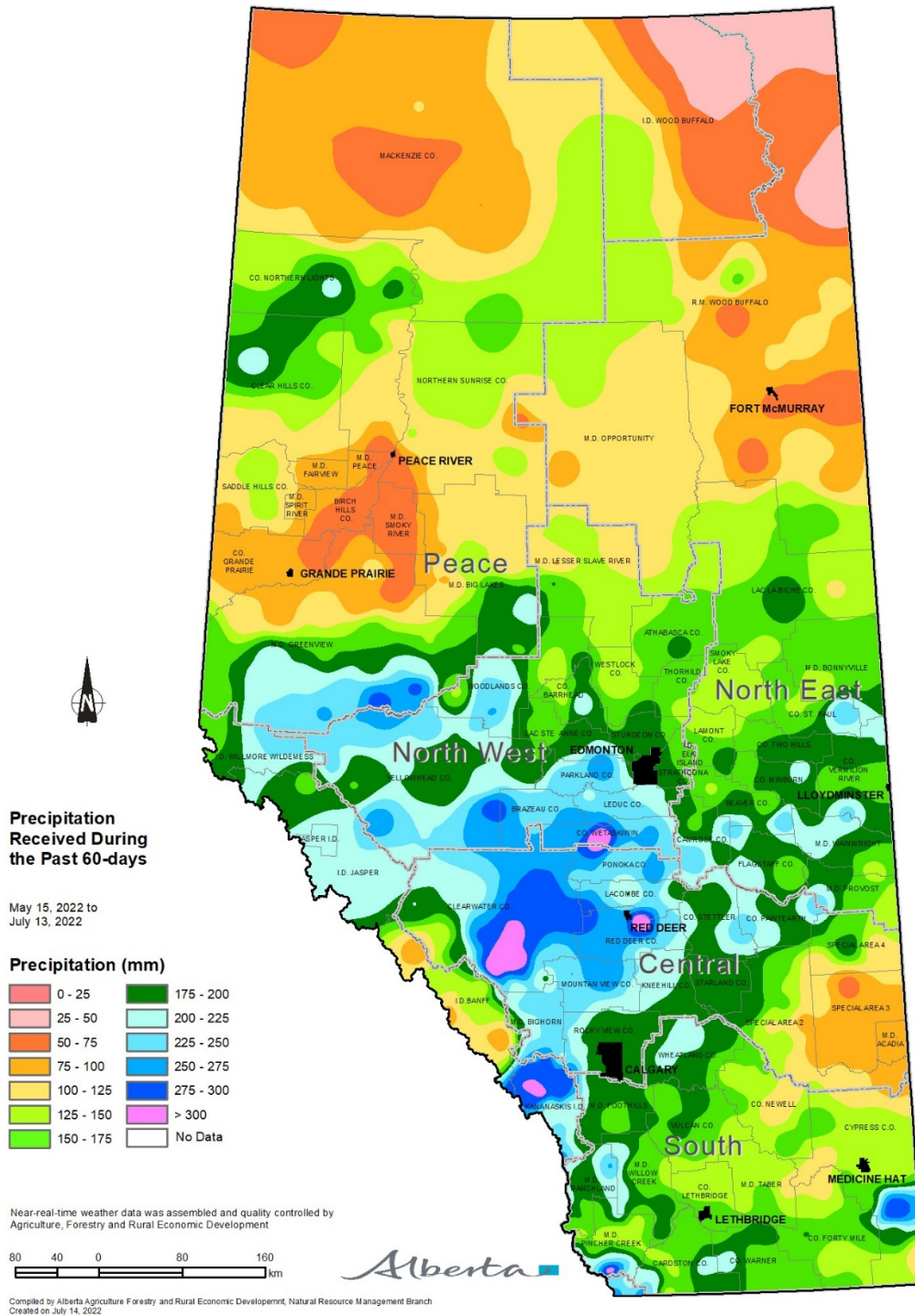


Map 2



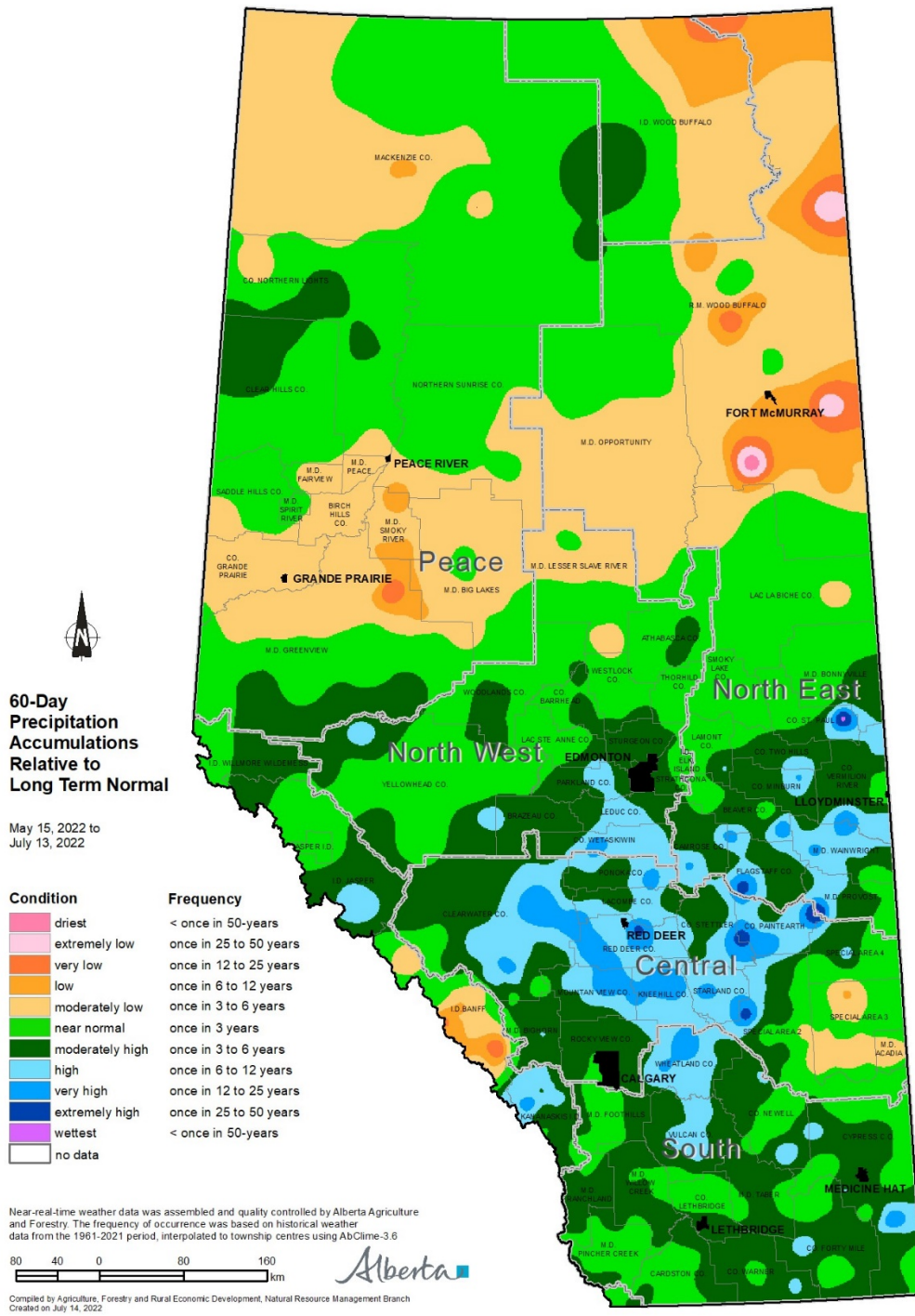
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Map 3



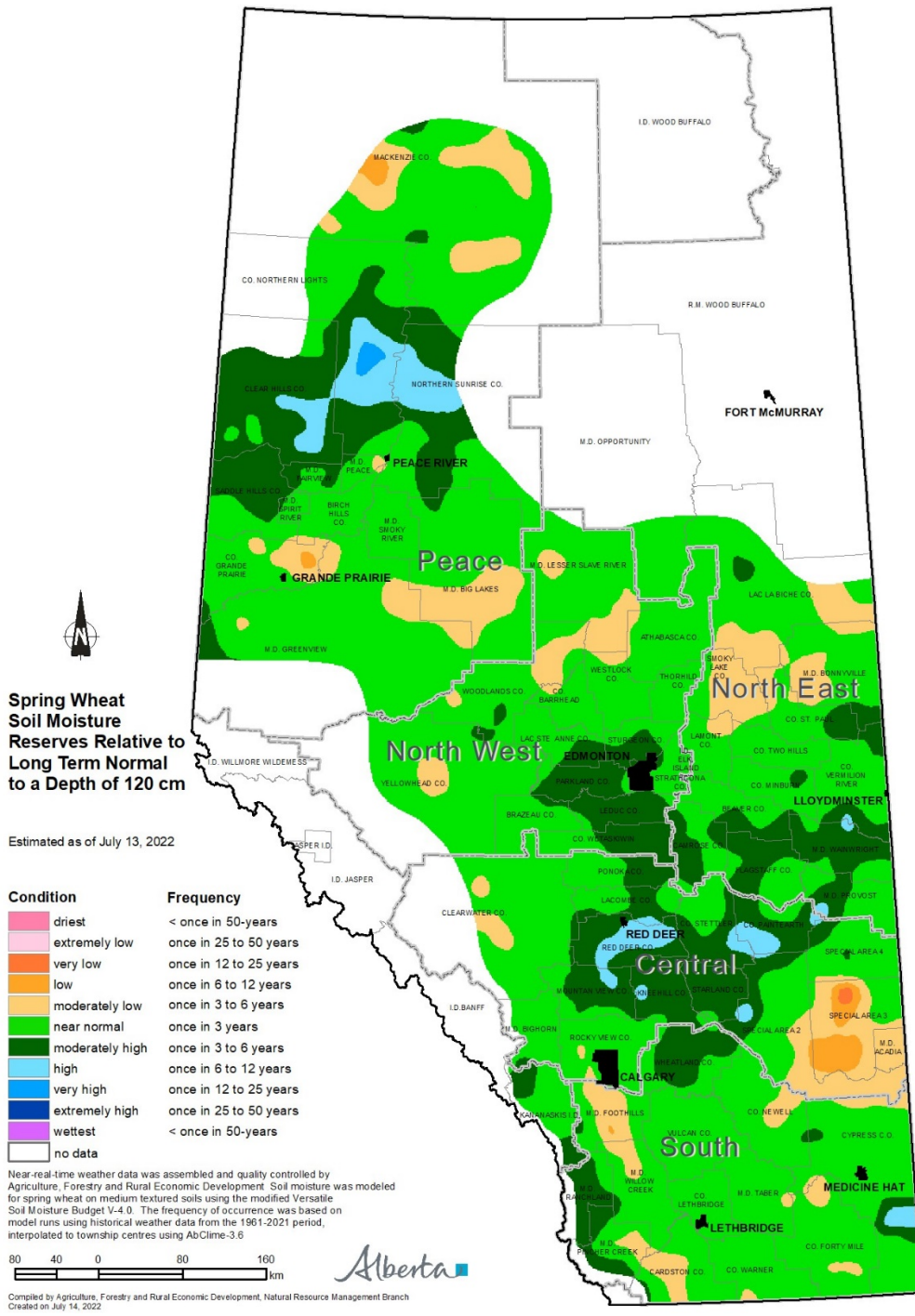
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Map 4



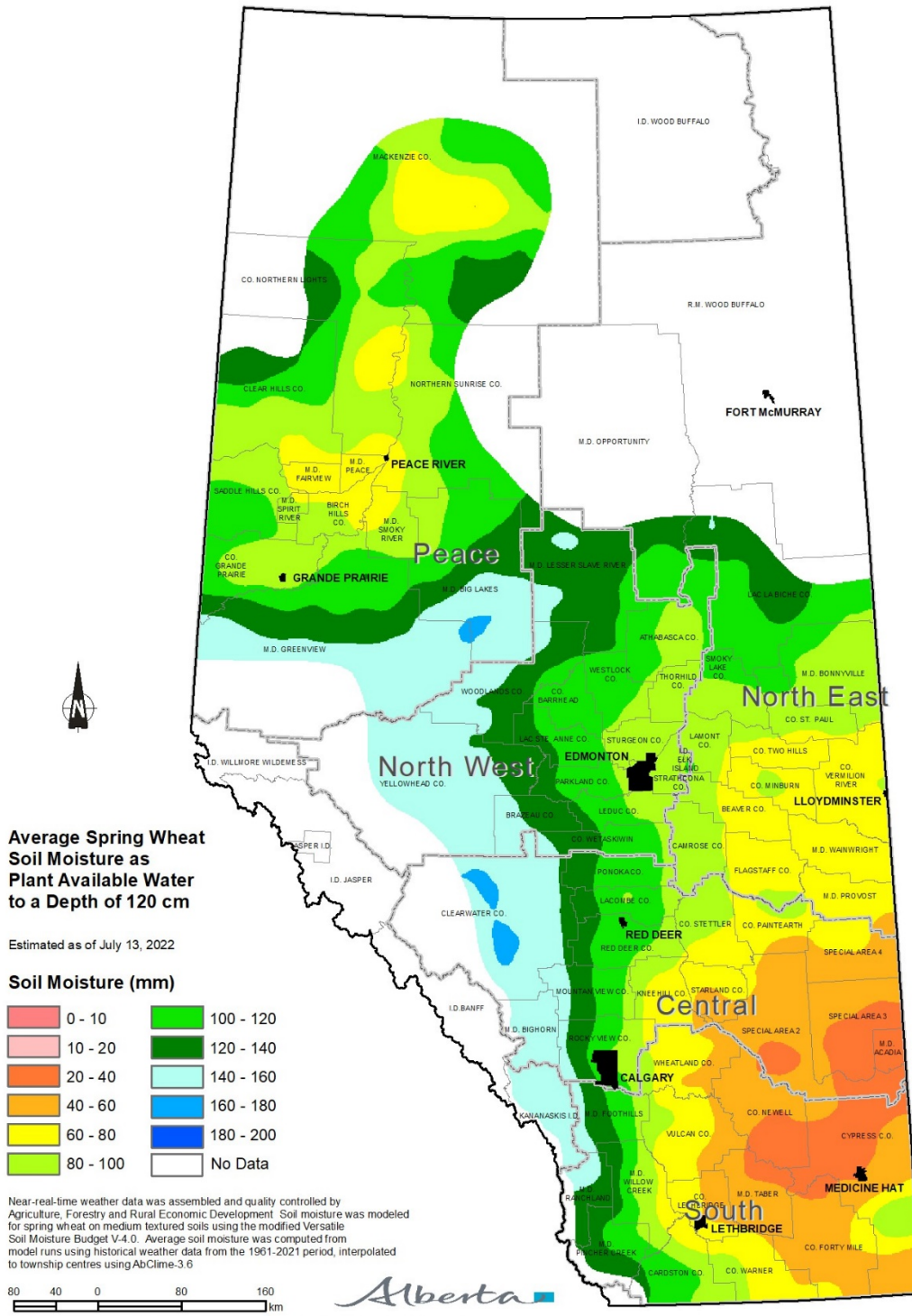
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Map 5



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Map 6



Compiled by Alberta Agriculture and Rural Development, Environmental Stewardship Division, Technology and Innovation Branch
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