



Agricultural Moisture Situation Update

November 8, 2022

Synopsis

Following a relatively warm Halloween night, winter arrived suddenly and with purpose. Most of the province received snow, with some pockets near Ponoka currently estimated to contain upwards of 50 mm of water in snowpacks (**Map 1**). Many agricultural lands between the southern Peace Region and the TransCanada Highway have snowpacks containing 10 to 20 mm or water, with current snowpack accumulations estimated to be well above normal for this time of year (**Map 2**). This marks a good start to building healthy winter snowpacks ahead of the spring melt. However, it's far too early to say this is meaningful, but it is at the very least encouraging to see that the dry late summer/early fall weather pattern has been broken.

30-day precipitation trends

Over the past 30-days most lands lying south of the Yellowhead Highway have seen a trend reversal from the very dry weather that persisted since July (**Map 3**). Parts of the very dry areas in southern Alberta have received significant moisture, with large areas estimated to see this much moisture at this time of year on average once in 25 years (**Map 4**). Much of this has likely made its way into the soil, with many areas south of a line between Calgary and Medicine Hat receiving more than 40 mm of recent moisture. Elsewhere many areas have received between 20 to 30 mm of moisture. Unfortunately, parts of the North East and Central Peace Regions remain in the drying trend with large areas receiving only 5 to 15 mm.

90-day precipitation trends

Late August through to freeze-up is an important time to begin recharging soil moisture reserves ahead of next year's growing season. Looking back at the previous 90 day moisture accumulations, **Map 5** shows that many agricultural areas have received well below normal moisture, with many widely scattered areas approaching one in 50 year lows. Since mid-August, a large area around Lloydminster has received less than 30 mm of moisture (**Map 6**), well below the historical averages which range between 80 to 90 mm.

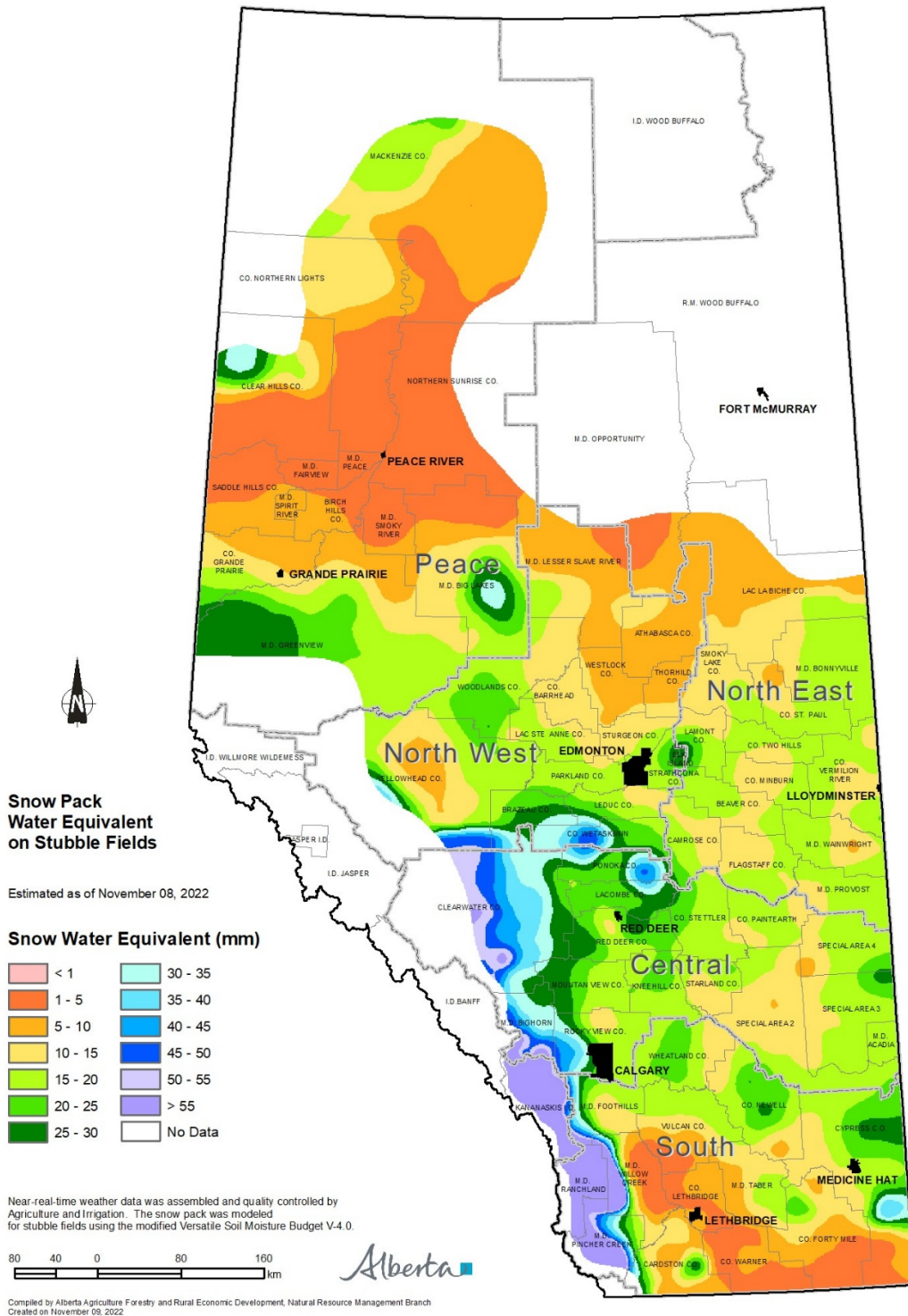
Soil moisture reserves relative to normal as of November 8, 2022

Currently, most of the province is estimated to have soil moisture reserves well below historical averages (**Map 7**), with the exception of some parts of southern Alberta. Notably, more than half of the North East Region is sitting near one in 50-year lows, along with a large portion of the North West Region as well as scattered pockets in the Central and Peace Regions.

Perspective

Winter still lies ahead and average to above average precipitation will be needed to help give crops, particularly pastures and hay land, a good start as dormancy breaks in the spring. Additionally, surface water supplies are depleted in many areas and healthy snowpacks leading to plentiful spring runoff will be needed to start the replenishment cycle.

Map 1



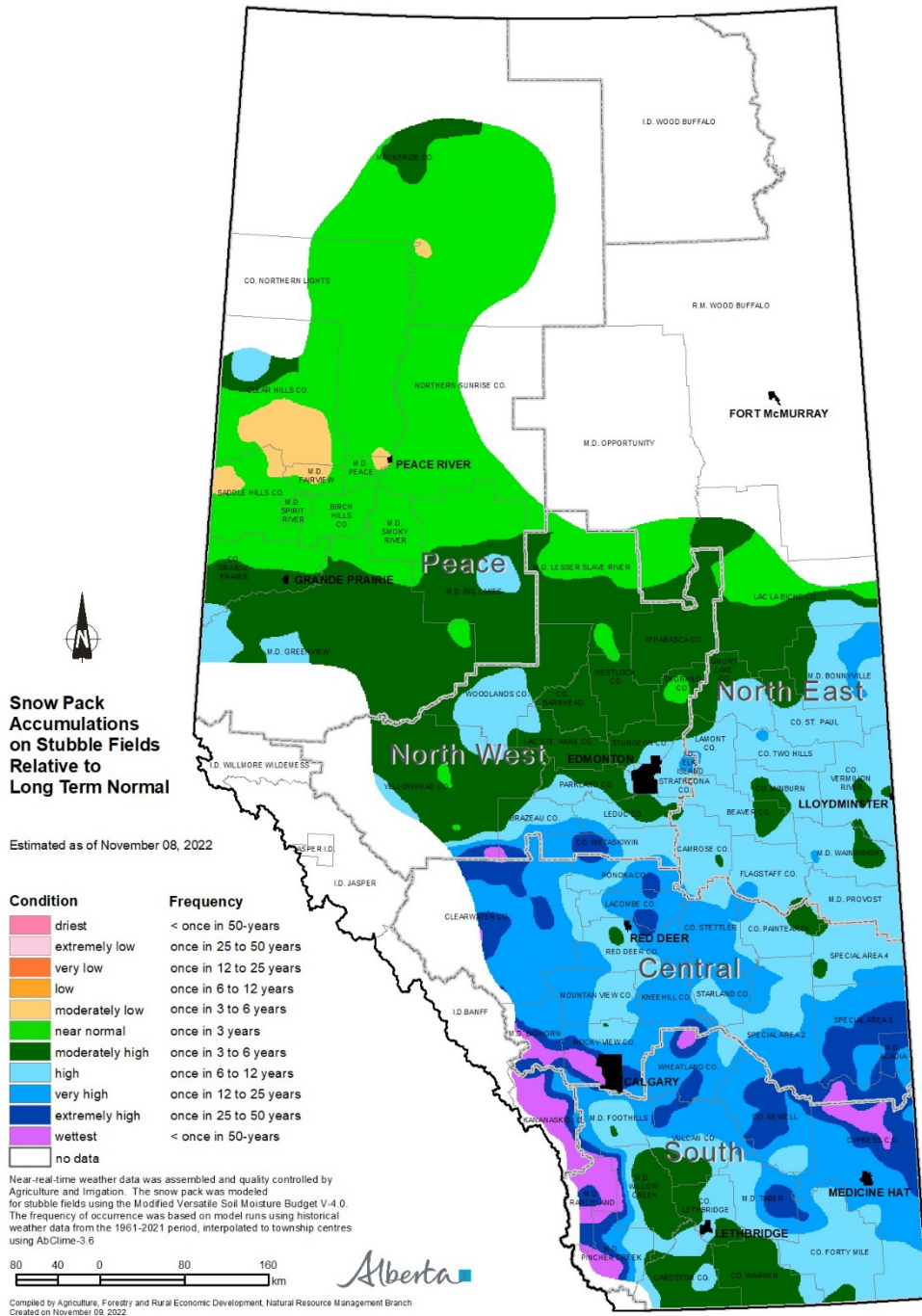
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<https://open.alberta.ca/publications/moisture-situation-update>

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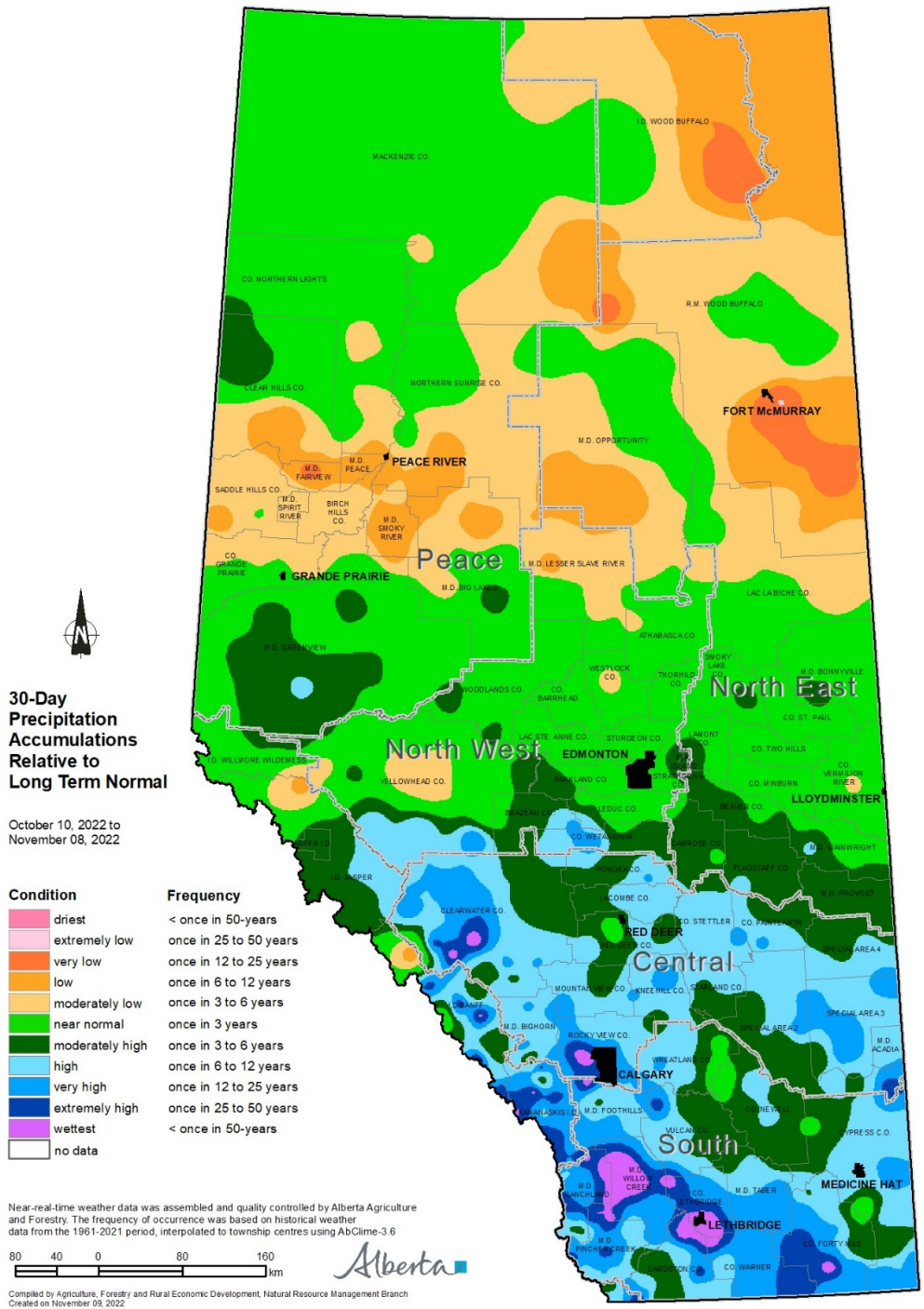


Map 2



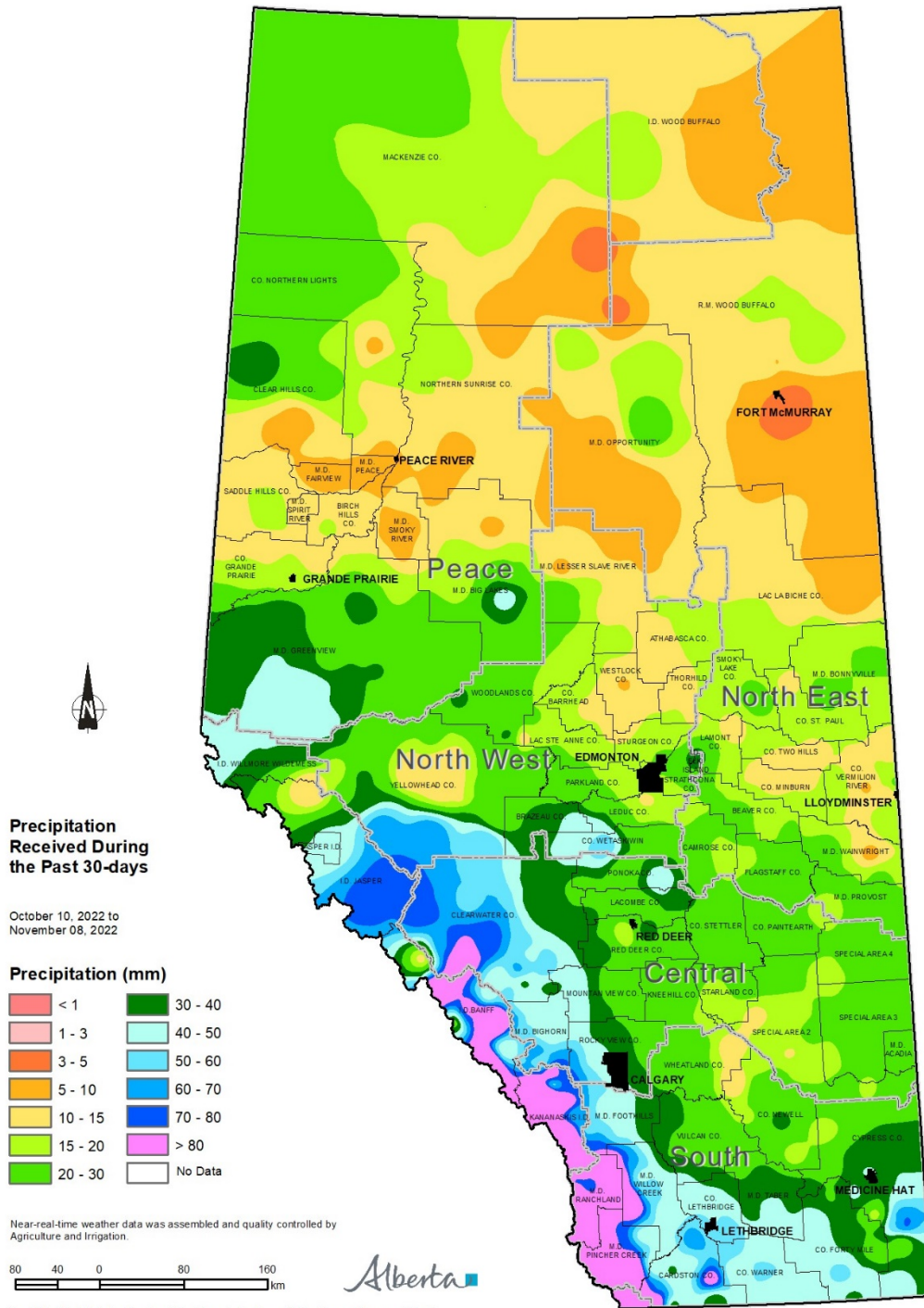
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Map 3



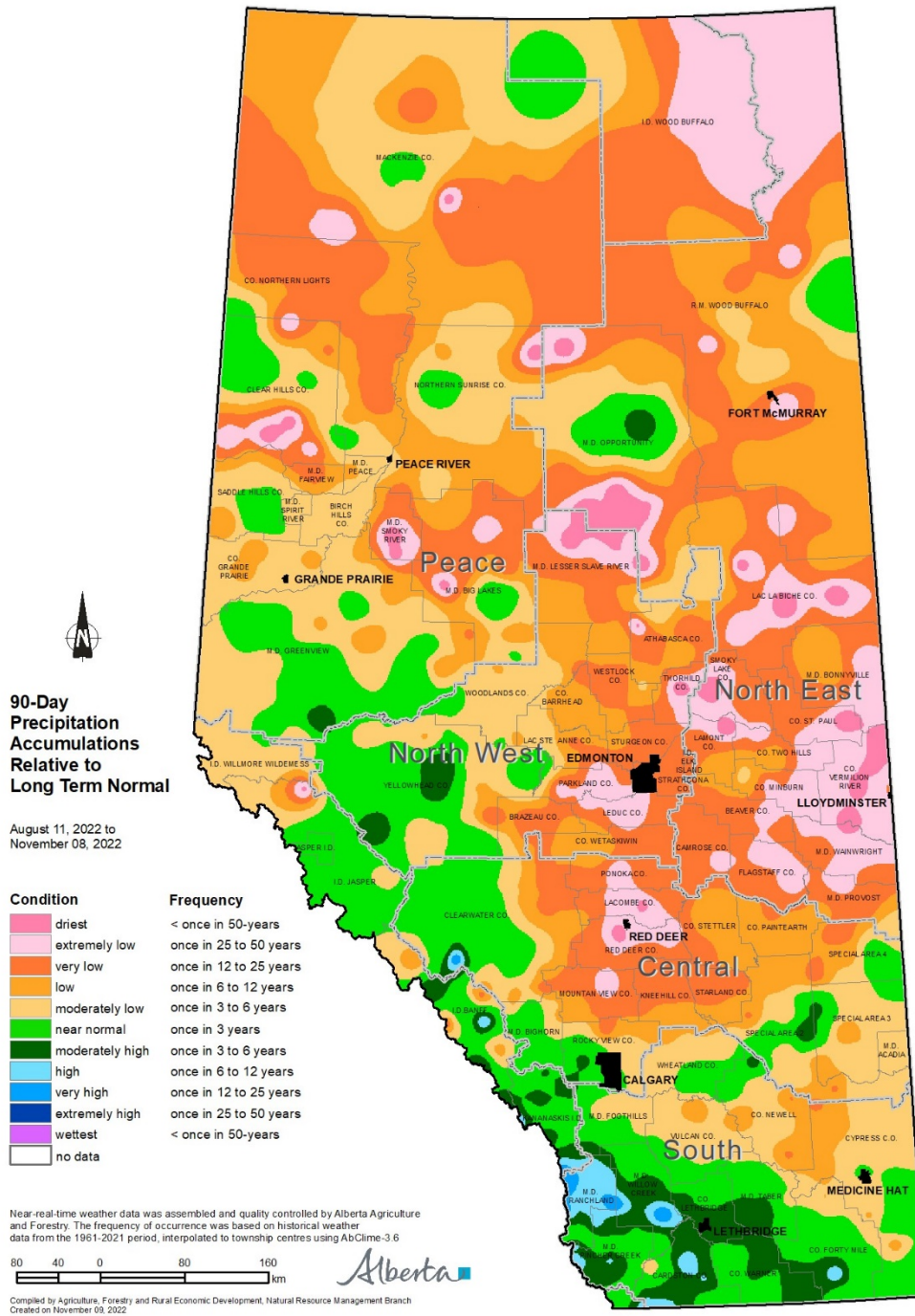
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Map 4



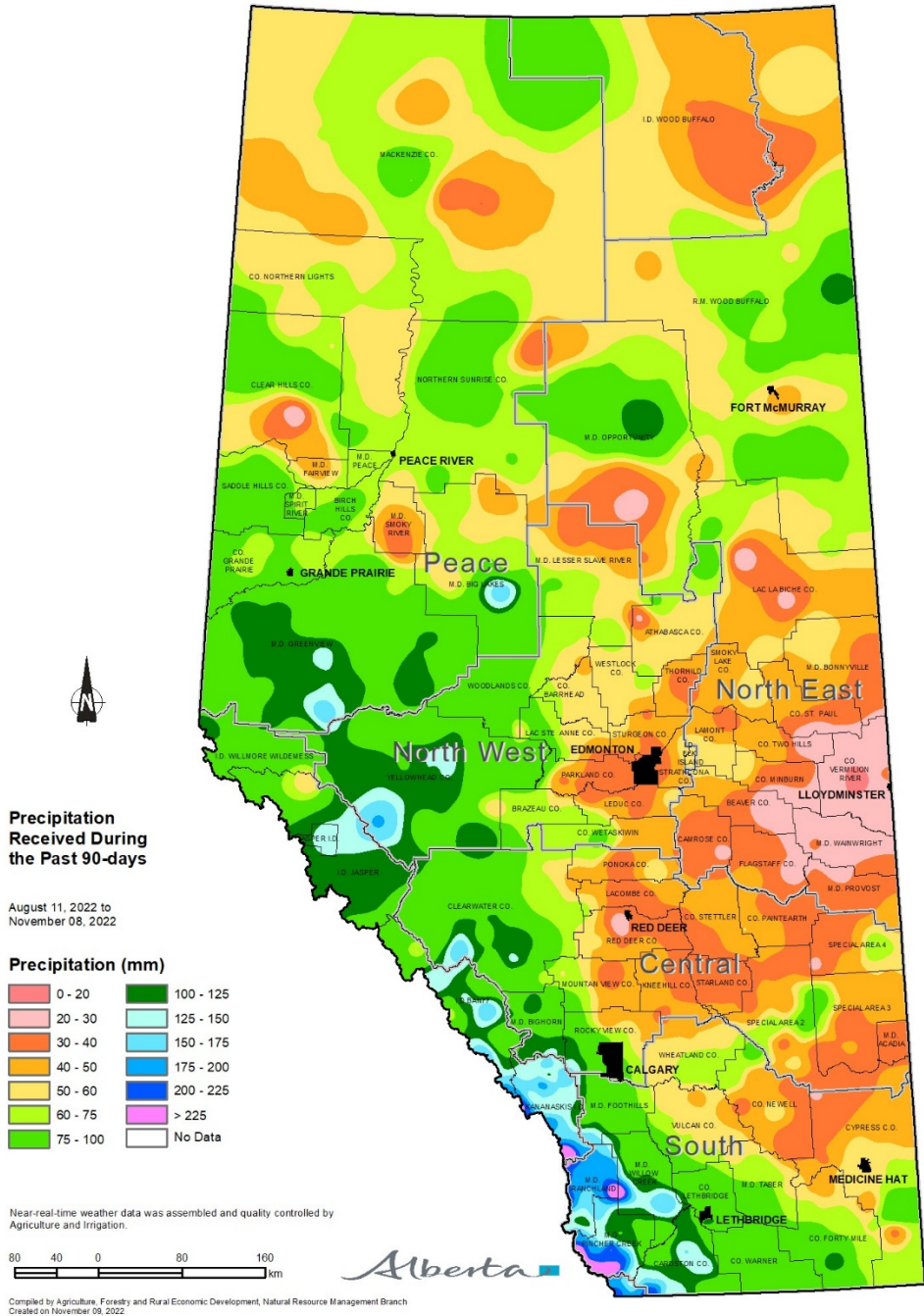
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Map 5



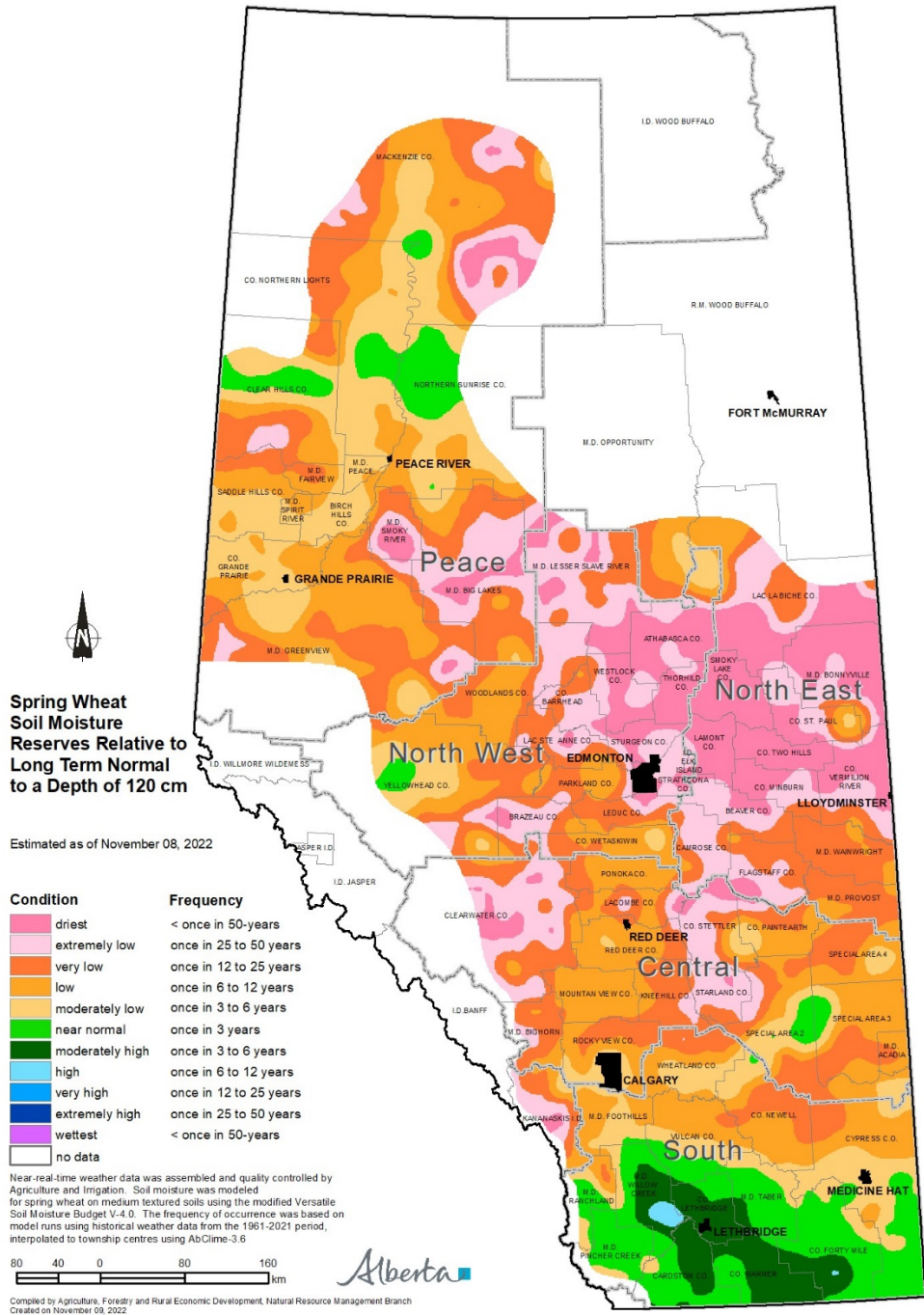
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Map 6



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Map 7



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