Moisture Situation Update – July 25, 2018

Synopsis:

Last week a large rainfall event brought upwards of 100 mm to much of the south-half of the Peace region (**see map 1**). The storm started on July 19th, with more than 125 mm recorded at Beaverlodge and Grande Cache. This followed another significant rain event that started on July 1st. Together, these two storms brought upwards of 150 mm to many parts of the extreme southern Peace region (**see map 2**). The greatest amounts were reported at the Grande Cache Auto station, (238.7 mm); and that is almost half of the annual average (580 mm) falling in less than one month. Also, many lands through the eastern half of the North East region, and across much of the North West region have seen ample moisture with upwards of 80 to 100 mm of rainfall recorded since the start of July.

In sharp contrast, southern Alberta has been experiencing moisture deficits, with parts of the extreme south-eastern portions receiving less than 10 mm since the start of July (**see map 2**). While most of southern Alberta typically experiences dry conditions at this time of year (starting the beginning of July), some areas are still shy of the 30 to 40 mm that is considered average for this month (**see map 3**). Moisture shortages at this time of year are not desirable, particularly since plant moisture demand is near its peak and seasonal temperatures reach maximum values.

Southern Alberta's immediate need for moisture stems from ongoing dryer than normal conditions that appeared on or about June 15 of last year (2017), with many areas experiencing year over year moisture deficits seen, on average, less than once in 25-years (**see map 4**). However, over the past week, several lands have seen 10-20 mm of rain and cooler temperatures that have helped reduce acute moisture stress for those fortunate enough to be in the path of fast moving thunderstorms.

Province wide, most areas south of Red Deer are currently in need of moisture stemming at least partially from longer term deficits (**see map 4**) and depleted soil moisture reserves. However, local conditions may be highly variable, in some cases from "mile to mile", as rainfall patterns have been primarily dominated by thunderstorm activity which is bringing "spotty" rain showers.

Across the northern tip of the Peace region, conditions are also relatively dry, with some areas south of Fort Vermillion receiving less than 30 mm of rain in recent weeks (see map 1). However, unlike southern Alberta, July tends to be the wettest month of the year here, with averages ranging from 80 to 100 mm and August averages only drop modestly to about 50 to 70 mm. This far north, a marked drying trend in the meteorological record typically does not occur until September.

Forecast from AF's fire weather section:

Currently a warming trend is gaining strength, with the associated high pressure ridge, centered on BC. Alberta is expected to be on the eastern side of this feature and unstable conditions are expected to prevail across southern Alberta for the next few days, which is likely to bring isolated thunderstorm activity.

Near-real-time hourly station data can be viewed/downloaded at www.agriculture.alberta.ca/stations

Note: Data has about a two hour lag and is displayed in MST.

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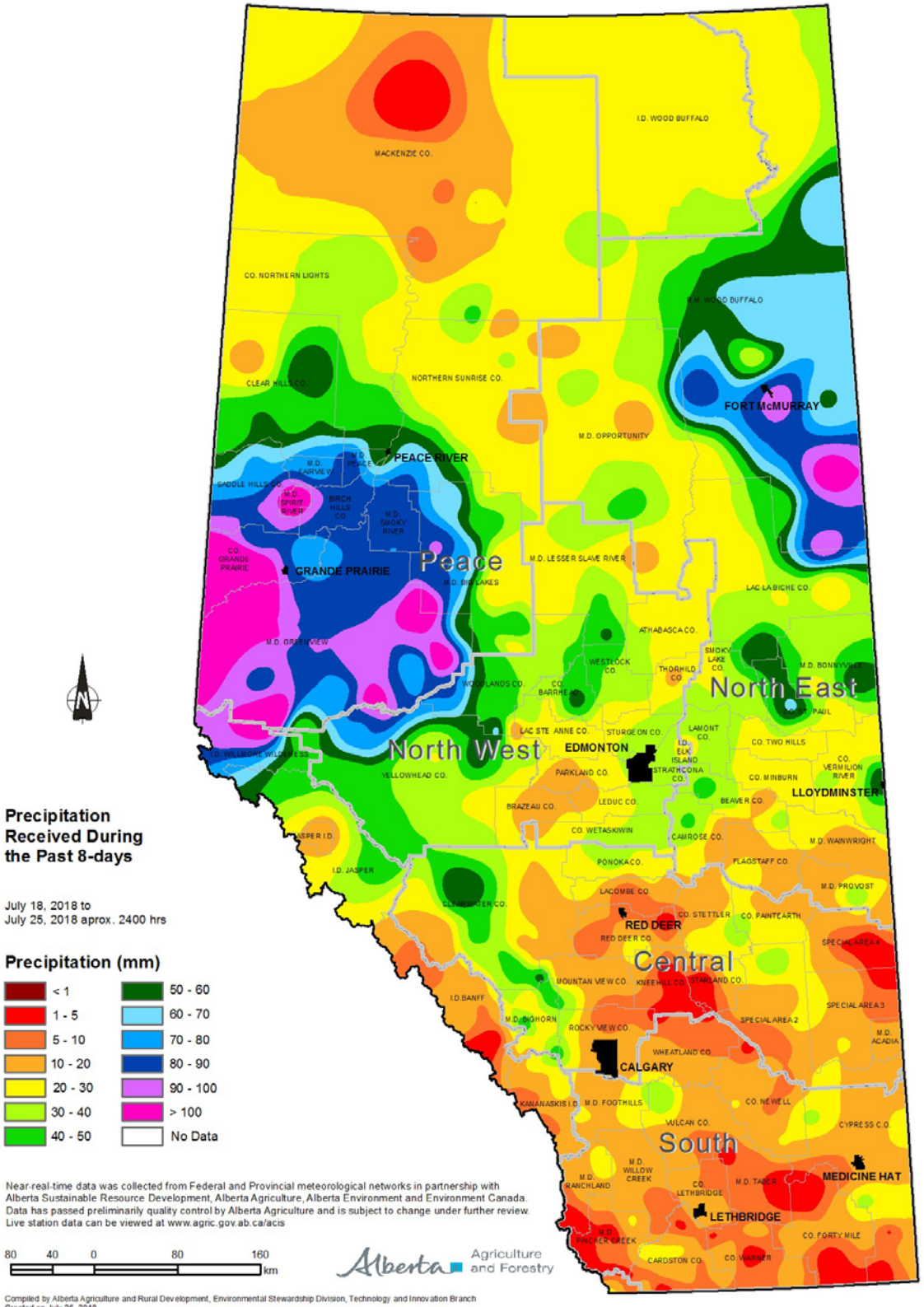
Map 1



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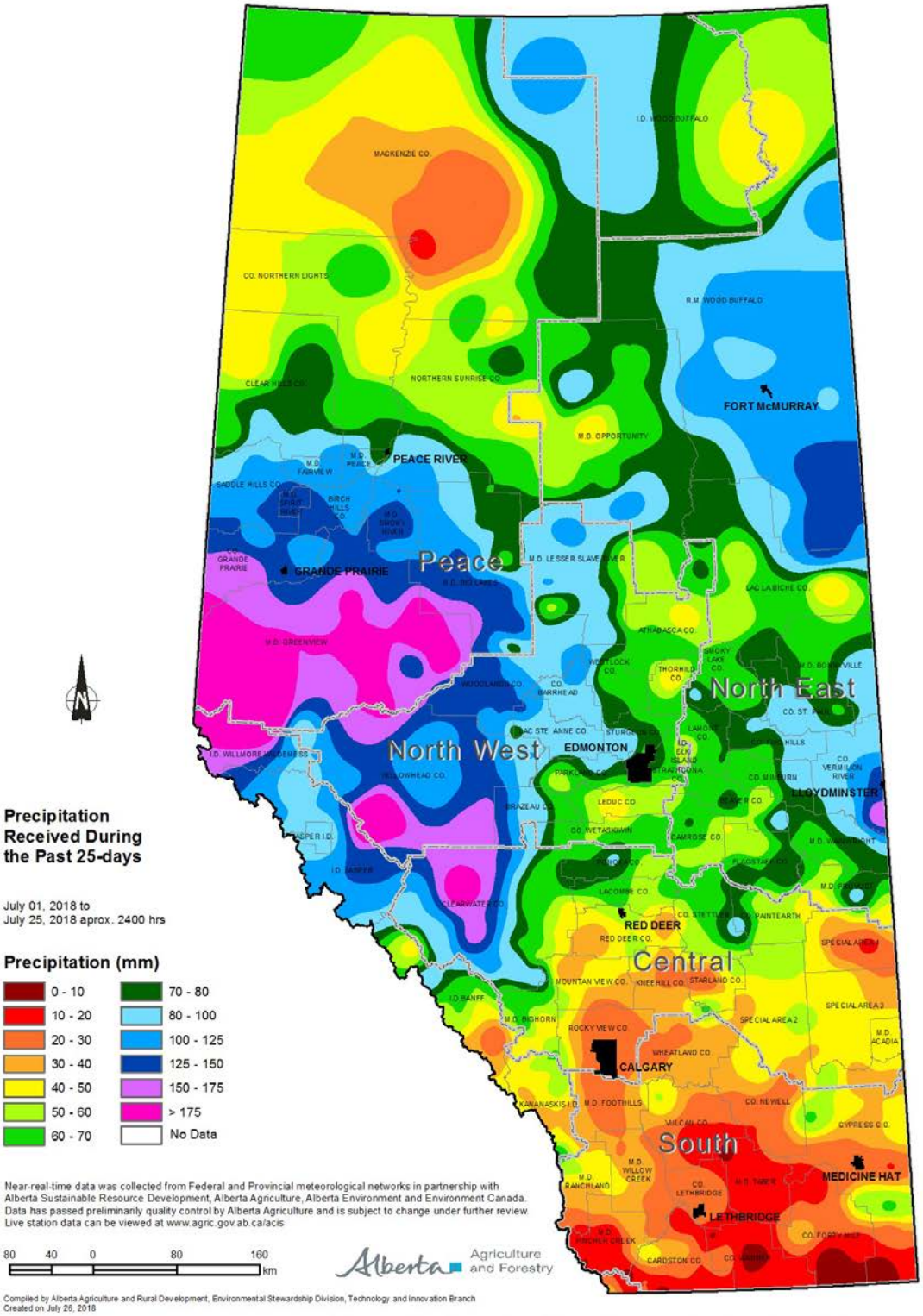
Map 2



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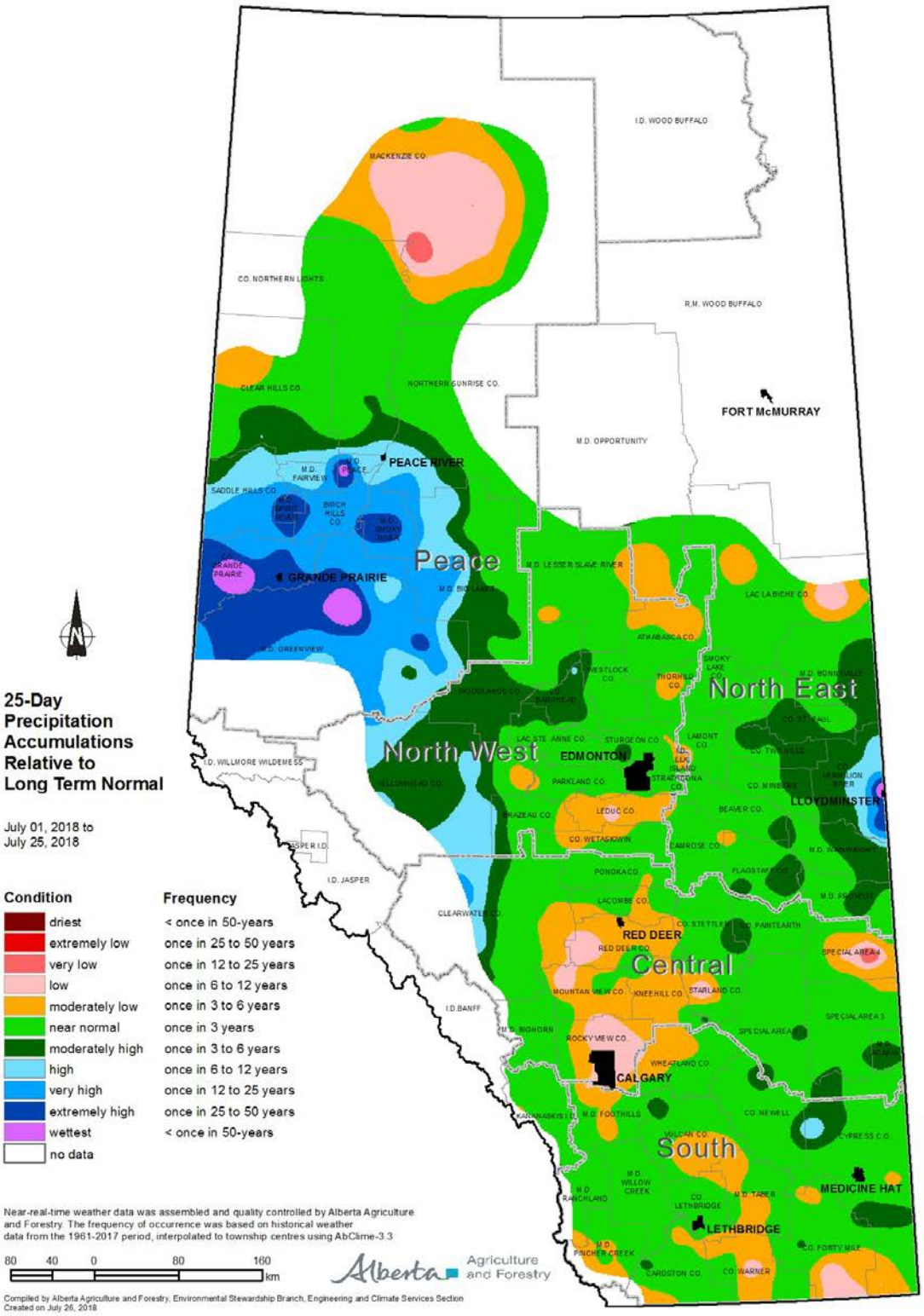
Map 3



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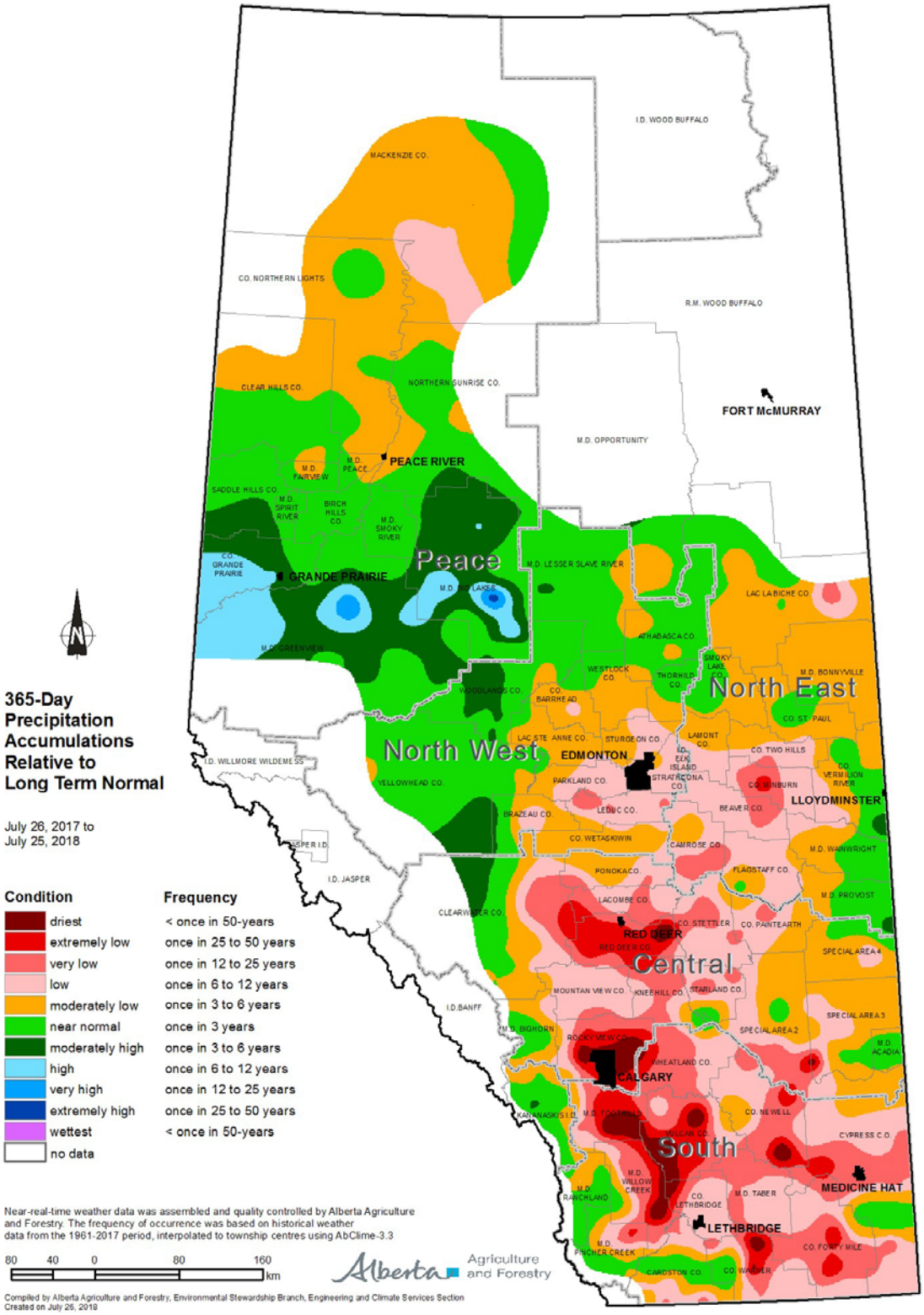
Map 4



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