

Moisture Situation Update – August 20, 2013

Synopsis:

Early in the morning of Aug 21st, generally light frosts were recorded at several locations in a large area extending along the foothills from Grande Cache in the north, down to the M.D of Ranchlands (south of Calgary). This cold air brought freezing temperatures into some agricultural areas northeast and southeast of Calgary.

Soil moisture reserves are showing signs of depletion across parts of the province as a result of several weeks of dryer than normal conditions. However, crop growth is still reported to be largely unaffected, with most crops in these dryer areas relying on previously stored moisture and regular intervals of adequate rain.

Frost areas August 20 to 21, 2013 –see map

- Cool air brought early morning frost to a large area along the foothills, between Grande Cache, down as far south as the M.D. of Ranchland.
- Below freezing temperatures extended into some areas as far east as Three Hills -0.9 °C, Biesecker -1.6 °C and Blackie -0.6 °C. For all three of these locations, temperatures only remained below the freezing mark for less than two hours, followed by rapidly rising temperatures after dawn. It is estimated that this type of frost event, this early in the season, will occur on average about once in 50-years.
- Note that low lying areas may have seen cooler temperatures with some frost damage possible.

60-day precipitation accumulations relative to long term normal as of August 20, 2013 -see map

- Several widely scattered areas have seen moderately low (one in 3 to 6 year) accumulations over the past 60 days, with some localized areas classified as low (one in 6 to 12 years). The driest areas, relative to normal, remain in the northern Peace Region and along the west side of Parkland County.
- Most areas south of the TransCanada highway have seen at least near normal accumulations with many areas in the west and east experiencing above average accumulations.

Soil moisture reserves relative to long term normal as of August 20, 2013 -see map

- Soil moisture reserves are highly variable across the agricultural areas, but in general, dry weather over the past several weeks has seen reserves diminish rapidly, even for this time of year. Many areas are seeing reserves this low once in 12 to 25 years, with highly depleted reserves (less than once in 50-years), emerging in the extreme northern Peace County, as well as in parts of Lac La Biche County and Vulcan County.
- However, despite the development of generally low soil moisture reserves, according the Provincial Crop Report, published on August 13, 2013 “crop growing conditions..... remain good to excellent in most areas of the province”. For those areas south of the Peace Region that have been relatively dry, this is likely due to well-timed rain events, coupled with generally cooler than average conditions, in addition to reserves of soil moisture, previously stored early in the season.
- In contrast, across most of the Peace Region over the past several weeks, rains have generally been near normal accompanied by above normal temperatures.

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Perspective:

- While soil moisture reserves are being rapidly depleted across many areas of the province, well timed rains and favorable temperatures have generally resulted in good crop growth.
- Soil moisture reserves for next growing season will largely depend on fall rains, winter snows and moisture received during the early spring.

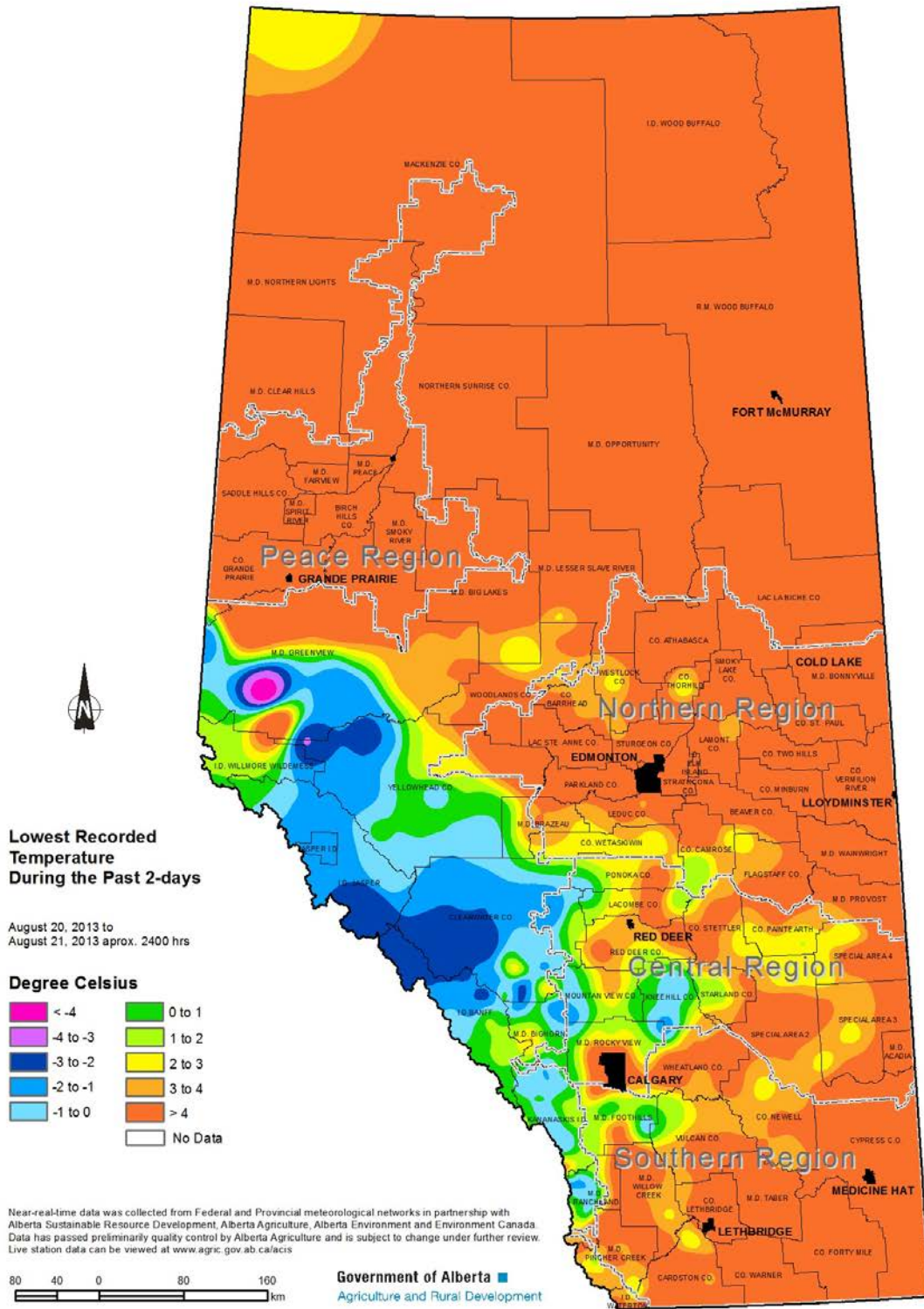
Additional Maps can be found at www.agriculture.alberta.ca/maps

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 (add one hour for daylight savings time)

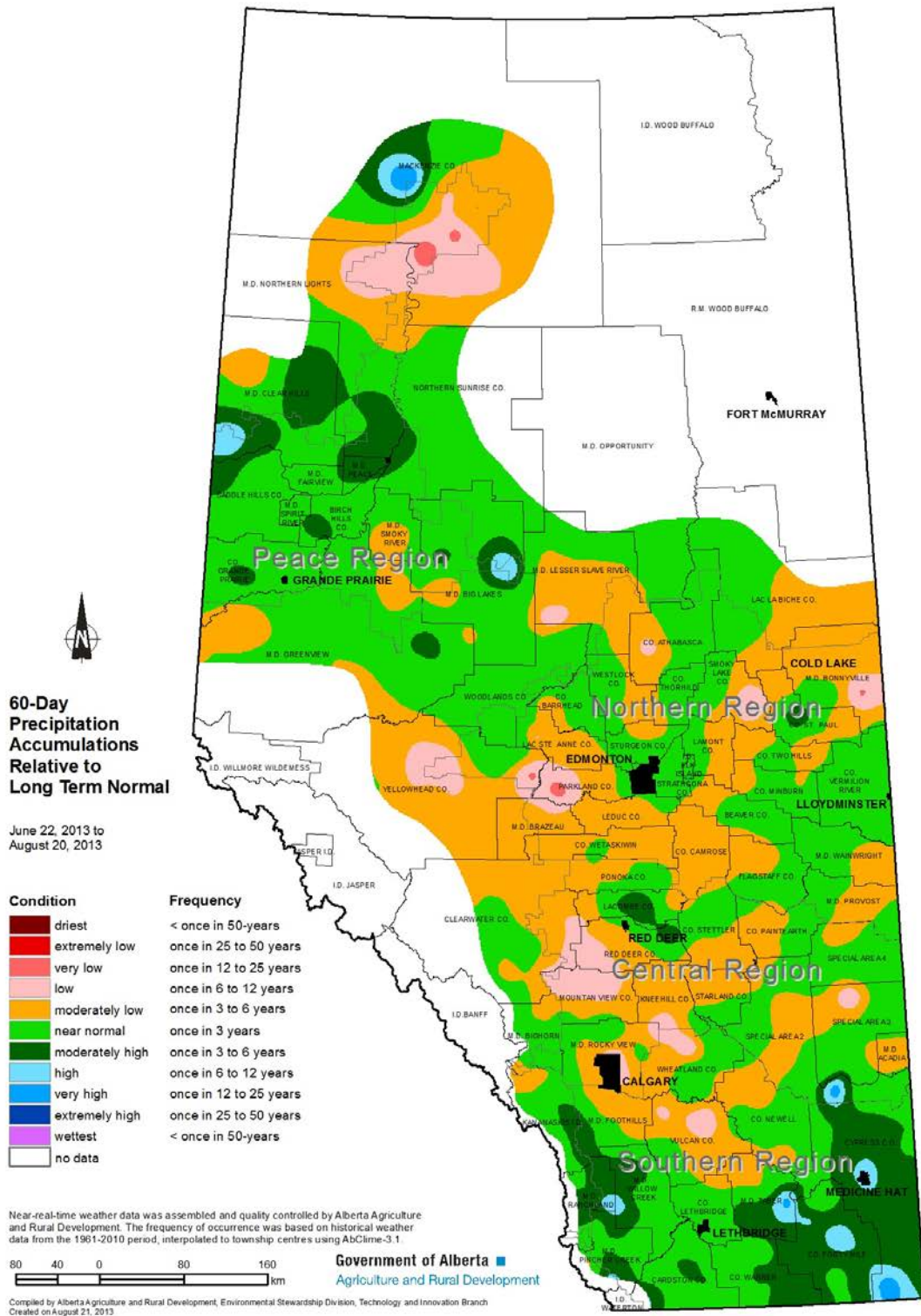
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Compiled by Alberta Agriculture and Rural Development, Environmental Stewardship Division, Technology and Innovation Branch
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