Moisture Situation Update – June 24, 2014

Synopsis:
From June 16 to June 18, 2014, heavy rains were reported over much of south-western Alberta, with total accumulations exceeding 200 mm across the mountains and foothills in the extreme southwest. Over the past 30-days, precipitation accumulations throughout the agricultural areas of the Province have been highly variable, ranging from less than 20 mm in the extreme northern parts of the Peace Region, to upwards of 200 mm across the southwest. Other relatively wet areas include the northeast, in and around the county of Lac La Biche (> 120 mm), Edson (180-200 mm), and also through a large area southwest of Red Deer where more than 180 mm was recorded.

Soil moisture reserves are highly variable, ranging from less than one in 50-year lows through small pockets located through the central parts of the Peace Region, to one in 12 to 25 year highs west of Lethbridge and southwest of Red Deer, and one in 25-50 year highs through small pockets in Smoky Lake County and the M.D of Bonnyville.

Precipitation accumulations relative to normal over the past 30-days, as of June 24, 2014 –see map

- Generally, over the past 30-days most of the agricultural areas have seen at least near normal precipitation accumulations, with drier areas found through the central and northern parts of the Peace Region, and through parts of the Special Areas. Across these areas, accumulations range from one in 3 to 6 year lows, along with pockets of one in 6-12 year lows.
- Wetter conditions have prevailed across the northeast Lake County Including Lloydminster, Cold Lake, Lac La Biche and Smoky Lake, with accumulations ranging from one in 6 to 12 year highs, to the less than on in 50 year highs. Through the Edson region, and near Sundrie (west of Red Deer) accumulations are up to one in 25 to 50 year highs, as well as through the western parts of the M.D of Willow Creek, located west-north-west of Lethbridge.

Soil moisture reserves relative to long term normal, as of June 24, 2014–see map

- Soil moisture reserves are extremely low through the central parts of the Peace Region, with a few small pockets north and northwest of Grande Prairie estimated to have reserves this low on average less than once in 50-years. Delayed seeding due to late snow melt and cool temperatures may have helped alleviate the situation somewhat, but this area currently has little capacity to resist hot, dry weather. Rain is needed here now. Historically, the end of June marks a return to wetter conditions in this area, and hopefully this year is no exception.
- The northern Peace Region is also dry, with reserves estimated to be down to at least one in 12-year lows. A dryer than normal situation has persisted for several years now with the last “wet” years occurring in 2006 and 2007.
- The other large area with low soil moisture reserves, north and northeast of Edmonton, has received 40-60 mm over the past 30-days, which has likely been enough to sustain relatively good crop growth. Again, July is typically the wettest month of the year, and near normal precipitation accumulations should be adequate to sustain good crop growth.
- Areas with excessive moisture include the lake county mentioned above with areas grading to one in 25 to 50 year highs, a large area between Red Deer and Calgary, as well as many parts of southern Alberta and in and around Edson.

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Interesting Facts

- In the wake of last week's rain it may be surprising that the soil moisture map shows parts of southwestern Alberta with soil moisture reserves only ranging from 1 in 3 to one in 12 to 25 year highs,. However, it's important to realize that May and June are the "monsoon" months in this part of the province. The rains of July 16 to 19 were indeed extreme, but came with significant runoff and this map is estimating reserves nearly a week later.
- Additionally this part of the province traditionally gets big rains. Using Cardston as an example:
    - on June 17, 2014, 71 mm was recorded at Cardston
    - in comparison over the 1961 to 2014 period, eight events were reported with more than 70 mm falling in a single day, with a greatest daily accumulation (114 mm) occurring on June 6, 1995
    - six of these eight events occurred in May or June, one in September (2005) and one in August (2005)
    - four of these eight events occurred during the last decade 2004 to 2014.

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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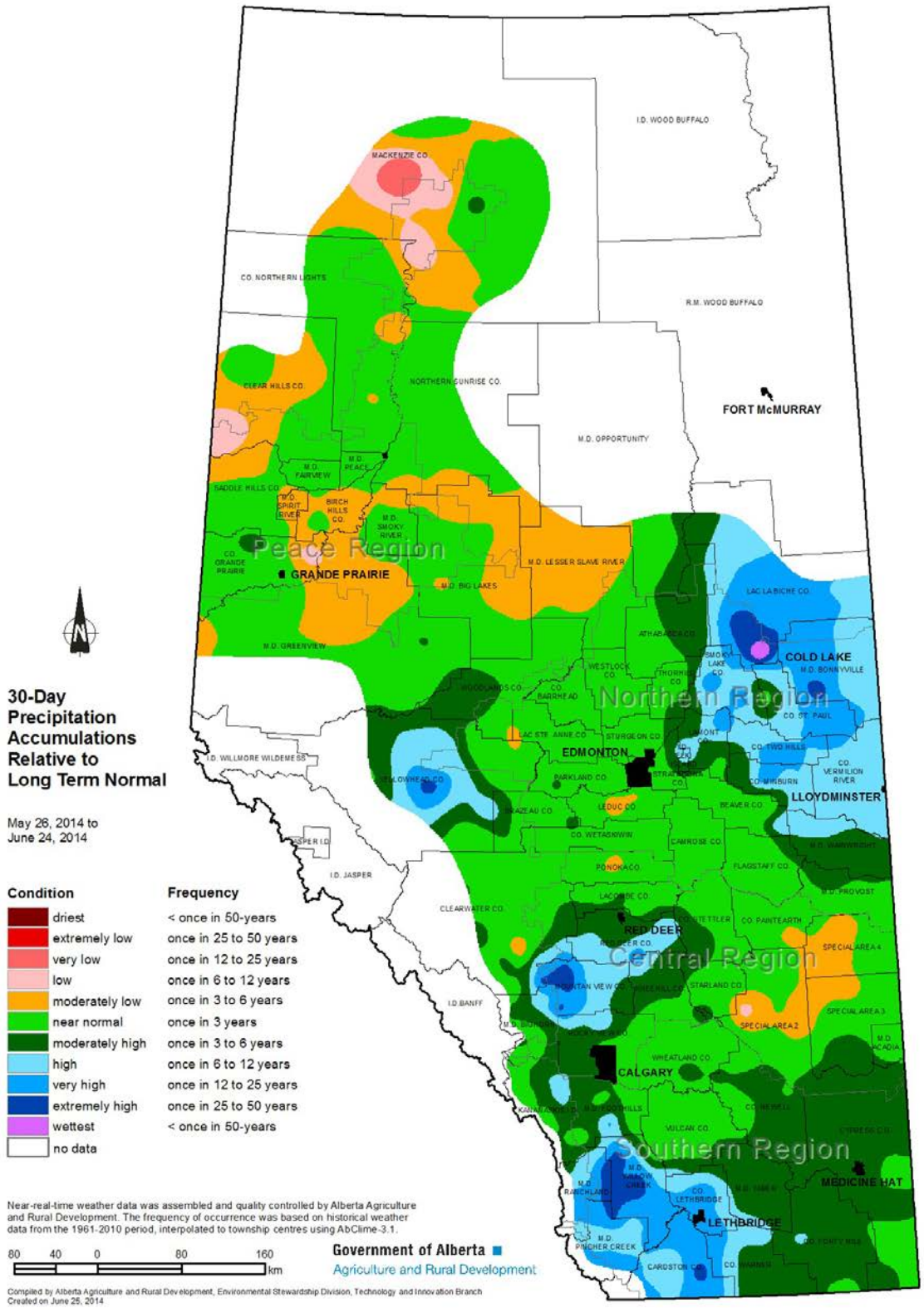

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