

Moisture Situation Update – August 28, 2018

Synopsis:

Last Thursday, August 23, 2018, marked the arrival of a cold arctic air mass that descended across the province, bringing an abrupt end to the long stretch of warm and dry weather that dominated the province over the past several weeks.

In its wake, many widely scattered agricultural areas experienced an early fall frost (**see map 1**). Through parts of central Alberta temperatures dipped below -2°C for a few hours during the early morning hours of Saturday, August 25th. The coldest temperatures were measured at the Ferintosh AGCM station (40 km south of Camrose) where the mercury dipped down to -2.4°C , staying below the freezing mark for three to four hours.

Early in the morning, Tuesday, August 28th, a second wave of frost touched down across a large area stretching from near Wainwright, down to about Oyen. The coldest air was measured at the Coronation climate station with temperatures remaining below zero for at least three hours, dipping to a low of -2.0°C . Notably, just south of Cypress hills, the Lodge Creek AGCM station recorded a low - 3.6°C with temperatures staying below freezing for about five hours.

Since cold air is denser than the surrounding air, and in the absence of strong winds, it drains across the landscape much like a layer of water would, finding its way into low lying areas, or being trapped by subtle surface features where it accumulates and pools, robbing the surrounding land of heat. As a result, local pockets of frost may be more or less severe than what is depicted on **map 1**. Fortunately, frost this early in the season can be very “hit and miss”, particularly following a long spell of warm weather, where radiant heat from the land surface helps warm the surrounding air. In some cases frost may only affect portions of fields, rather than large wide spread areas. For an interesting article on frost behavior, read AF’s “Protection Against Frost Damage” [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/aqdex9](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/aqdex9)

Along with the unseasonable cold, came some much needed moisture, particularly for southern Alberta, where most areas received at least 10 mm of moisture, ranging to over 40 mm in and along the Milk River Ridge (**see map 2**).

Forecasts from Various Sources:

Until about Tuesday next week, wet weather is expected to continue across most of the north half of the province, extending down at least as far as Red Deer as well as for most lands under the influence of the foot hills. Forecasts for much of southern Alberta are currently showing cool but dry conditions are expected to prevail during this time.

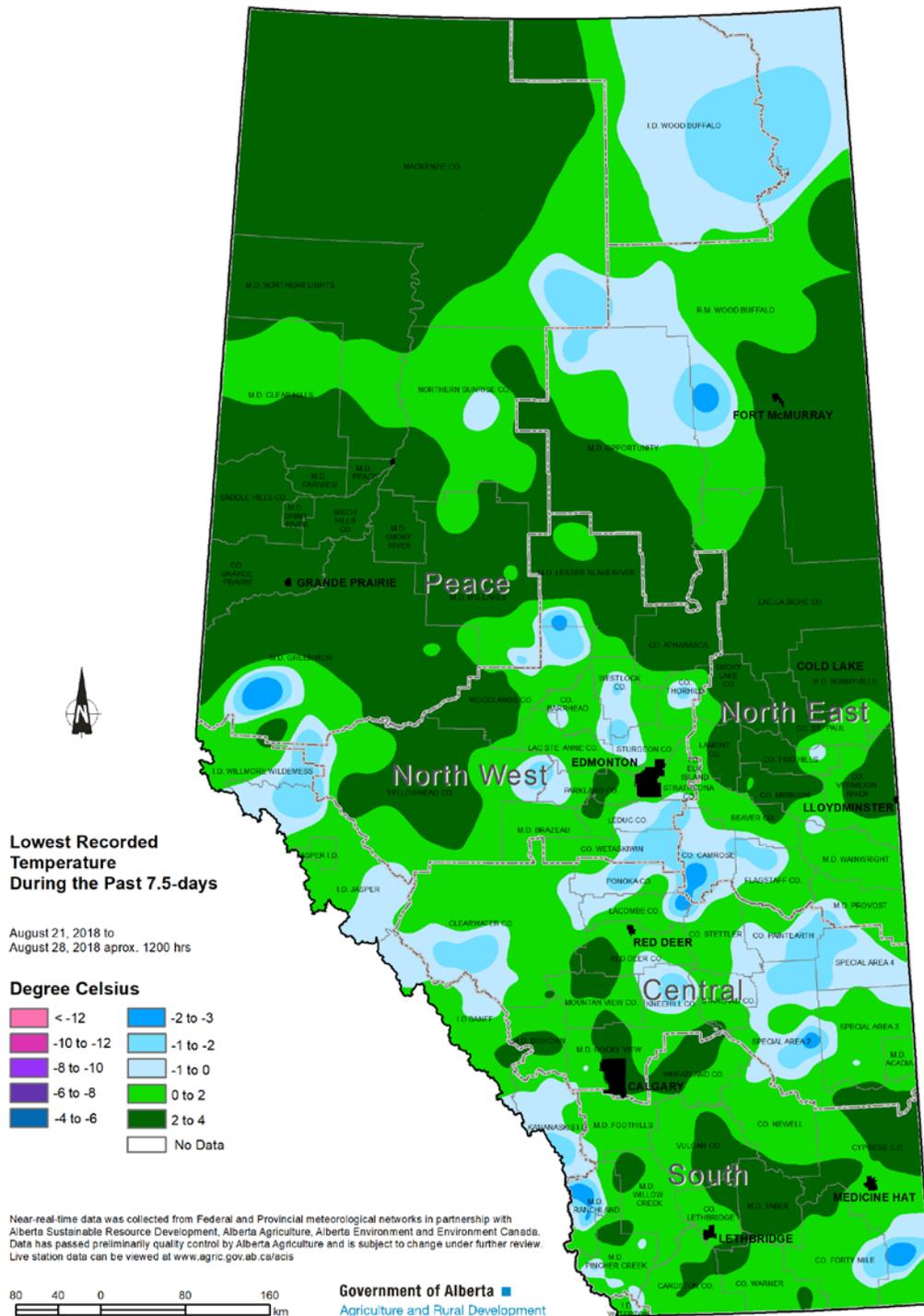
Near-real-time hourly station data can be viewed/downloaded at www.agriculture.alberta.ca/stations

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

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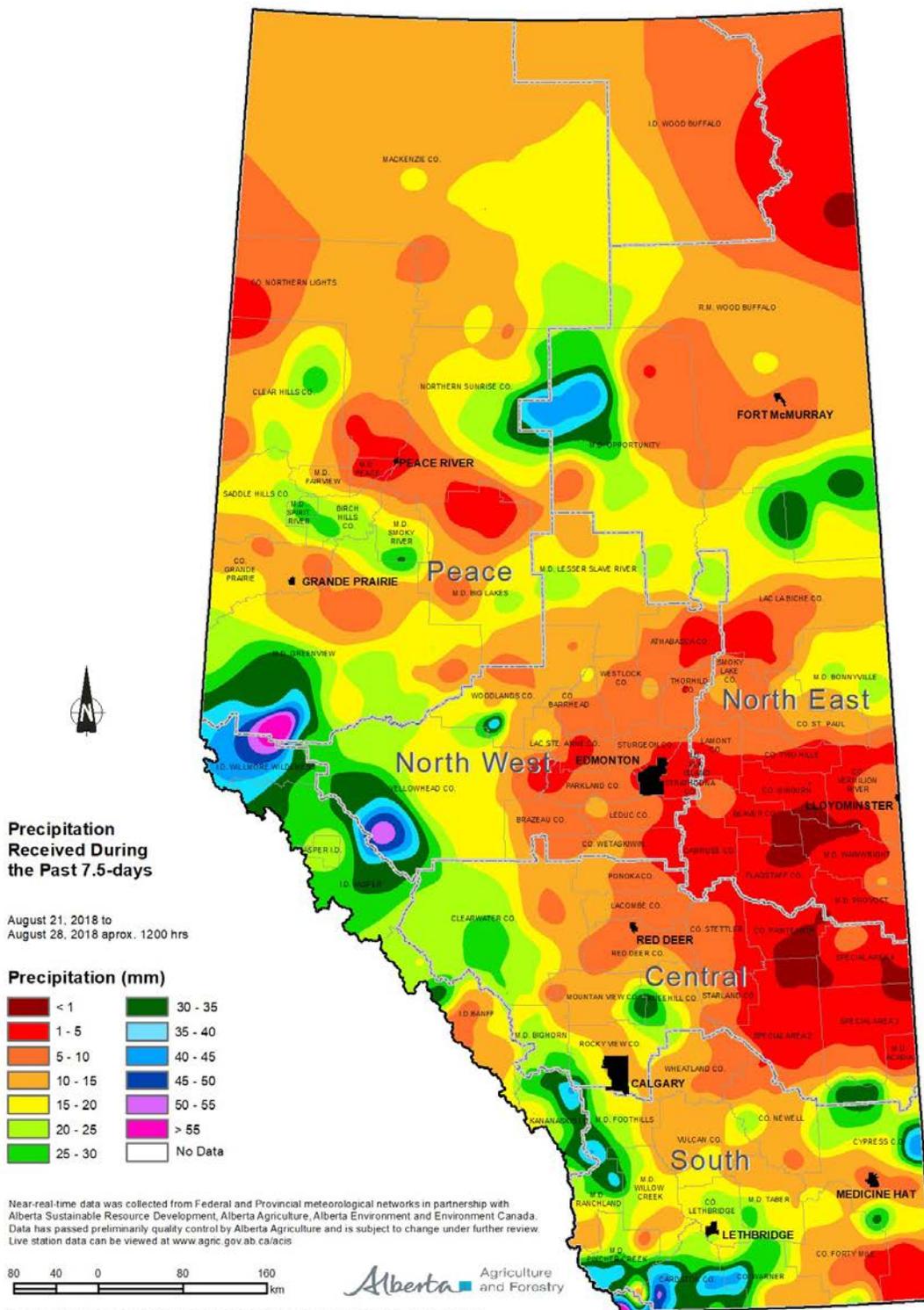
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Map 1



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Map 2



Visit weatherdata.ca for additional maps and meteorological data