

Agricultural Moisture Situation Update

October 1, 2019

Southern Alberta snowfall accumulations (Maps 1 and 2)

Over the weekend, a large storm system deposited significant amounts of snow across most of the south-half of the province. Lands south of Red Deer received at least 10 cm of fresh snow. At least 20 cm fell across a large area lying west of a line from Rocky Mountain House, running diagonally down to Medicine Hat (**Map 1**).

Moving westward, snowfall accumulations increased rapidly towards the foothills, with some areas south of Calgary and lying west of Highway 22, experiencing more than 1 meter of snow. Six mountain stations have reported over 130 mm of precipitation (measured as depth of water), with two stations in the mountains west of Lethbridge, Spionkop Creek and Porcupine Lookout recording 260 and 212 mm, respectively (**Map 2**). This translates to about 2 m of fresh snow accumulating in less than 4-days.

For those areas that did not receive snow, north of Red Deer, upwards of 20 mm fell throughout parts of the North East, and southern Peace Region (**Map 2**). For the most part this moisture is unwelcome as harvesting operations are currently underway.

Some areas in and around Lethbridge received upwards of 30 cm of snow. Looking back through Lethbridge's historical records as far back as 1961, there was only one year with more snow in September. That was 1968, when an estimated nearly 1 meter of snow fell. This is about three times more than what fell this weekend. Ranked third and fourth are the Septembers of 1972 and 1965 with each receiving nearly 20 cm of snow.

Frost during the past 5-days (Map 3)

As the skies cleared in the wake of the storm, all of Alberta was left with freezing overnight temperatures. On the morning of October 1st, many stations recorded temperatures below -10°C.

Claresholm was the coldest, dipping to -19.4°C at 5:00 am, with temperatures remaining below -10°C for 13 hours.

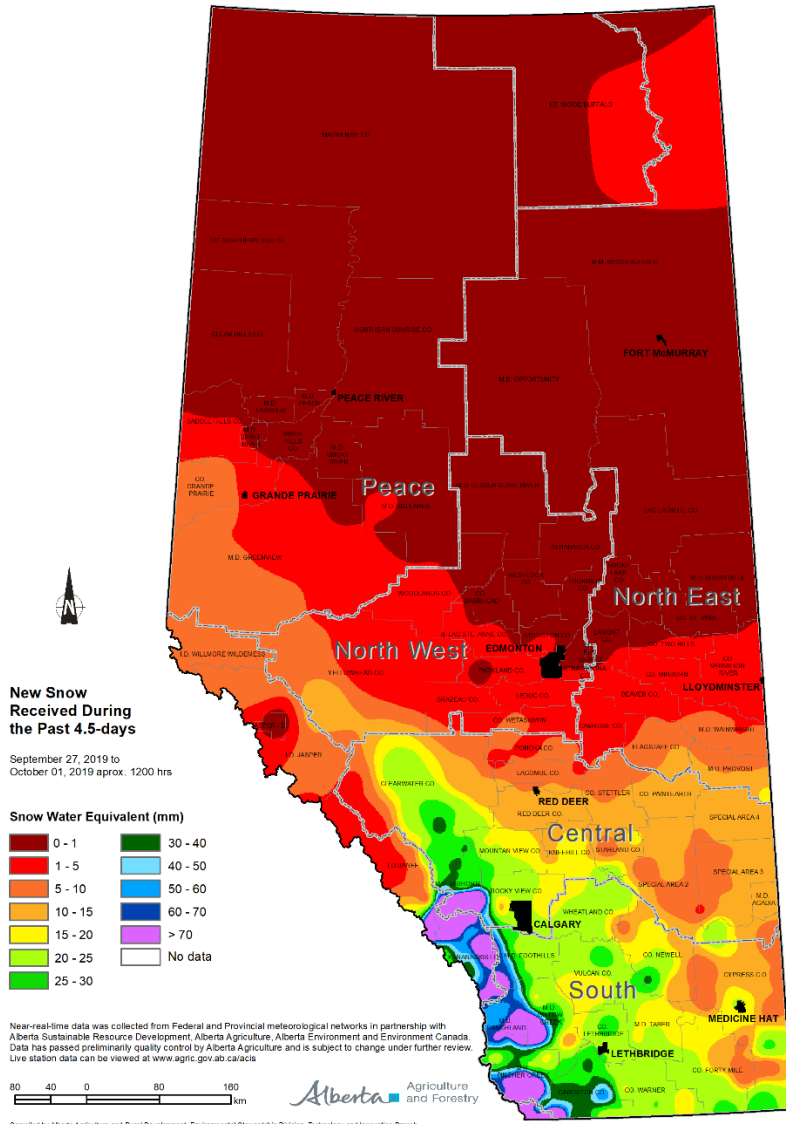
Nearly the entire province experienced hard frosts, with most areas seeing the temperature dip well below -4°C for several hours. Only a small portion of the far eastern portions of the province escaped hard frosts with many areas lying between Lloydminster, and Oyen only dipping to -1°C.

September rainfall accumulations (Map 4)

The month of September has been relatively wet throughout the entire province, with most areas experiencing at least 30 mm of moisture. Much of the North West has continued with wet weather in September, following abundant rains in June, July and August. Here some lands have received between 80 to 100 mm which is roughly twice the normal amount.

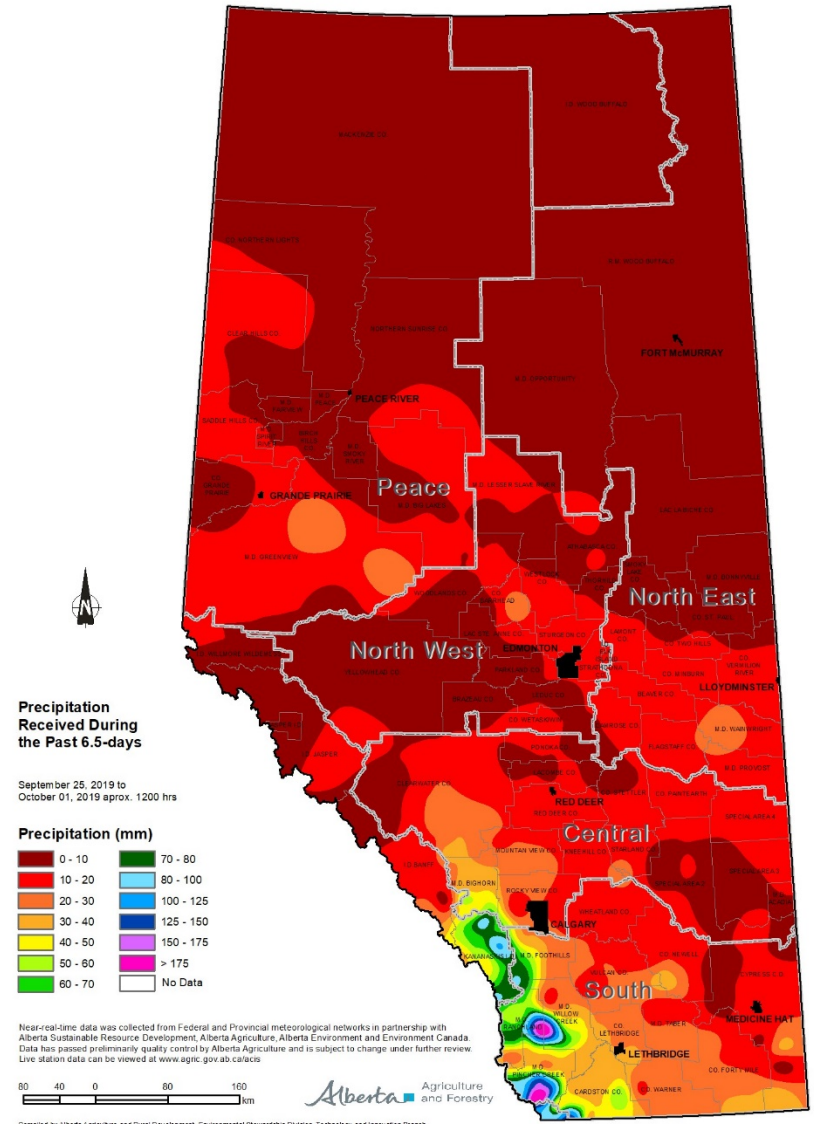
Other wet areas include a large area extending from the extreme southern Peace Region, down along the foothills to the US border where precipitation accumulations range from 60 to well over 100mm. Additionally a large strip of land from about Wetaskiwin, through Camrose and continuing just north of Lloydminster has received 50 to 70 mm of rain. Finally the Central Peace region has been quite wet, too, with upwards of 60 to 80 mm of rain recorded since the start of September.

Map 1



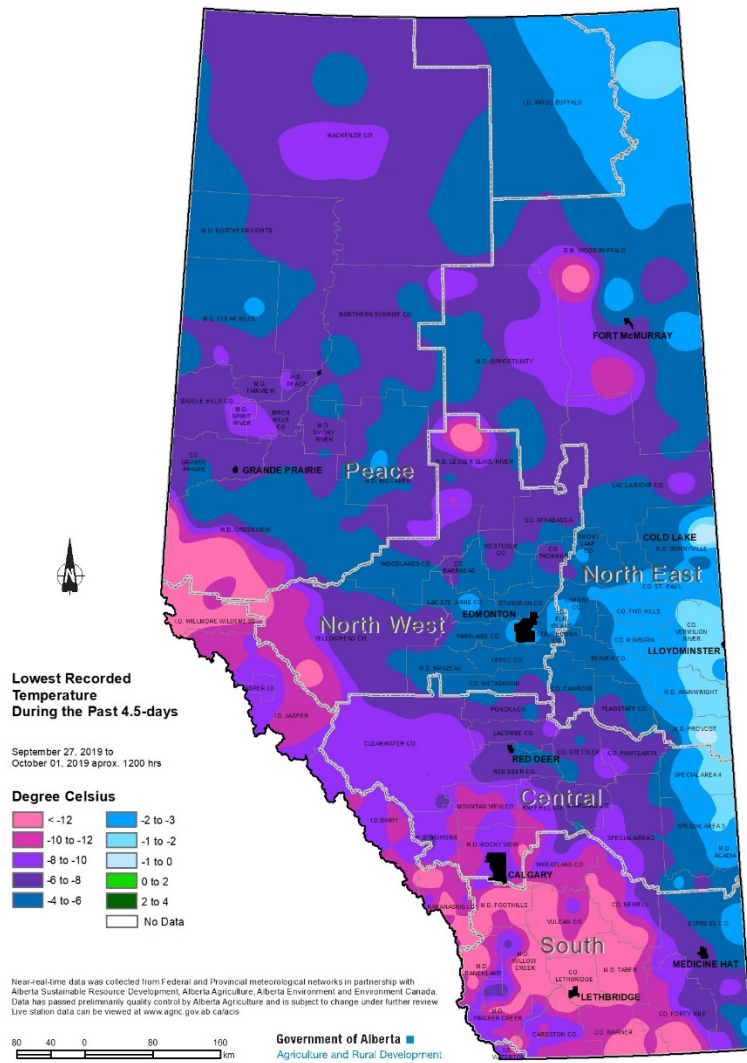
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Map 2



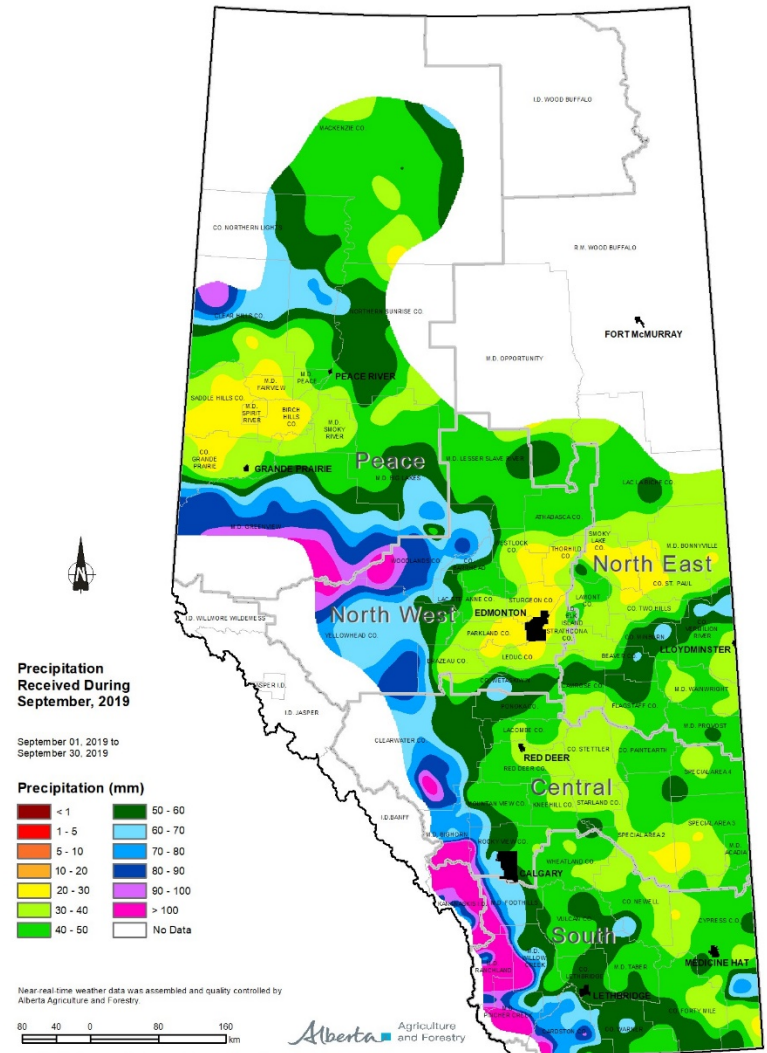
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Map 3



Created by Alberta Agriculture and Rural Development, Environmental Stewardship Division, Technology and Innovation Branch
Created on October 01, 2019

Map 4



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