Agricultural Moisture Situation Update
July 5, 2024

Synopsis

Since the June 26th report, most of the Central Region, along with parts of the North West and Southern regions received upwards of 30 mm of rain, grading up to over 70 mm in several areas (**Map 1**). The greatest accumulations occurred through the Special Areas, with the wettest weather (117.6 mm) being recorded at the Consort AGDM station. Notably a large area west of Red Deer that has been relatively dry, received well over 50 mm, just in time for the heat wave which is now building across the province. This along with peak day length at this time of year, should give crops a good boost and allow those lands that are a bit soggy to dry out. Long range forecasts are presently suggesting this heat should begin to moderate by Friday, July 12th.

Areas that largely missed out on recent rains include the western and northern Peace Region and throughout much of the North East, where moderate moisture deficits are potentially beginning to develop in some areas. Rain will be beneficial for these areas in the face of the expected heat. With ample moisture now present across large parts of the province, hopefully evaporation will help fuel some moderate thunderstorm activity across these drier areas in the coming days. As always, heat and moist air at this time of year remains a good recipe for severe thunderstorm activity, so remain watchful and take shelter if you see adverse weather developing.

60-Day Precipitation Trends

Despite last week's generous rains across many areas, 60-day deficits still exist throughout parts of the Central Region, the North West, and to a lesser extent through the western parts of the Southern Region (**Map 2**). Relative to the 1961-2023 average, most of the North West, and the western portions of the Peace, Central and Southern regions have received below average moisture, ranging from 50% to 90% of "normal" (**Map 3**). In contrast, most of the east-half of the province and the central Peace Region are near to above average, with large areas receiving at least 130% of average. Total precipitation across each of the four regions is variable, ranging from less than 100 mm to over 180 mm (**Map 4**). The driest location occurs in and around La Glace (30-km northwest of Grande Prairie) where 64 mm has been recorded since May 1, roughly 50% of the normal (120 mm). For perspective, 60-day averages (1961-2023) for select locations are as follows: Beaverlodge 110 mm, Edmonton 125 mm, Red Deer 155 mm, Brooks 115 mm and Fort Macleod 151 mm.

Note that Fort McLeod's 60-day average at this time of year appears higher than many might expect, but remember, it gets an early start to the wet season, which ends abruptly in July (**Map 5**), and throughout most other locations, July remains wet. For context, July averages for these 5 locations are as follows: Beaverlodge (70 mm), Edmonton and Red Deer (90 mm), Brooks and Fort Macleod (40 mm).

Soil Moisture Reserves Relative to Normal

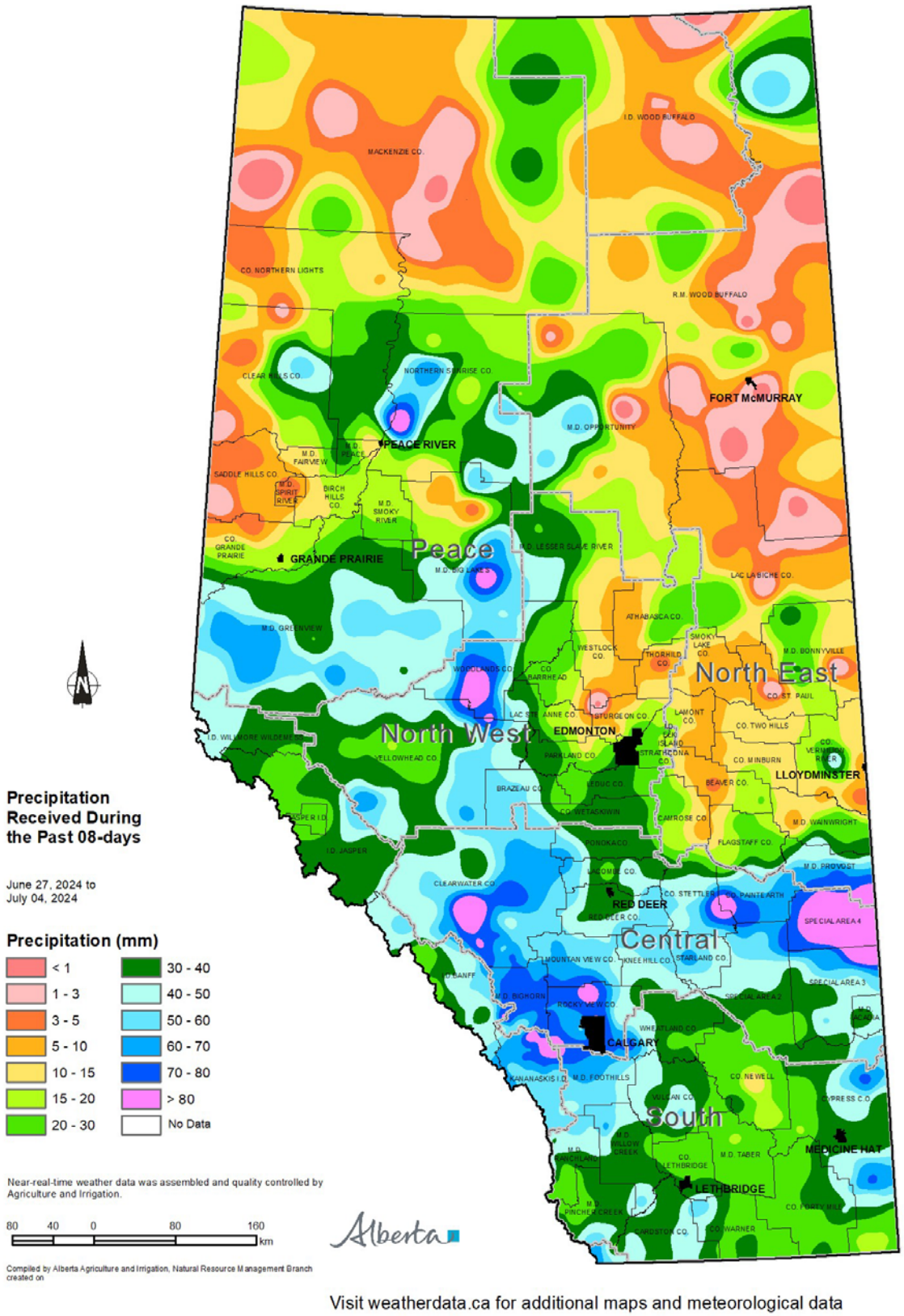
On average, by late June, soil moisture reserves reach their peak levels, and as crops mature and water use peaks, rainfall is usually unable to keep up with moisture demand and soil moisture reserves enter a net depletion phase. Currently many of our agricultural areas are at least near normal with respect to soil moisture and some lands in the Central, Southern and Peace regions are above normal for this time of year (**Map 6**). In contrast, reserves are below normal for large parts of the North West, the west-half of the Central Region and the western and northern portions of the Peace Region. Fortunately, in most of these areas, July is still typically a good month for moisture (**Map 5**) and as such, the risk of serious moisture stress developing moving forward is relatively low even if rainfall ends up somewhat below normal.

Perspective

With the droughts of 2021 and 2023 fresh in everyone's mind, the fear of another drought in 2024 was ever present, particularly given the warm relatively snow free winter that followed the fires and drought of 2023. Thankfully for most, 2024 has been shaping up as a good year for growing crops. However, July will remain a critical month, particularly for those areas generally north of the TransCanada Highway where seeding occurs later. With favourable weather, this year's harvest should not be disappointing providing that we receive adequate moisture (near normal) and warmer temperatures prevail along with favourable harvest weather this fall.

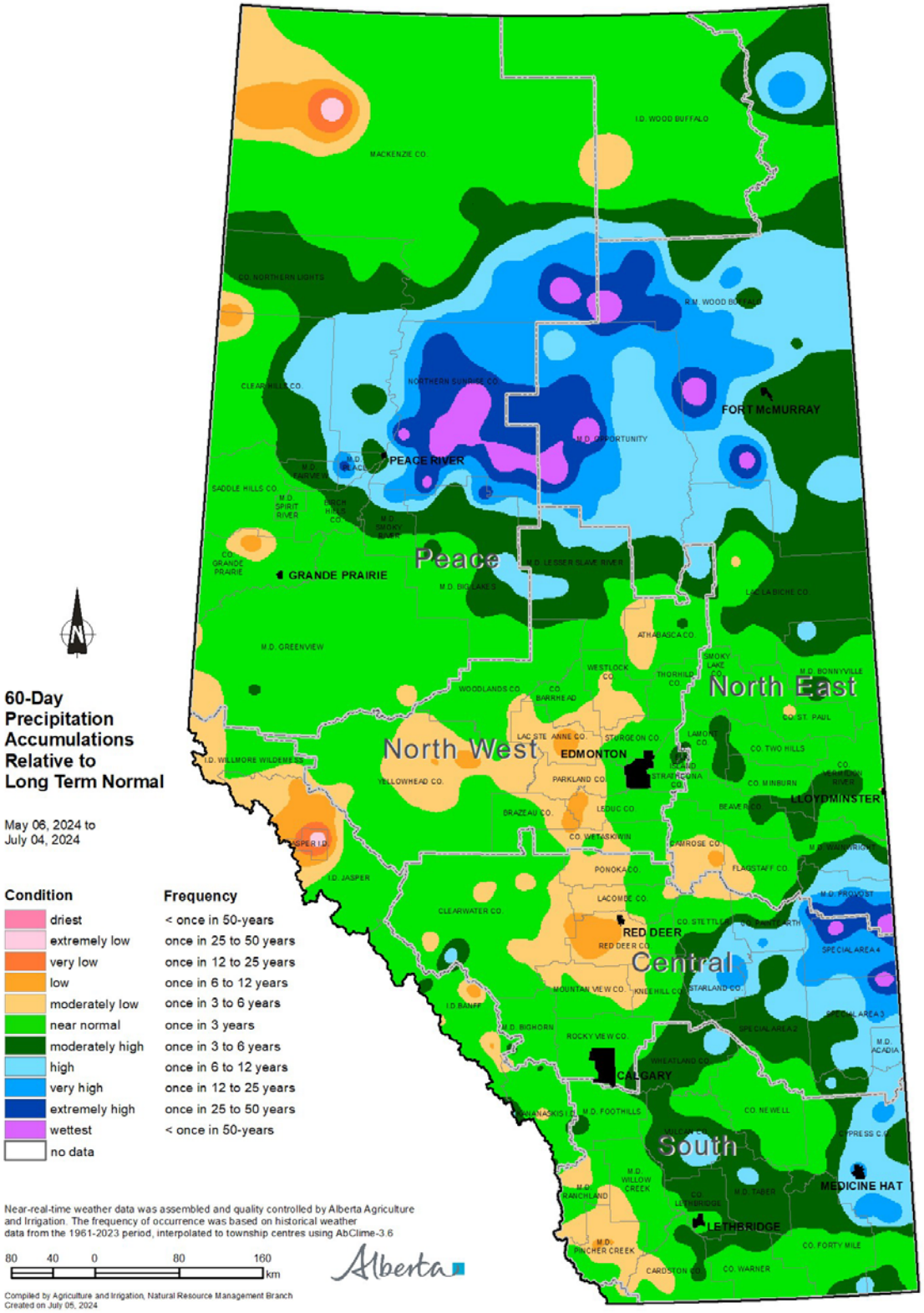
https://open.alberta.ca/publications/moisture-situation-update

Map 1



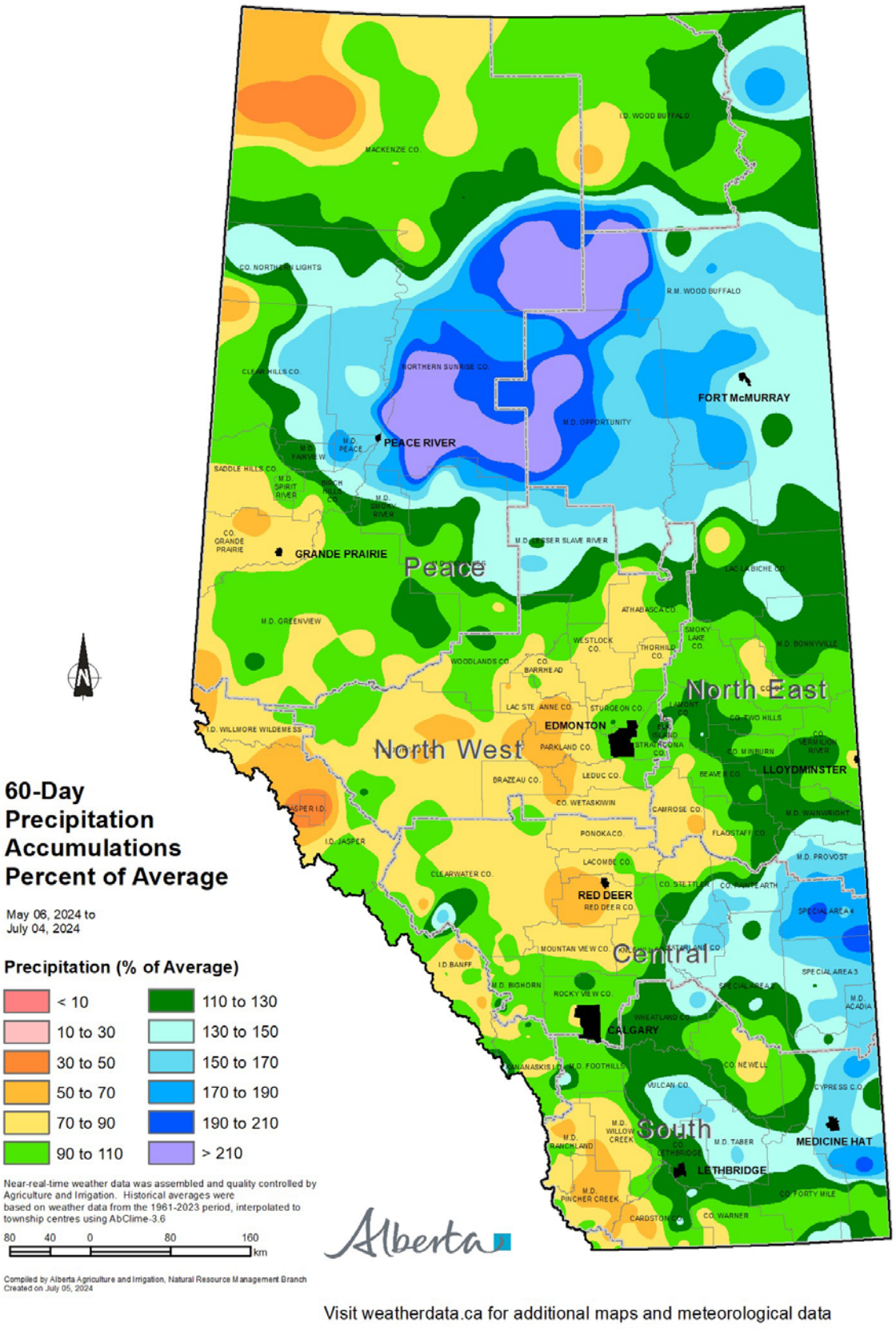
Visit weatherdata.ca for additional maps and meteorological data

Map 2



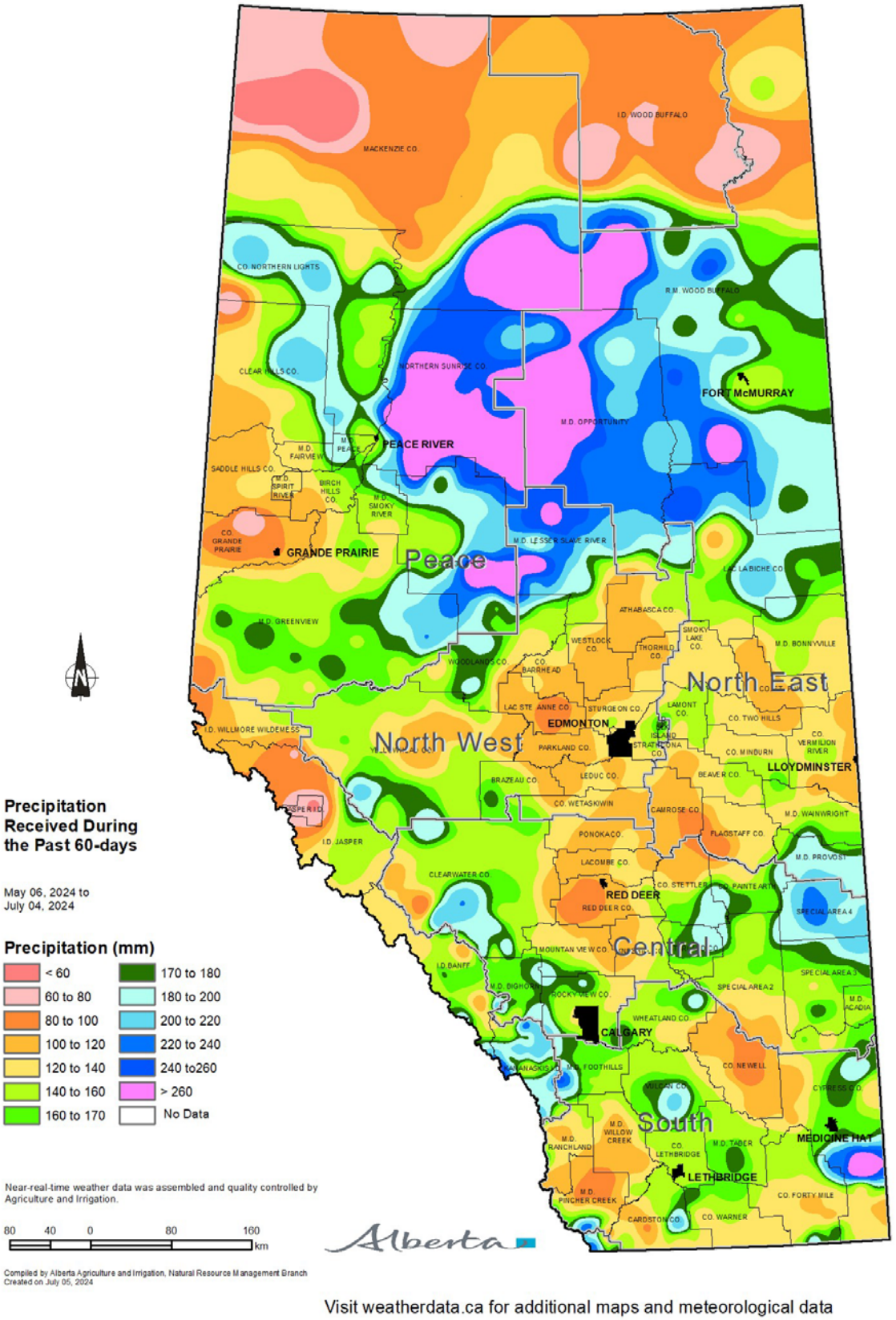
Visit weatherdata.ca for additional maps and meteorological data

Map 3



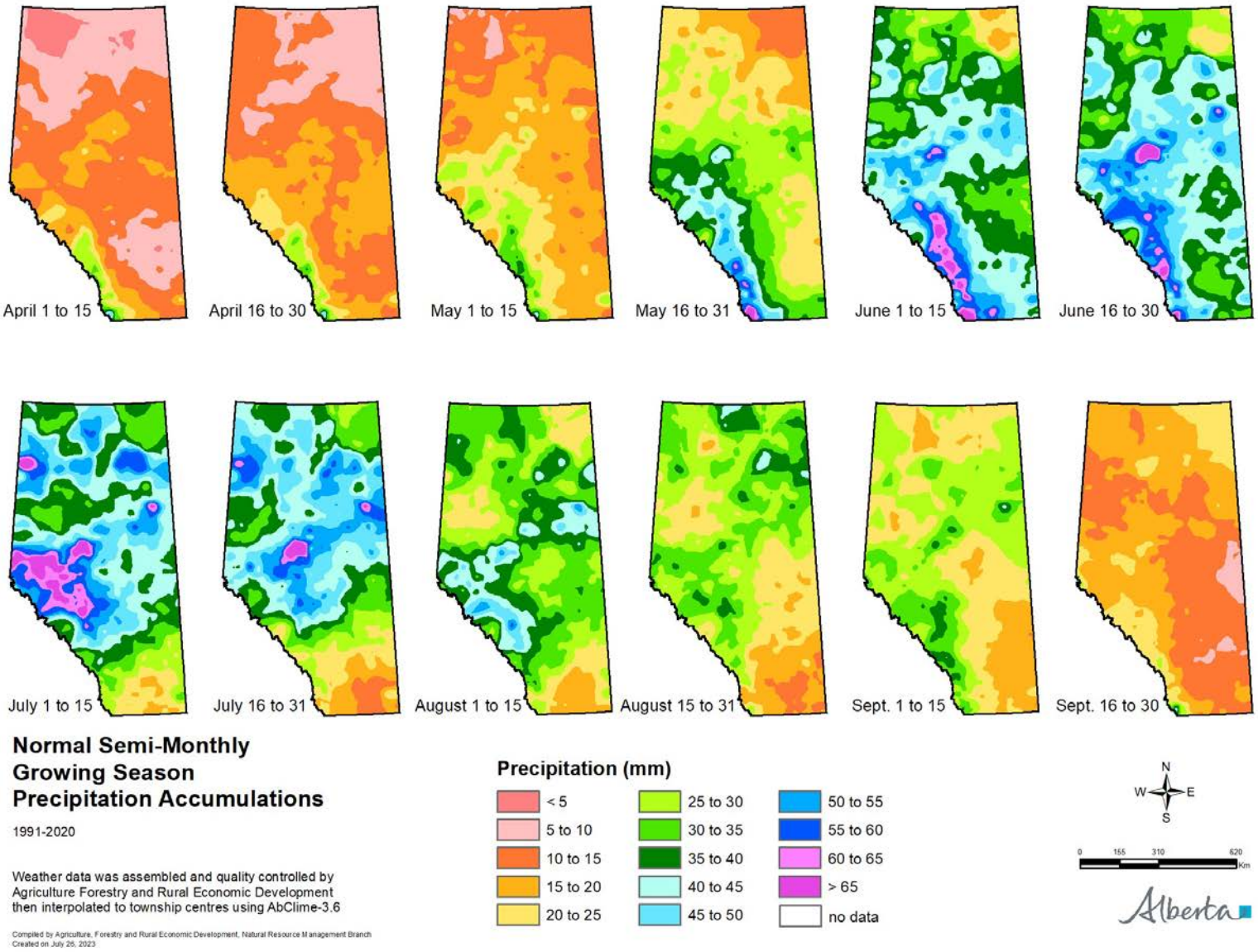
Visit weatherdata.ca for additional maps and meteorological data

Map 4



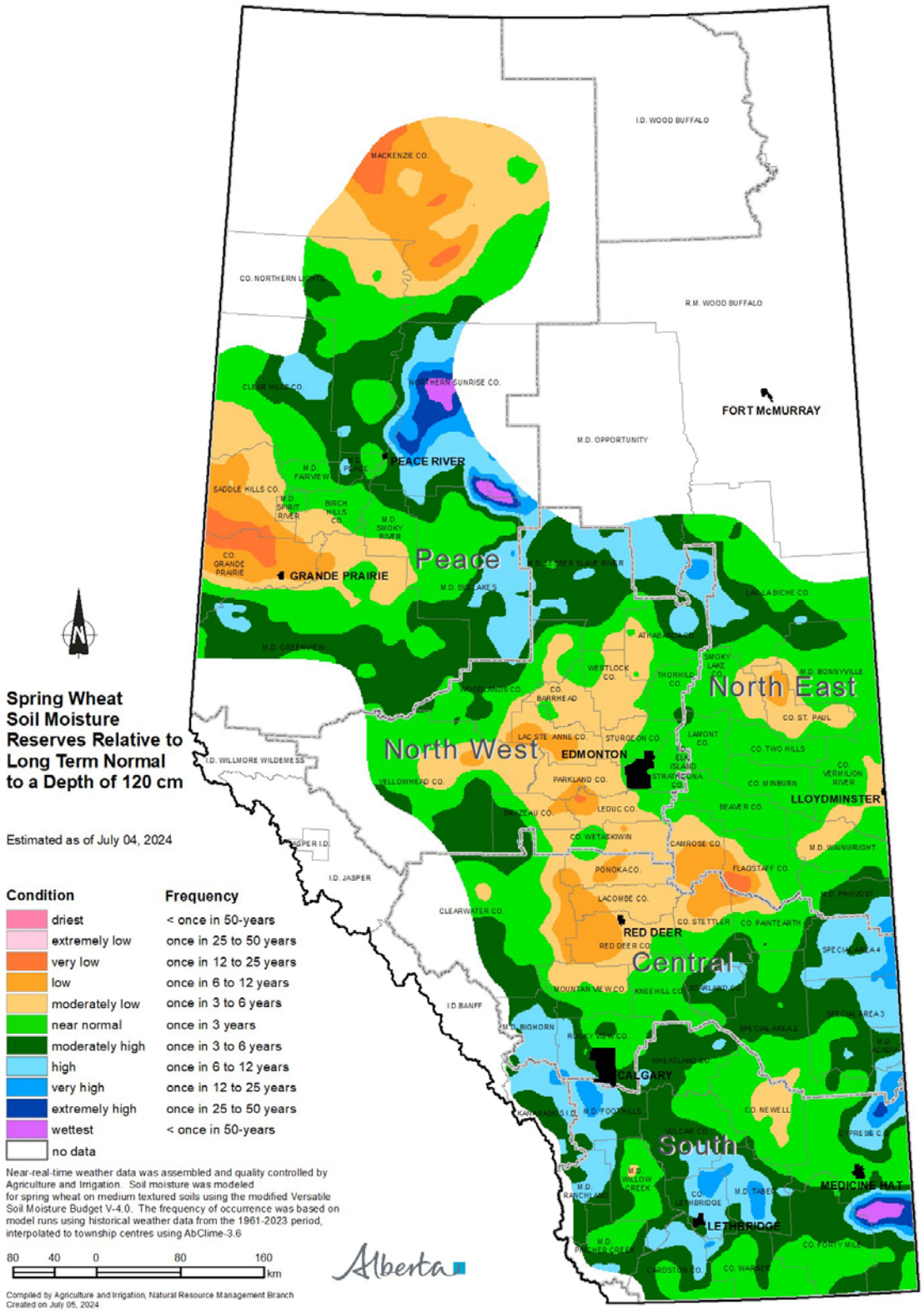
Visit weatherdata.ca for additional maps and meteorological data

Map 5



https://open.alberta.ca/publications/moisture-situation-update

Map 6



Visit weatherdata.ca for additional maps and meteorological data