

WATER AVAILABILITY AND DROUGHT CONDITIONS REPORT **JUNE 27, 2008**

Conditions for June 20th to June 26th

- There has been little precipitation for the past week in much of southern Manitoba.
- Water levels and flows on most streams and rivers in southern Manitoba are in the normal range and receding.
- Water supply reservoirs in southern Manitoba are generally full or close to full.
- Aquifer levels remain close to average.
- As of June 23rd, fire danger levels remained very high in much of the Northern part of the Province. Rainfall received on June 23rd and 24th likely alleviated the situation with more than 30 mm of precipitation received in Thompson. Fire danger levels in the southern half of the Province are moderate in most areas with the Eastern region once again slowly climbing into the higher levels (<http://www.gov.mb.ca/conservation/fire/>)
- The second interdepartmental drought committee was held on June 25, 2008. As immediate drought concerns are reduced, the committee does not plan to meet again until November when fall soil moisture conditions are known, unless drought concerns arise through the growing season.

Background Conditions

Weather:

Most of southern Manitoba experienced a dry summer and autumn in 2007, followed by below average winter precipitation and dry conditions during April and May. Between April 1st and June 25th, precipitation has been near normal across southern Manitoba. Precipitation remains below average in the Swan River area and northern Manitoba.

River Flows:

Spring runoff was below average across most of southern Manitoba but not among the lowest on record. However, there was little or no runoff in the Souris River and Pembina River watersheds.

Flow in the Souris River was well below average during April and May but had recovered to near normal by mid June. As per an international agreement, 20 cubic feet per second will be released from storages in North Dakota from June 1st to October 31st. This will provide sufficient supplies for cattle watering and other uses along the river.

Flows on streams with significant reservoirs, such as the Assiniboine River, Boyne River, and Valley River will be sufficient to support agricultural uses this summer.

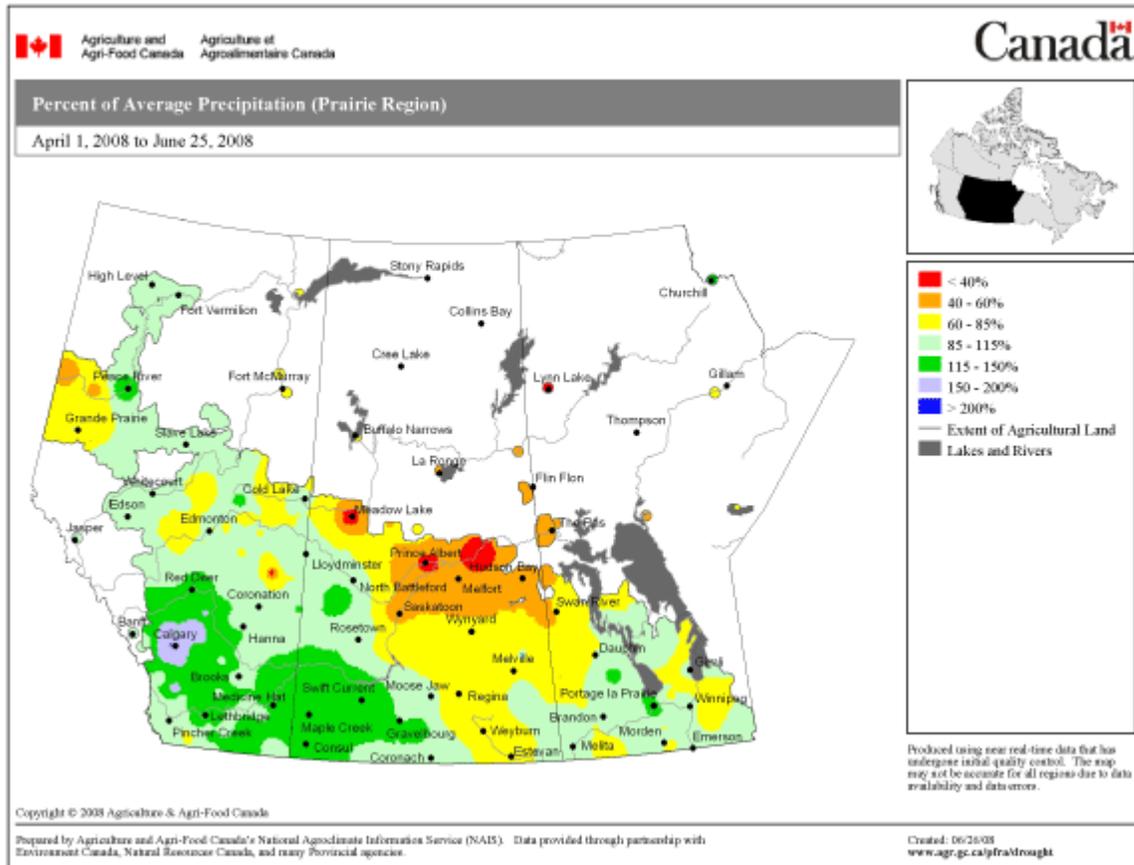


Figure 1. Percent of average precipitation (From Agriculture and Agri-Food Canada)

Water levels on the Winnipeg River have been rising steadily since early May in response to several significant rainfall events. An updated flood advisory was issued June 13th.

The Red River crested in the Winnipeg area June 21. The Red River is declining quite rapidly but flows will be above average for the next few weeks.

For more information on the river flows, please visit:
<http://www.gov.mb.ca/waterstewardship/floodinfo/index.html>

On-Farm Water Supply:

On farm water surface water supplies are very low in southwestern Manitoba due to a lack of water sources from which to pump water this spring. The Water Services Board and Conservation Districts report that many dugouts are dry or contain little water. It is expected that precipitation received last week will have helped to refill dugouts by providing temporary sources of water for pumping.

- Farmers in southwestern Manitoba have been hauling water since early May for cattle watering and domestic use.
- In central and southeastern Manitoba, there appears to have been a moderate replenishment of dugouts this spring. However some off-stream storage reservoirs in the Pine Creek area and in the Tobacco Creek and Buffalo Channel areas are only about 90 % full.

Reservoirs:

Most reservoirs operated by the province are full and have plenty of water for the remainder of 2008 even though levels could decline to below average with dry weather. However, a few reservoirs are relatively low, including Deloraine Reservoir which is three feet below full supply level. Pleasant Valley Reservoir near Gilbert Plains has recovered and is now less than one foot below full supply level. Jackson Lake near MacGregor is not quite full but this is not unusual.

Aquifers:

Water levels in most aquifers are currently at or close to average levels for this time of year. Water level responses to seasonal or yearly precipitation fluctuations in most aquifers lag considerably behind surface water responses so even prolonged periods of below normal precipitation may not have a significant deleterious effect on groundwater levels. Most aquifers also retain very large amounts of groundwater in storage and can continue to provide water during extended periods of dry weather. Consequently, the major concern regarding groundwater and dry periods relates to shallow sand aquifers and large-diameter wells constructed into these aquifers. Many of these areas are serviced by water supply pipelines sourced by more drought resistant aquifers.

Background on Water Supply and Drought

Actions to Cope With Drought:

As of June, 2008:

- Operate dams to supply downstream water needs while conserving reservoir water as much as possible for later use (Regulatory and Operational Services Division, Water Stewardship).
- Continue providing pumps for farmers to fill dugouts from ditches or other temporary water sources following rainfall (Manitoba Conservation Districts).
- Advise as to sources of reliable water for water hauling (Manitoba Water Services Board).
- Provide inter-agency water supply/drought condition reports (Ecological Services Division and Regulatory and Operational Services Division, Manitoba Water Stewardship).

- Inter-agency drought committee established (Manitoba Agriculture, Food and Rural Initiatives).

If the Drought worsens this summer the inter-agency drought committee will provide advice on:

- Non-essential uses and curtail such uses;
- Possible difficulties such as intakes needing to be lowered (based on river and reservoir forecasts); and
- The need to secure rural water supplies by deepening pump intakes.

Levels of Drought:

There are several levels of drought depending on the length of the dry period and the time of the year. Drought pertaining to crops and forest fires can develop quite quickly following a period of below average precipitation. Surface water drought with respect to farm dugouts can occur quickly during the spring if there is little or no spring runoff. A more general surface water drought with low reservoir and low river levels tends to develop after a somewhat longer period of dry weather of a few seasons. Groundwater drought is the last to develop and may require many years of dry weather to develop.

Prepared by Manitoba Water Stewardship Drought Committee:

Bob Harrison, Chair, Surface Water Management, 945-7411
Alf Warkentin, Flood Forecasting and Coordination, 945-6698
Bob Betcher, Groundwater Management, 945-7420
Rhonda McDougal, Planning and Coordination, 945-8271