

WATER AVAILABILITY AND DROUGHT CONDITIONS REPORT

Issued on August 12th, 2009

Synopsis/Overview

Drought Condition Levels

The Palmer Drought and Standard Precipitation Index indicates moderate drought conditions for Swan River and the surrounding area and abnormally dry conditions for Morden, Winkler, Pilot Mound, Melita and Russell (Attachment 1).

Precipitation

Average to above average precipitation was received over the last 30 days in most areas with the exception of Swan River and the surrounding area where precipitation was below average.

Average to above average precipitation was received over the last 90 days in most areas with the exception of Morden to Swan River and westward where precipitation was below average for the month of July. For the last three months precipitation in the Swan River area has been extremely low. Since the June 2008 report, the dry area has also extended from Virden to Melita and Morden (Attachment 2);

<http://www.gov.mb.ca/agriculture/climate/wad00s00/cropwxrep.pdf>).

Stream and River Flows

Stream and river flows were average and above average for the entire province with the exception of the Saskatchewan and Gods Rivers where flows were below average for the month of July (Attachment 3).

http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river_report2009-06-25.html;

On-Farm Water Supply

Generally on-farm surface water supplies are adequate.

Reservoirs

All reservoirs operated by the province are either full or close to full at this time and all contain enough water to last through the remainder of 2009.

Aquifers

Water levels in most major aquifers are currently at above 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

Soil Moisture

No update since the December 2008 Water Availability and Drought Conditions report.

Environment Canada’s 3 Month Outlook (August-September-October 2009)

The three month Environment Canada forecast is for normal temperatures for the entire province with the exception of below normal temperatures for north-eastern Manitoba and normal precipitation for the entire province with the exception of above normal for a part of eastern Manitoba and below normal for the far north (Attachment 4).

Detail by Watershed (Attachments: 1- 5)					
Watershed	Indicators				
	1 month Precipitation (July 8- August 6 2009)	3 month Precipitation (May 9 - August 6 2009)	Flow Conditions (July 2009)	Palmer Drought Index (PDI) (July 2009)	Standard Precipitation Index (SPI) (July 2009)
Red River	Average to above average except below average for Pilot Mound and Morden	Average to above average except below average for Pilot Mound and Morden	Above average	Moderately wet to very wet except dry for Morden, Winkler and Pilot Mound	Moderately wet to very wet except dry for Morden, Winkler and Pilot Mound
Winnipeg River	Average to above average	Average to above average	Above average	Very wet	Very wet
Assiniboine River- Souris River	Average to above average	Below normal. Well below normal for Russell	Average to above average	Moderately wet except dry from Melita to Russell	Moderately wet except dry for Melita and Russell
Lake Manitoba	Average to above average except below average for Swan River and surrounding area	Below average to average. Well below average for Swan River and surrounding area	Above average	Moderately wet except mild drought for Swan River and surrounding area	Moderately wet except mild drought for Swan River and surrounding area
Lake Winnipeg	Average to	Average to	Above average	Very wet	Very wet

	above average	above average			
Saskatchewan River	Average to above average	Average to above average	Below average for Saskatchewan River at the Pas	Moderately wet except dry for The Pas.	Moderately wet
Nelson River	Average to above Average	Average to above average	Above average	Very wet	Moderately wet
Hayes River	Average to above Average	Average to above average	Below average for Gods River at Shamattawa	Moderately wet to Very wet	-
Churchill River	Average to above average	Average to above average	Above average	Very wet	Moderately wet
Seal River	-	-	Above average	-	-

Acknowledgements

This report was prepared with information from the following sources and which are gratefully acknowledged:

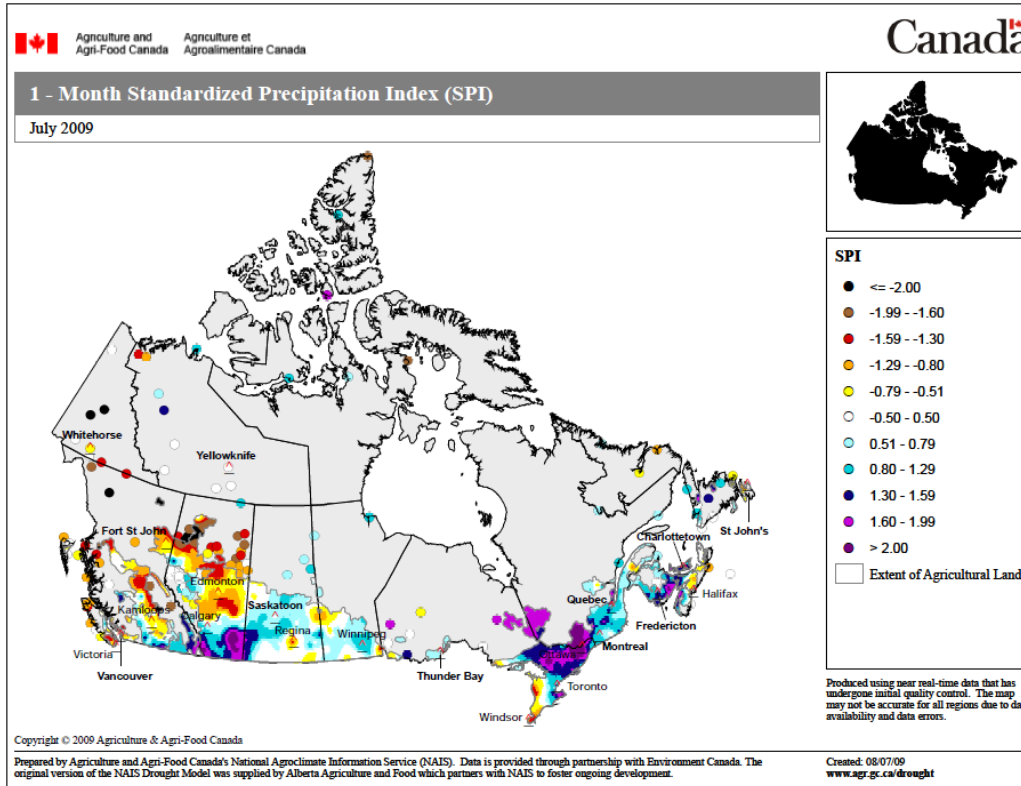
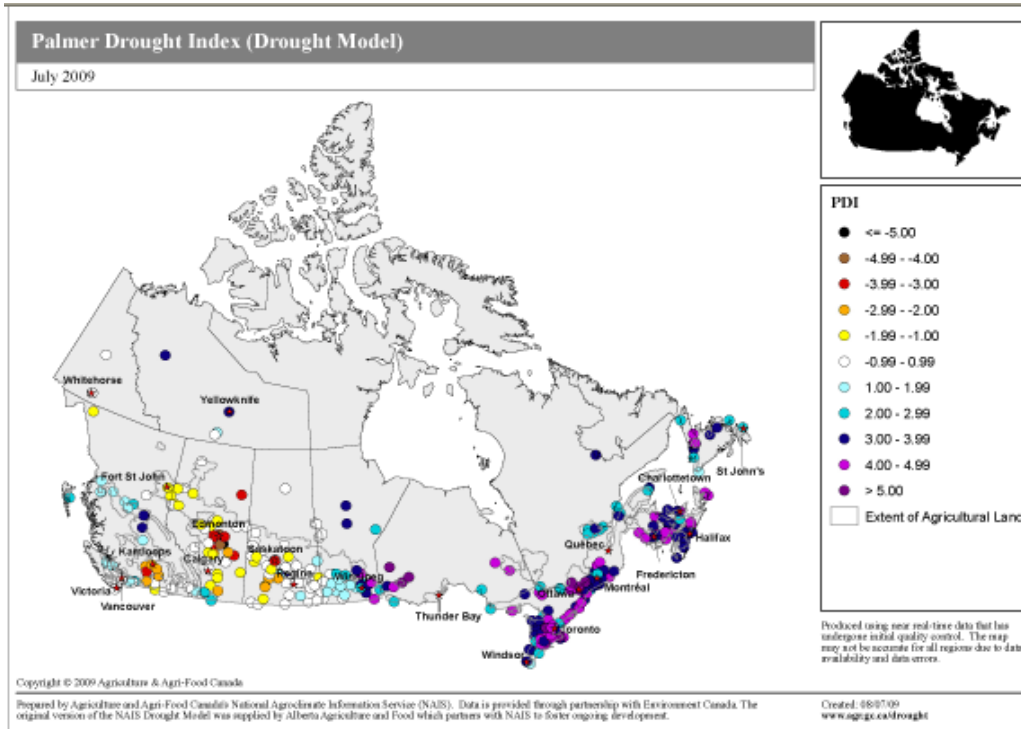
- Agriculture and Agri-food Canada, http://www.agr.gc.ca/pfra/drought/mapscc_e.htm
 - Regional site: [30 and 90 precipitation](#)
 - National Site: [Palmer Drought](#) and [Standard Precipitation Indices](#)
- Manitoba Water Stewardship: Flow and Precipitation information: http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river_report2008-18-12.html); http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/Weekly_Flows_2009.pdf). <http://www.gov.mb.ca/waterstewardship/floodinfo/maps.html>
- Fire Hazard: <http://www.gov.mb.ca/conservation/fire/>
- Environment Canada 3 month climatic outlook: http://www.weatheroffice.gc.ca/saisons/index_e.html
- North America Drought Monitor: http://www.agr.gc.ca/pfra/drought/mapscc_e.htm; http://www.agr.gc.ca/pfra/drought/pr_e.htm
- Manitoba Crop Weather Report, Manitoba Agriculture, Food and Rural Initiatives (MAFRI): <http://www.gov.mb.ca/agriculture/climate/wad00s00/cropwxrep.pdf>

For further information, please contact:

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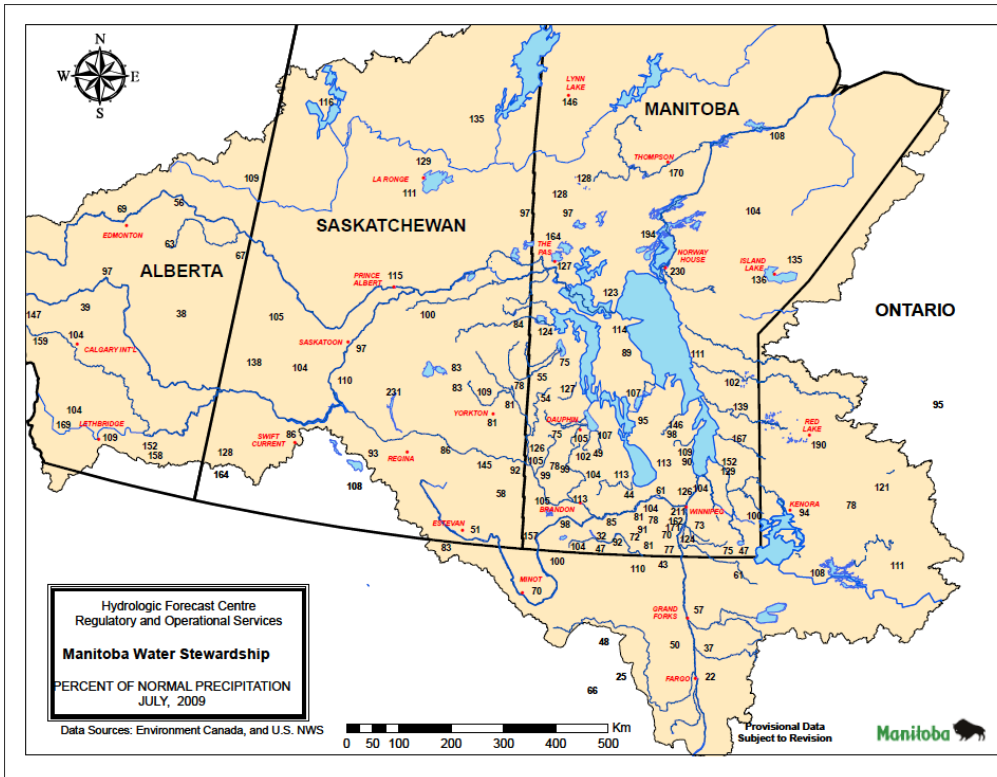
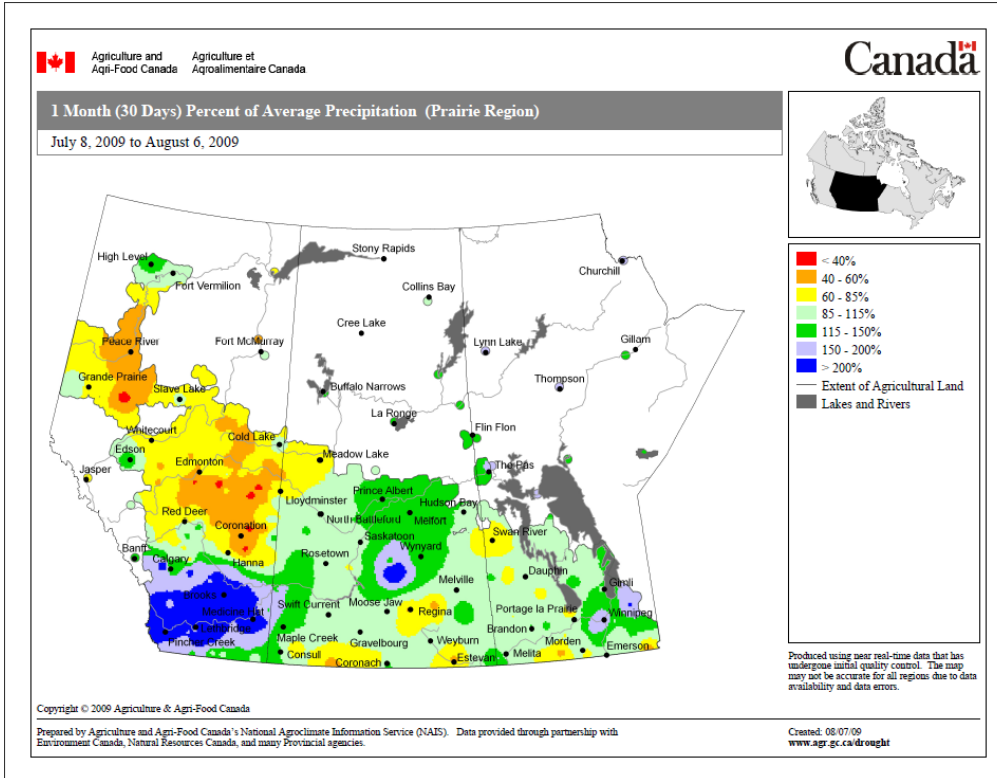
Attachments

1. Palmer Drought and Standard Precipitation Indices



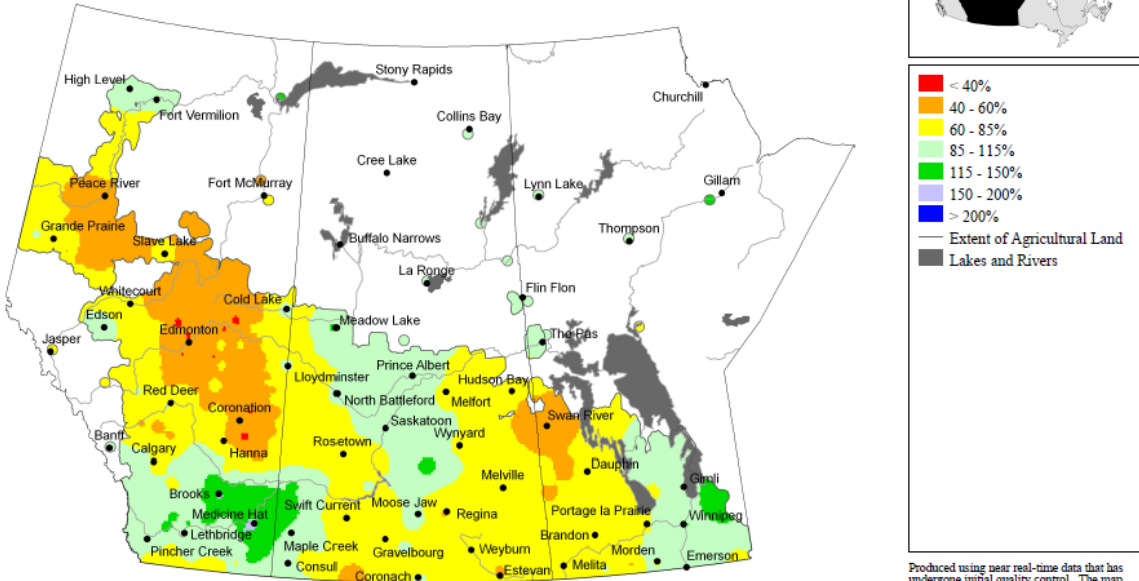
Note: Drought severity increases as the Palmer Drought and Standard Precipitation Indices decline to more negative values.

2. Precipitation (Percent of average:30 days and 90 days)



3 Month (90 Days) Percent of Average Precipitation (Prairie Region)

May 9, 2009 to August 6, 2009



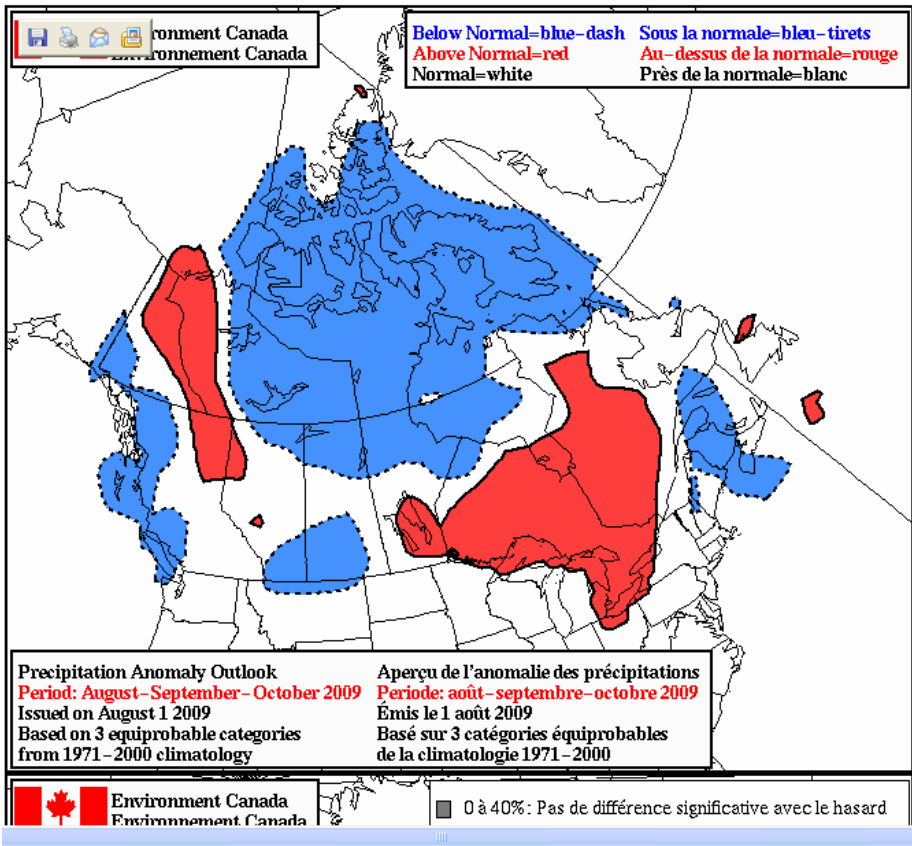
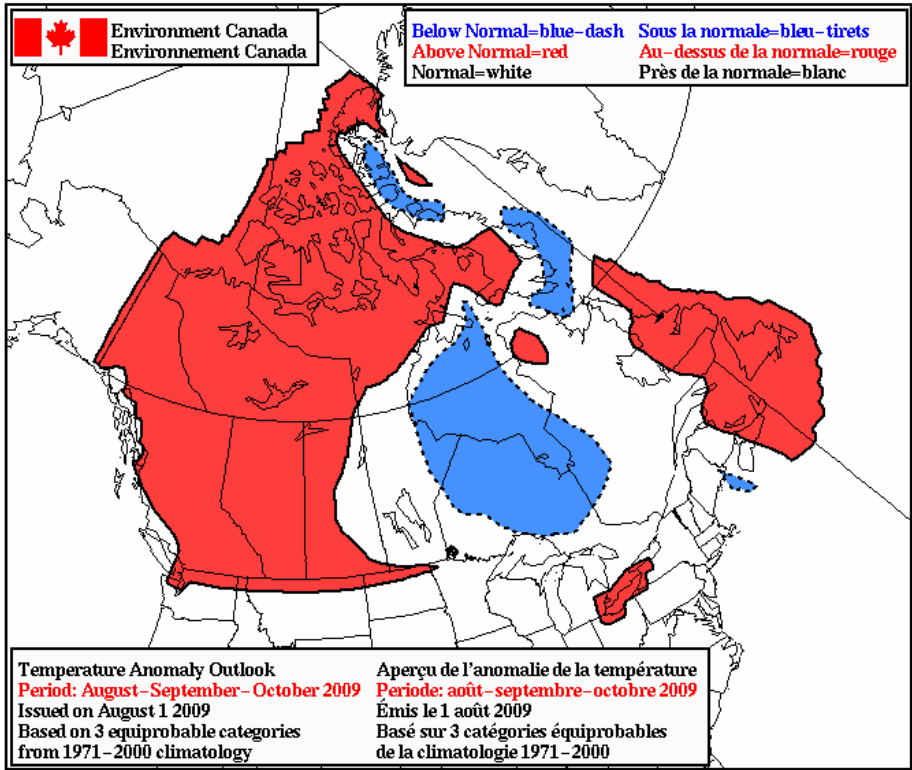
Produced using near real-time data that has undergone initial quality control. The map may not be accurate for all regions due to data availability and data errors.

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Prepared by Agriculture and Agri-Food Canada's National Agroclimate Information Service (NAIS). Data provided through partnership with Environment Canada, Natural Resources Canada, and many Provincial agencies.

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www.agr.gc.ca/drought

4. Environment Canada 3 Month Outlook



5. Major River Basins

