

**WATER AVAILABILITY AND DROUGHT CONDITIONS REPORT**

Reporting Period: June 8-July 7, 2009

**Synopsis/Overview****Drought Condition Levels**

The Palmer Drought and Standard Precipitation Index indicates moderate drought conditions from Virden north to The Pas (**Attachment 1**).

**Precipitation**

Average to above average precipitation was received over the last 30 and 90 days in most areas with the exception from Virden north to The Pas where precipitation was significantly below average for the month of June. The scattered rainfall received by the areas from Virden north to The Pas was very low and as a result, no significant impact on existing dry conditions is expected (**Attachment 2**). Southwestern Manitoba received significant amount of scattered showers from the July 8 to 9 weather systems.

**Stream and River Flows**

Stream and river flows were average and above average for the entire province with exception of the Saskatchewan and Carrot rivers where flows were below average for the month of June.

([http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river\\_report2009-06-25.html](http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river_report2009-06-25.html);  
[http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/Weekly\\_Flows\\_2009.pdf](http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/Weekly_Flows_2009.pdf)).

**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. The low level at Rapid City Reservoir is temporary and due to logs having been removed for repair. The reservoir will quickly refill once the repairs are completed and the logs are replaced.

(<http://www.gov.mb.ca/waterstewardship/floodinfo/forecasting.html>)

**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 (July-August-September 2009)**

The three month Environment Canada forecast is for **normal temperatures** for southern and western Manitoba and the far north, and below normal for central and eastern Manitoba with **normal precipitation** for the entire province with the exception of below **normal** for a part of eastern Manitoba (**Attachment 3**).

<b>Detail by Manitoba Water Stewardship Region (Attachment 4)</b>					
<b>Water Stewardship Region</b>	<b>Indicators</b>				
	<b>1 month Precipitation (June 8-July 7 2009)</b>	<b>3 month Precipitation (April 9 to July 7 2009)</b>	<b>Flow Conditions (June 2009)</b>	<b>Palmer Drought Index (PDI) (June 2009)</b>	<b>Standard Precipitation Index (SPI) (June 2009)</b>
<b>Red River</b>	Average to above average	Average to above average except below average for the vicinity of Manitou	Above average	Very wet	Very wet
<b>Interlake</b>	Average to above average, except below average for areas around Lake Manitoba	Below average for the entire region	Above average	Moderately wet to very wet	Moderately wet to very wet
<b>Western</b>	Below average, but much below from Virden north to Swan River	Below average but much below from Virden north to Swan River	Average to above average	Moderately wet, except mild drought from Virden north to Swan River	Moderately wet, except mild drought from Virden north to Swan River
<b>Eastern</b>	Average to above average	Average to above average	Above average	Very wet	Very wet
<b>Northwest</b>	Below average	Below average	Below average	Mild drought near The Pas	Mild drought near The Pas
<b>Northeast</b>	Average to above average	Average to Above average	Above average	N/A	N/A

## Acknowledgements

This report would not be possible without the resources produced by the following agencies:

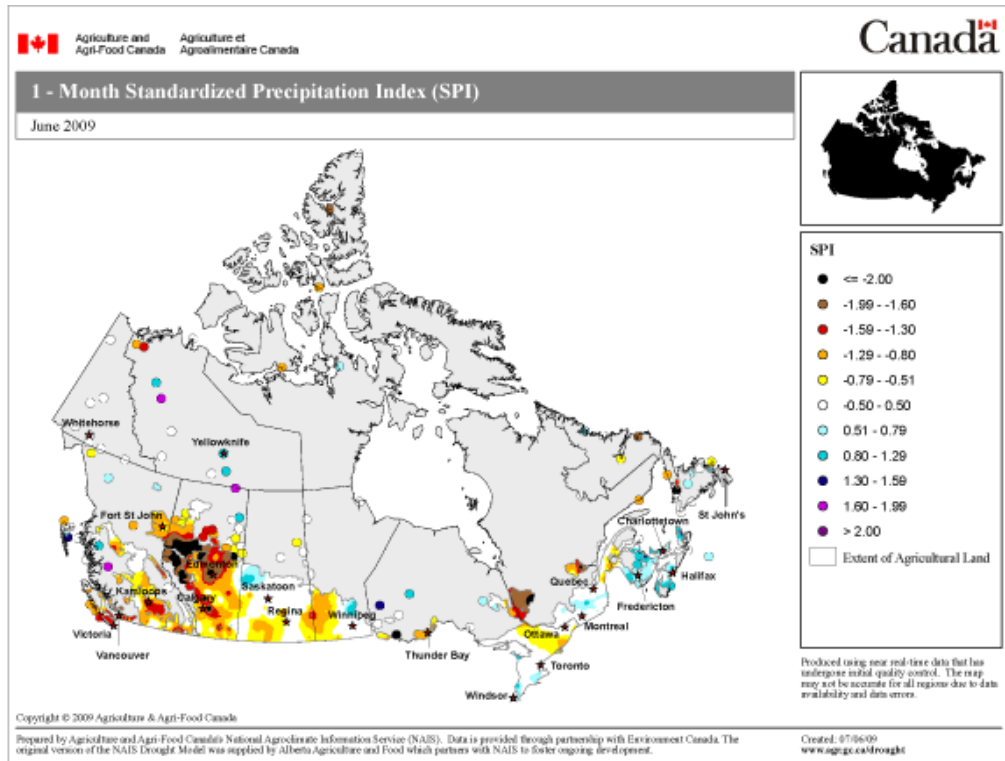
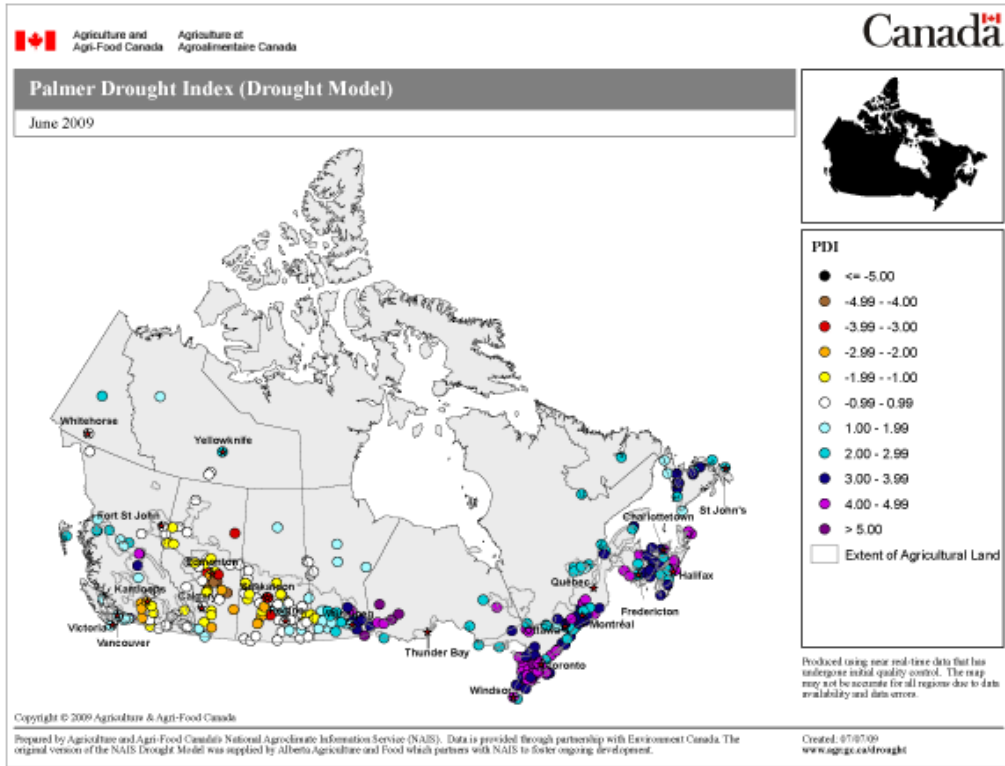
- Agriculture and Agri-food Canada, [http://www.agr.gc.ca/pfra/drought/mapscc\\_e.htm](http://www.agr.gc.ca/pfra/drought/mapscc_e.htm)
  - Regional site: [30 and 90 precipitation](#)
  - National Site: [Palmer Drought](#) and [Standard Precipitation Indices](#)
- Manitoba Water Stewardship: Flow information: [http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river\\_report2008-18-12.html](http://www.gov.mb.ca/waterstewardship/floodinfo/forecasts/river_report2008-18-12.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](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/mapscc_e.htm); [http://www.agr.gc.ca/pfra/drought/pr\\_e.htm](http://www.agr.gc.ca/pfra/drought/pr_e.htm)

### **For further information, please contact:**

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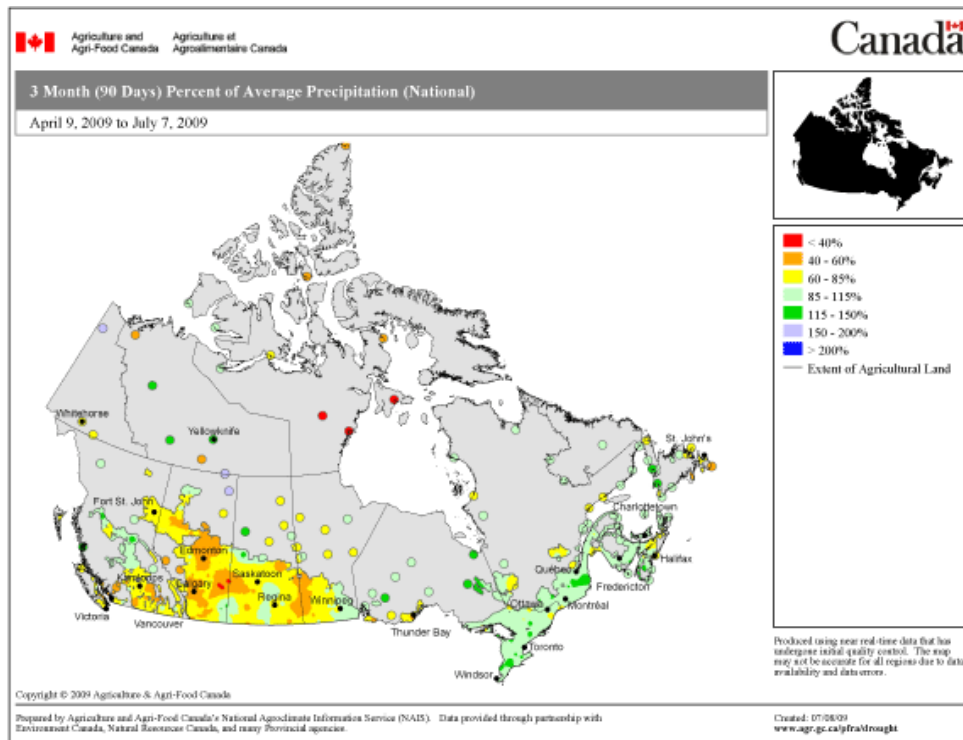
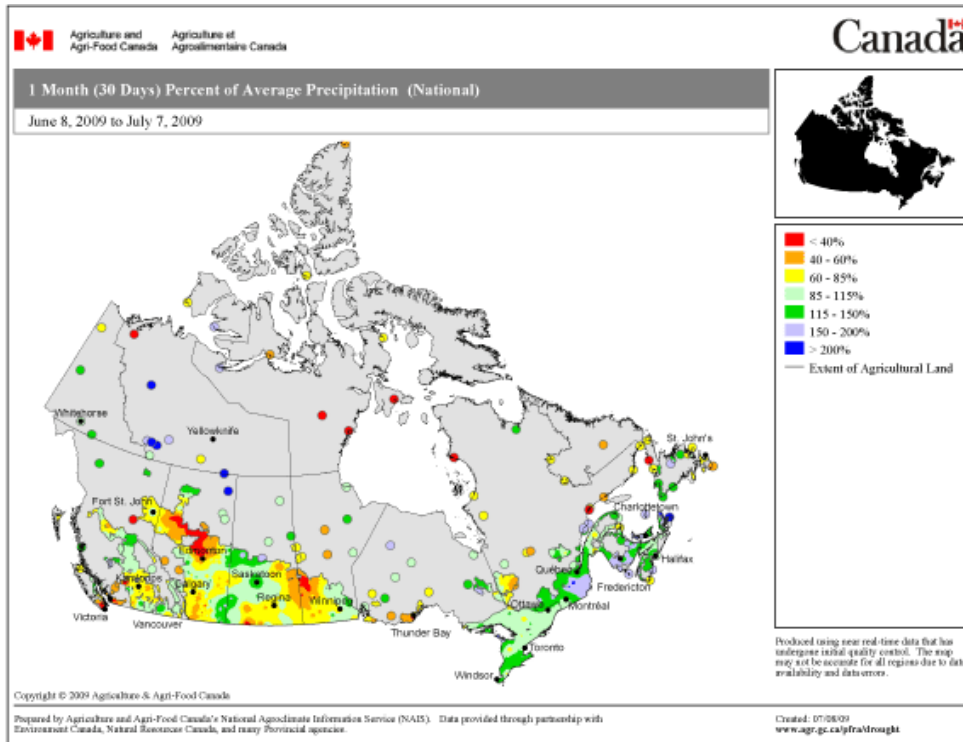
# Attachments

## 1. Palmer Drought and Standard Precipitation Indices

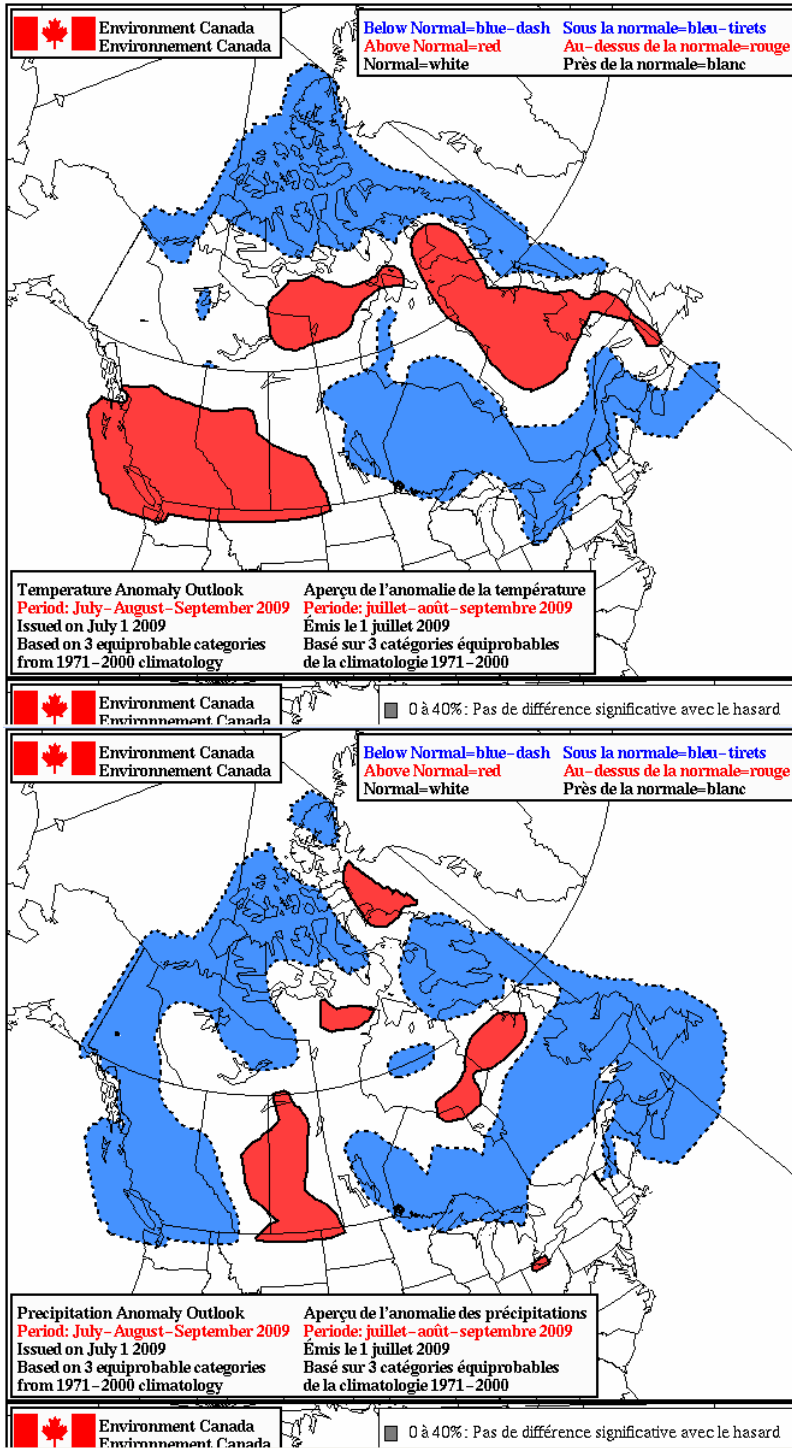


**Note: Drought severity increases as the Palmer Drought and Standard Precipitation Indices decline to more negative values.**

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



### 3. Environment Canada 3 Month Outlook



## 4. Water Stewardship Regions

