

# WATER AVAILABILITY AND DROUGHT CONDITIONS REPORT

Issued on September 21, 2009

## **Synopsis/Overview**

### **Outlook**

As of mid-September 2009, all areas except Portage la Prairie and Pilot Mound have normal to above normal moisture conditions. The three month precipitation indicator shows mild drought conditions for the Swan River, Portage la Prairie, Russell, Pilot Mound and Morden areas. However, the recent significant rainfall has likely lead to a return to normal conditions in the Swan River, Russell, and Morden areas. As the water supply is adequate with all provincial reservoirs full or close to full, it is expected that all watersheds will remain in normal conditions through the remainder of 2009.

### **Drought Index**

The Palmer Drought and Standard Precipitation Index indicates near normal conditions across the province for August (Attachment 1).

### **Precipitation**

Average to above average precipitation was received over the last 30 days in most areas with the exception Portage la Prairie where precipitation was below average. Average to above average precipitation was received over the last 90 days in most areas with the exception of Swan River, Morden, Pilot Mound, Russell, and Portage la Prairie where precipitation was below average (mild drought) (Attachment 2).

### **Stream and River Flows**

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

### **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 is available since the December 2008 Water Availability and Drought Conditions report.

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

The three month Environment Canada forecast is for above normal temperatures for the entire province and above normal precipitation for south-eastern and normal for south-western and central Manitoba and below normal for the far north (Attachment 4).

<b>Detail by Drainage Basin (Attachments: 1- 5)</b>					
Basin	Indicators				
	1 month Precipitation (August 12-September 10 2009)	3 month Precipitation (June 13 - September 10 2009)	Flow Conditions (August 2009)	Palmer Drought Index (PDI) (August 2009)	Standard Precipitation Index (SPI) (August 2009)
Red River	Average to above average except below average for Pilot Mound	Average to above average except below average (mild drought) for Morden and Pilot Mound	Above average	Moderately wet to very wet except near normal for Morden and Pilot Mound	Moderately wet to very wet except near normal for Morden 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 except below average for Portage la Prairie	Average to above average except below average (mild drought) for Portage la Prairie and Russell	Above average except below average for Qu’Appelle near Welby	Moderately wet except near normal for Portage la Prairie, Melita, and Russell.	Moderately wet except near normal for Portage la Prairie

Lake Manitoba	Average to above average	Average to above average except below average (mild drought) for Swan River	Above average	Moderately wet except near normal for Swan River	Moderately wet
Lake Winnipeg	Average to above average	Average to above average	Above average	Very wet	Very wet
Saskatchewan River	Average to above average	Average to above average	Below average for the 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 except average at the Limestone River Near Bird	Moderately to very wet	Moderately wet
Hayes River	Average to above average	Average to above average	Below average for Gods River at Shamattawa	Moderately wet	-
Churchill River	Average to above average	Average to above average	Above average	Moderately wet	Moderately wet
Seal River	-	-	Above average	-	-

### Acknowledgements

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

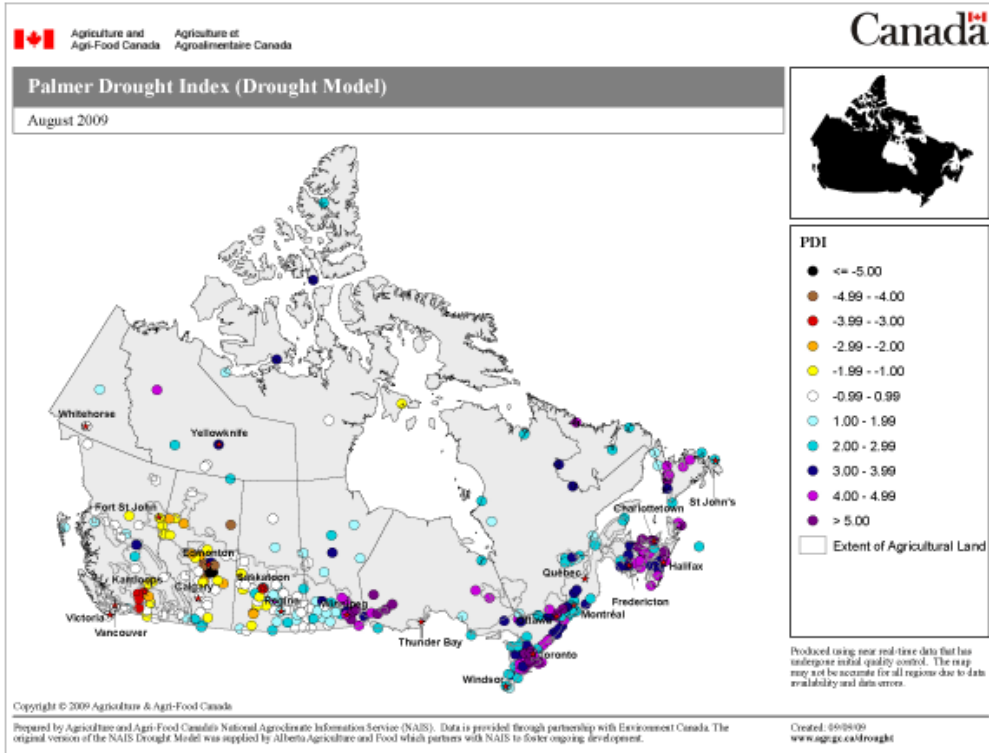
- Agriculture and Agri-food Canada,  
[http://www.agr.gc.ca/pfra/drought/mapsc\\_e.htm](http://www.agr.gc.ca/pfra/drought/mapsc_e.htm)
  - Regional site: [30 and 90 precipitation](#)
  - National Site: [Palmer Drought](#) and [Standard Precipitation Indices](#)
- Manitoba Water Stewardship: Flow and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

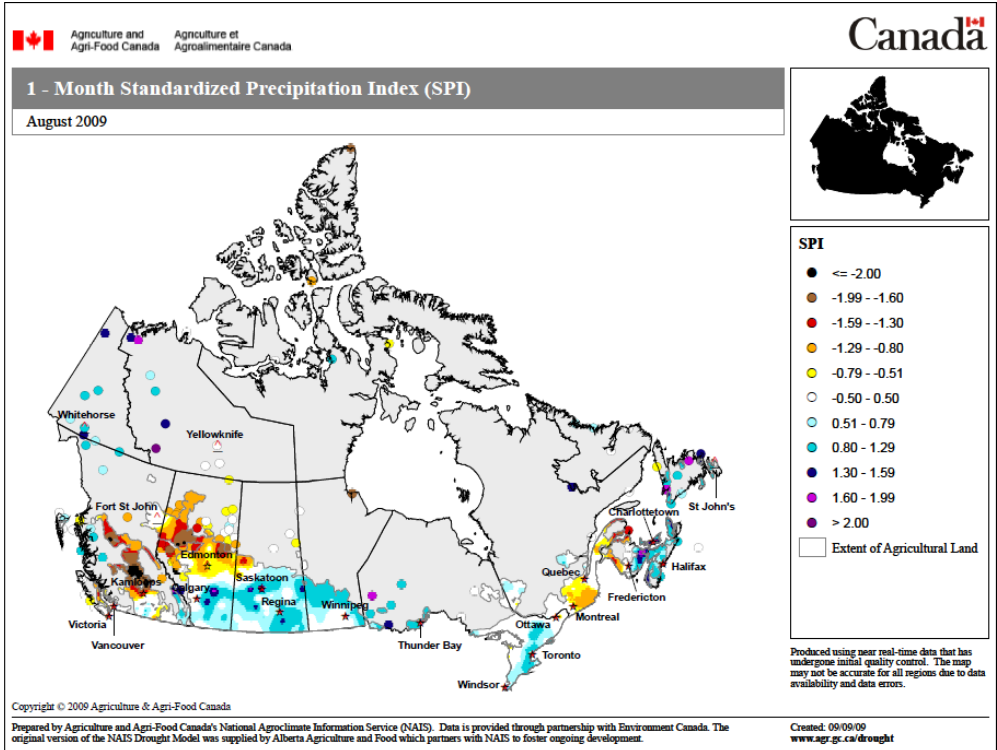
Manitoba Crop Weather Report, Manitoba Agriculture, Food and Rural Initiatives (MAFRI):<http://www.gov.mb.ca/agriculture/climate/wad00s00/cropwxrep.pdf>

For further information, please contact: Abul Kashem, Surface Water Management Section, Manitoba Water Stewardship, 945-6397

## Attachments

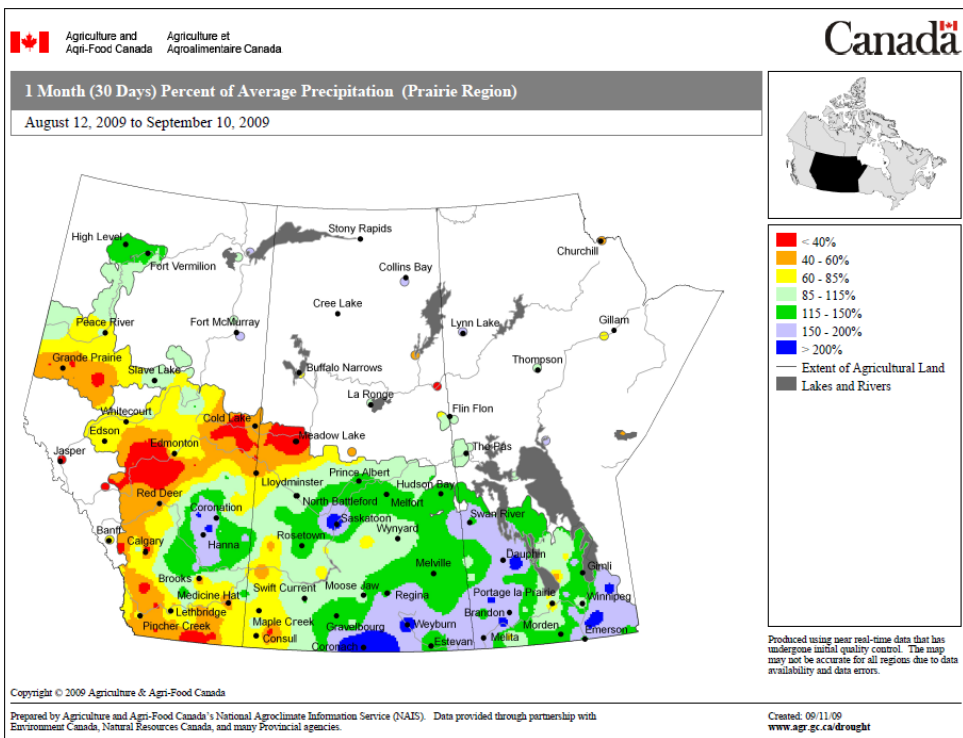
### 1. Palmer Drought and Standard Precipitation Indices

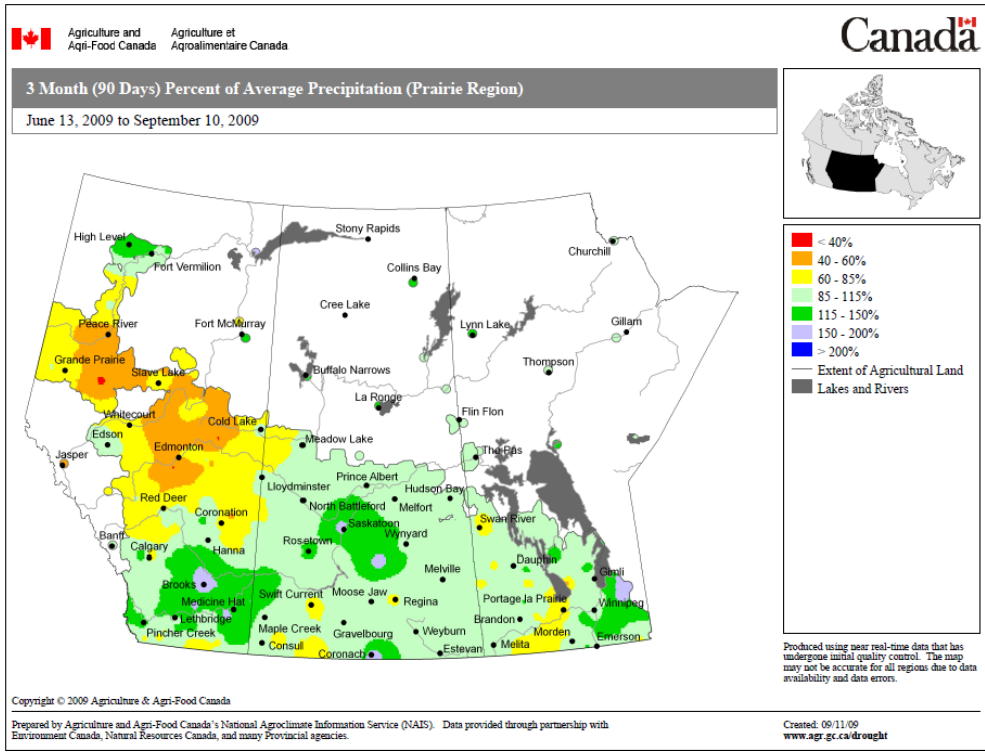
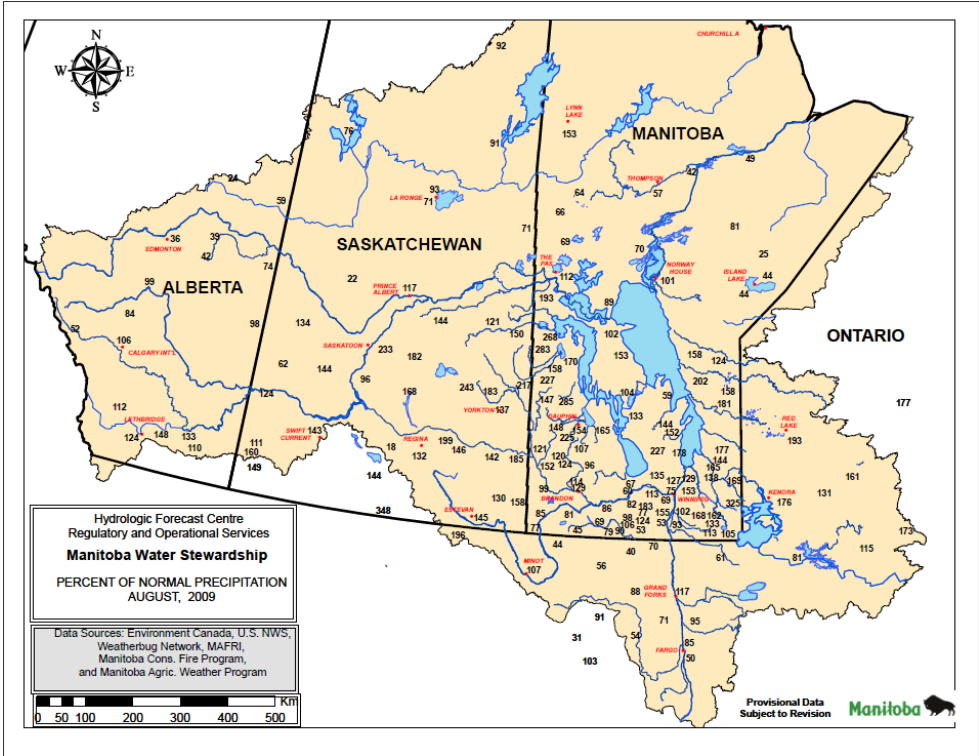




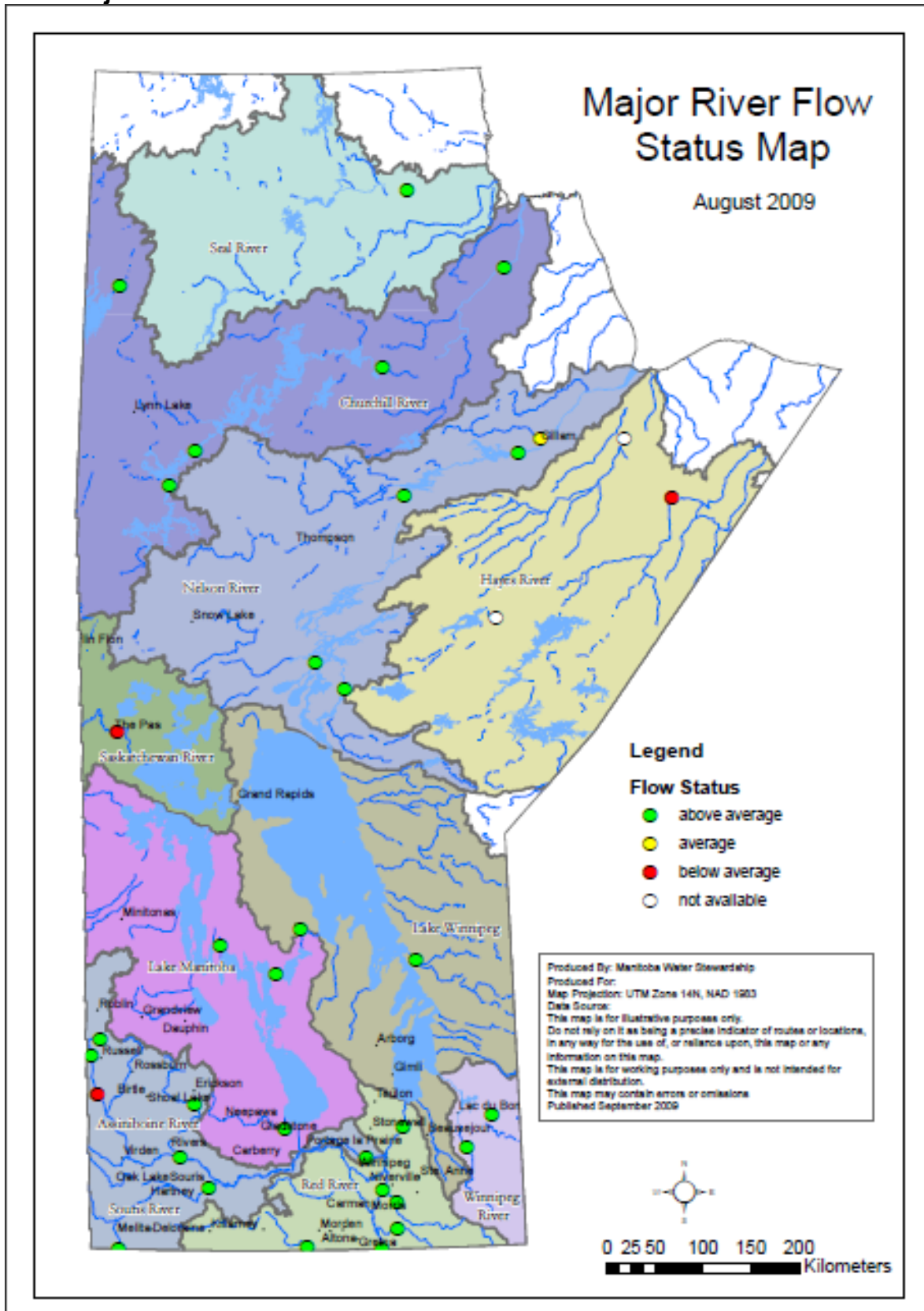
Note: Drought severity increases as the Palmer Drought and Standard Precipitation Indices decline to more negative values.

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

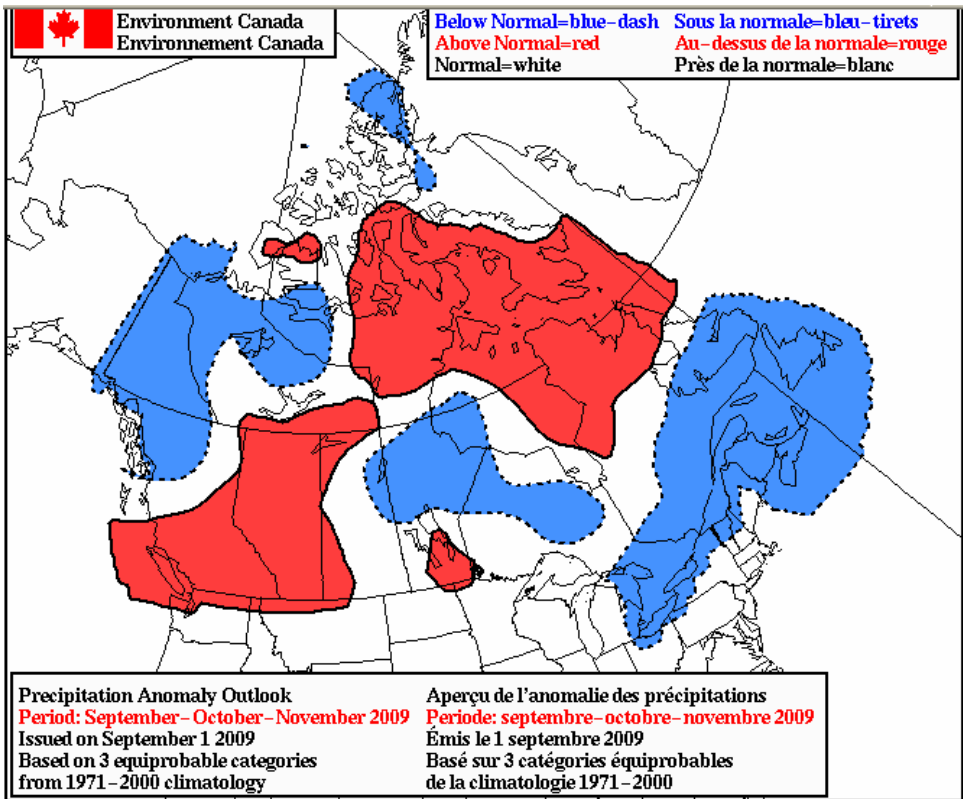
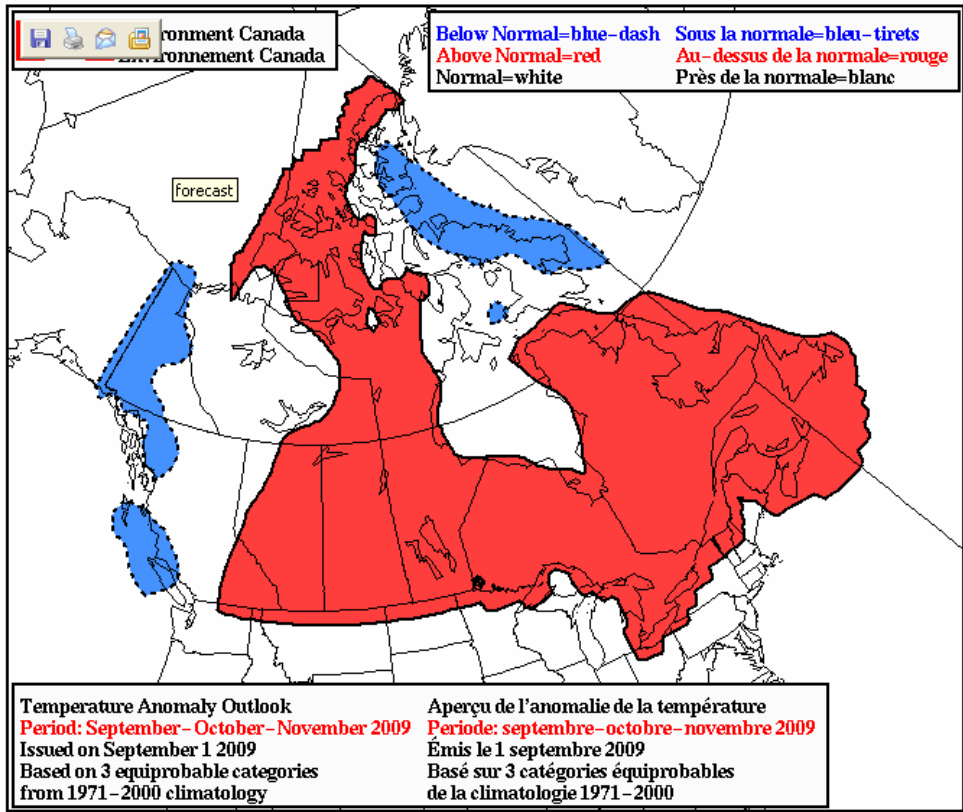




### 3. Major River Flow Status



#### 4. Environment Canada 3 Month Outlook





## 5. Major River Basins

