Manitoba
Water Stewardship

WATER AVAILABILITY AND DROUGHT CONDITIONS REPORT
Manitoba

November 21, 2011

Synopsis/Overview

Moderate drought conditions (meteorological) are prevailing in areas from the Bloodvein River south to the international border in eastern Manitoba and in southern Manitoba including southern parts of the Westman and Interlake regions. Eastern Manitoba has been experiencing moderate drought due to lack of rainfall since late June.

Flows were below median for a number of rivers and streams across the province.

On-farm water supplies are adequate except in areas surrounding Winnipeg, Portage la Prairie Carman, Arborg, Neepewa, Minnedosa, Dauphin, and south-eastern Manitoba where some water shortages may exist due to low dugout and creek water levels.

There is a potential for shortages of forage due to below average production and supplies in the Interlake, Westman and Southeastern regions.

Manitoba Agriculture, Food and Rural Initiatives reported some of the winter seeding has been adversely affected by recent lack of rainfall in Beausejour and south-eastern Manitoba due to prolonged dry conditions.

Outlook

For the next 3 months (November-December 2011 and January 2012) Environment Canada's seasonal forecast is for below normal temperatures for Manitoba. Normal precipitation is forecast for southern Manitoba with below normal precipitation forecast for the northern Manitoba (Attachment 6).

Precipitation

Over the last 30 days, average to below average precipitation was received in all regions of Manitoba except for the lower Churchill and Hayes River basins where precipitation was above average. Most areas in the Assiniboine River basin received well below average precipitation.

Over the last 90 days, well below average precipitation was received in southern Manitoba including southern parts of the Westman and Interlake regions. Average to above average precipitation was received in northern Manitoba and parts of western Manitoba north of Roblin (Table 1 and Attachment 1).

On-farm Water Supplies

Agriculture and Agri-food Canada and Manitoba Agriculture, Food and Rural Initiatives

reported on-farm water supplies are adequate except in areas surrounding Winnipeg, Portage la Prairie Carman, Arborg, Neepewa, Minnedosa, Dauphin, and south-eastern Manitoba where some water shortages may exist due to low dugout and creek water levels (Attachment 4).

Stream and River Flows

For October, flows were below median for a number of rivers and streams across the province (Table 1 and Attachment 2). Most rivers and their tributaries in eastern Manitoba have been experiencing low flows since July.

Lake/Reservoir conditions

For October, most lakes in eastern Manitoba were experiencing very low flows due to prevailing drought conditions and water levels were about 0.3 to 0.6 metres (1 to 2 ft). below summer target levels.
http://www.gov.mb.ca/waterstewardship/floodinfo/lakes_information.html#lake_levels.

Forage Production and Supply

Agriculture and Agri-food Canada and Manitoba Agriculture, Food and Rural Initiatives reported there is a potential for shortages of forage due to below average production and supplies in Interlake, Westman and south-eastern regions (Attachment 5).

Potential Impacts

Meteorological drought can contribute to low flows in rivers and streams and to low soil moisture. There is a potential for forage shortages and negative impacts on the emergence of winter crops in some areas in the Interlake, Westman and south-eastern regions. Shortages in on-farm water supplies may continue in the areas surrounding Winnipeg, Portage la Prairie, Carman, Arborg, Neepewa, Minnedosa, Dauphin, and south-eastern Manitoba due to low dugout and creek water levels.

Table 1: Detail by Major River Basin (Attachments: 1, 2, 3 and 7)				
Basin	Indicators			Major River Flow Conditions
	1 month Precipitation (October 11 – November 9, 2011)	3 months Precipitation (August 12 – November 9, 2011)	Standard Precipitation Index (SPI)	
Red River	Generally below average except average for Winnipeg	Generally below average except average for Winnipeg	Near normal to moderately dry depending on area of basin	Above median except below median for some small eastern tributaries
Winnipeg River	Below average in general	Below average in general	Moderately dry	Below median
Assiniboine River- Souris River	Well below average for most areas	Well below average for most areas	Near normal to moderately dry depending on area of basin	Above median except below median for Little Saskatchewan River
Lake Manitoba	Below average except average to above average for Swan River and surrounding areas	Below average except average to above average for Swan River and surrounding areas	Near normal to moderately dry depending on area of basin	Above median except below median for Whitemud River
Lake Winnipeg	Generally well below average for southern part and average to above average for northern part of basin	Generally well below average for southern part and average to above average for northern part of basin	Near normal to moderately dry depending on area of basin	Above median except below median for eastern tributaries
Saskatchewan River	Below average for most parts of basin except above average for the Flin Flon area	Generally average to above average	Near normal to moderately wet depending on area of basin	Above median
Nelson River	Generally below average	Above average	Near normal to moderately wet depending on area of basin	Below median for most stations

Hayes River	Above average in general	Above average	Above average	Below median
Churchill River	Well above average for lower Churchill and below average for upper Churchill	Above average for lower Churchill and below average for upper Churchill	Moderately wet to very wet	Above median
Seal River	n/a	n/a	n/a	Above median

***Note: Median is 50th percentile*.**

Acknowledgements

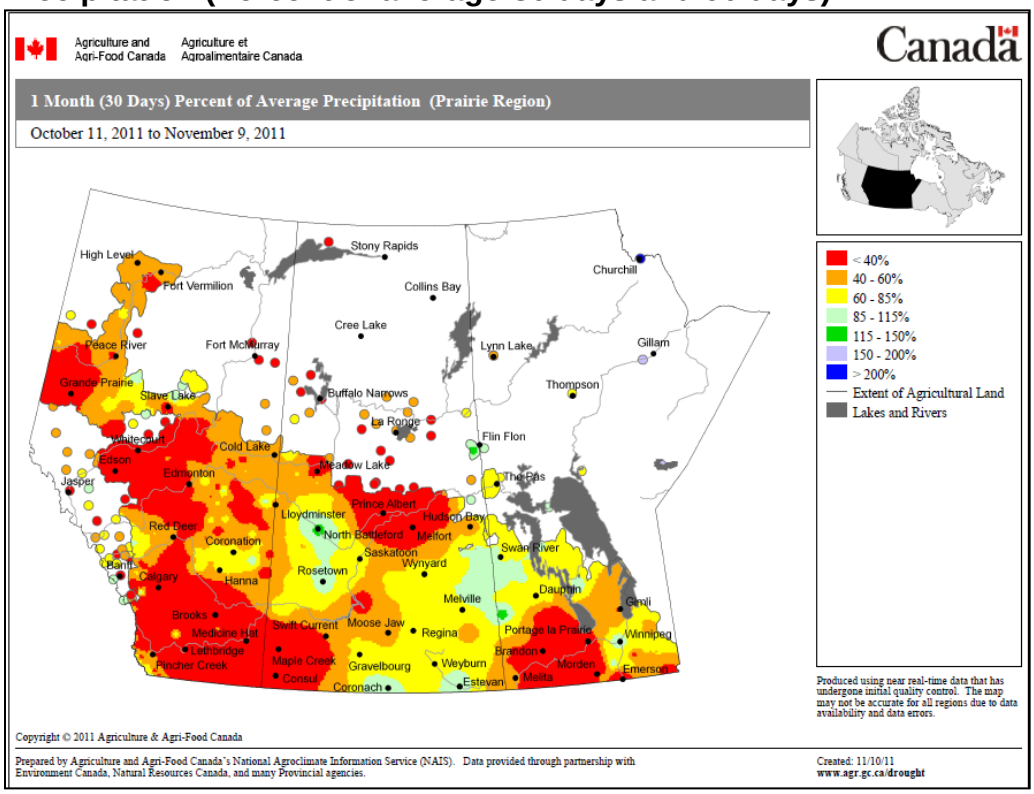
This report was prepared with information from the following sources which are gratefully acknowledged:

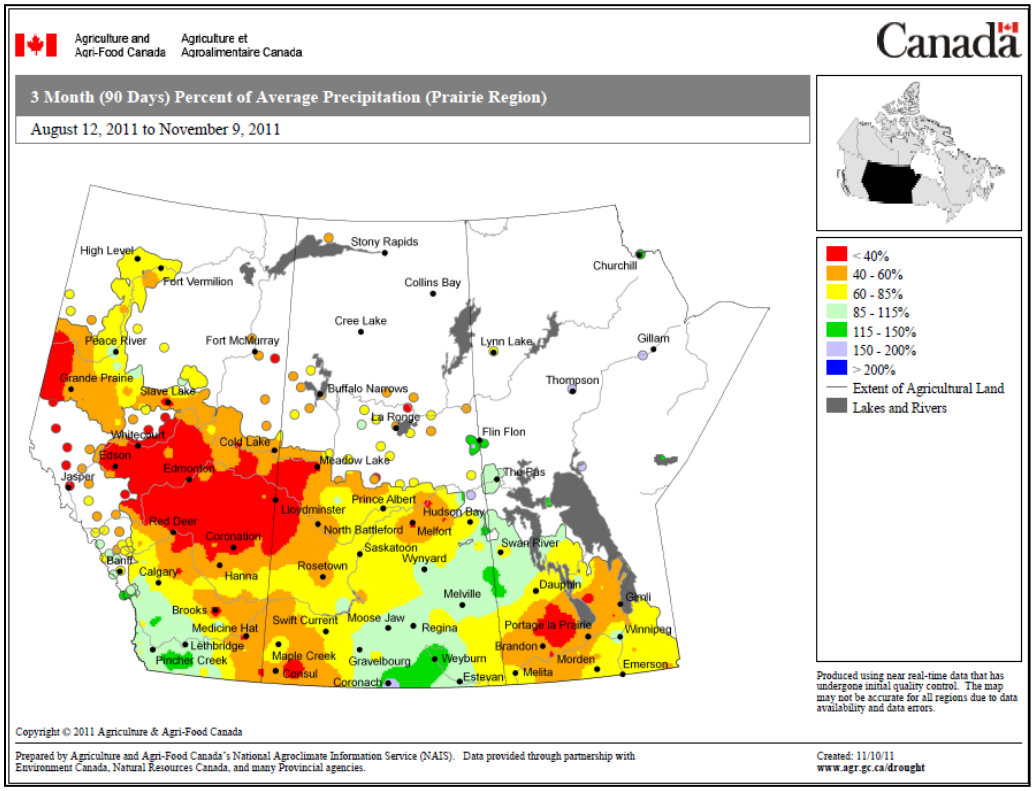
- Agriculture and Agri-food Canada (Drought watch); North America Drought Monitor:
  http://www.agr.gc.ca/pfra/drought/mapscc_e.htm
  http://www.agr.gc.ca/pfra/drought/pr_e.htm
  - Regional site: 30 and 90 precipitation
  - National Site: Palmer Drought and Standard Precipitation Indices
- Manitoba Water 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_2011.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://weatheroffice.gc.ca/saisons/index_e.html
- Manitoba Conservation Fire Program

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

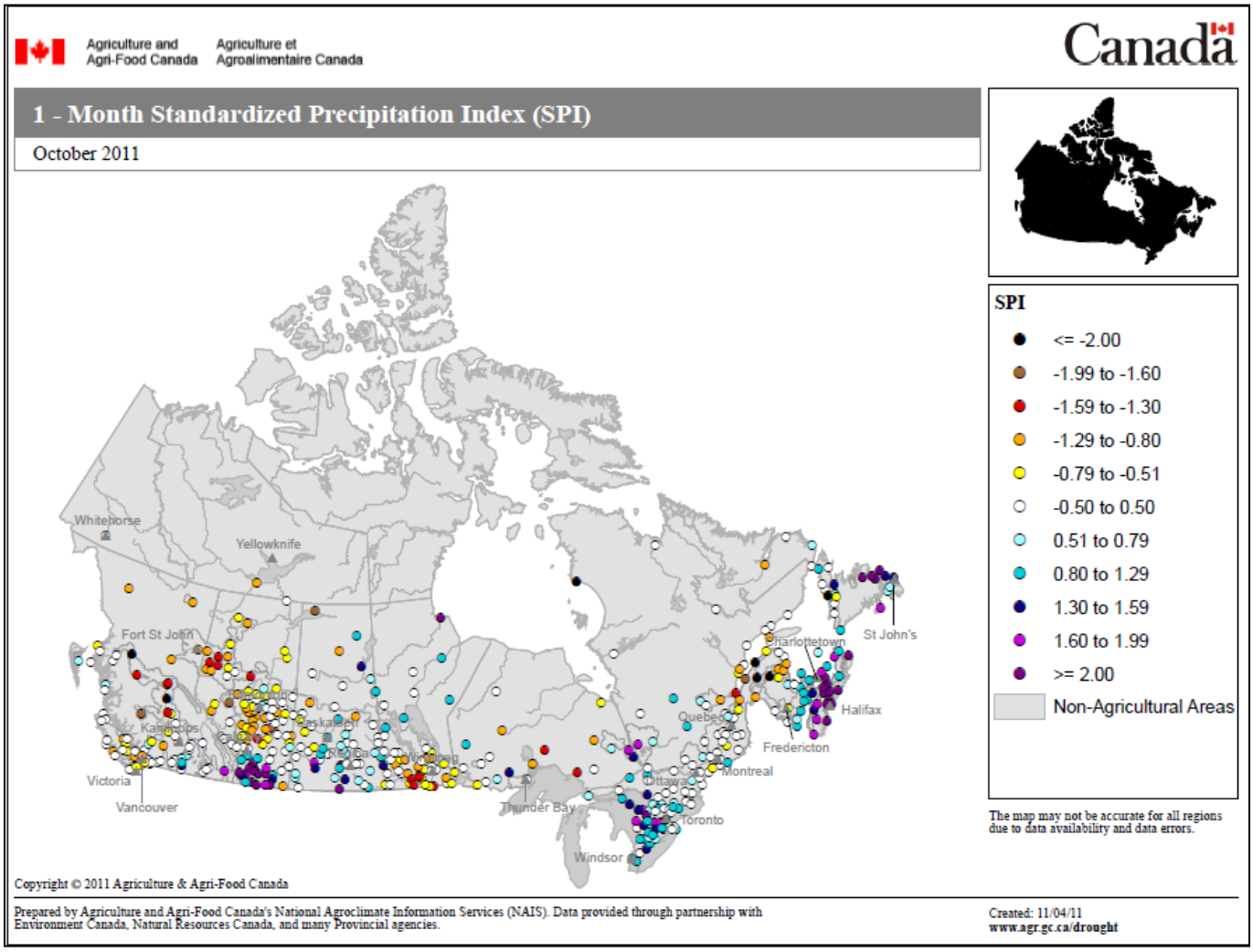
Attachments

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



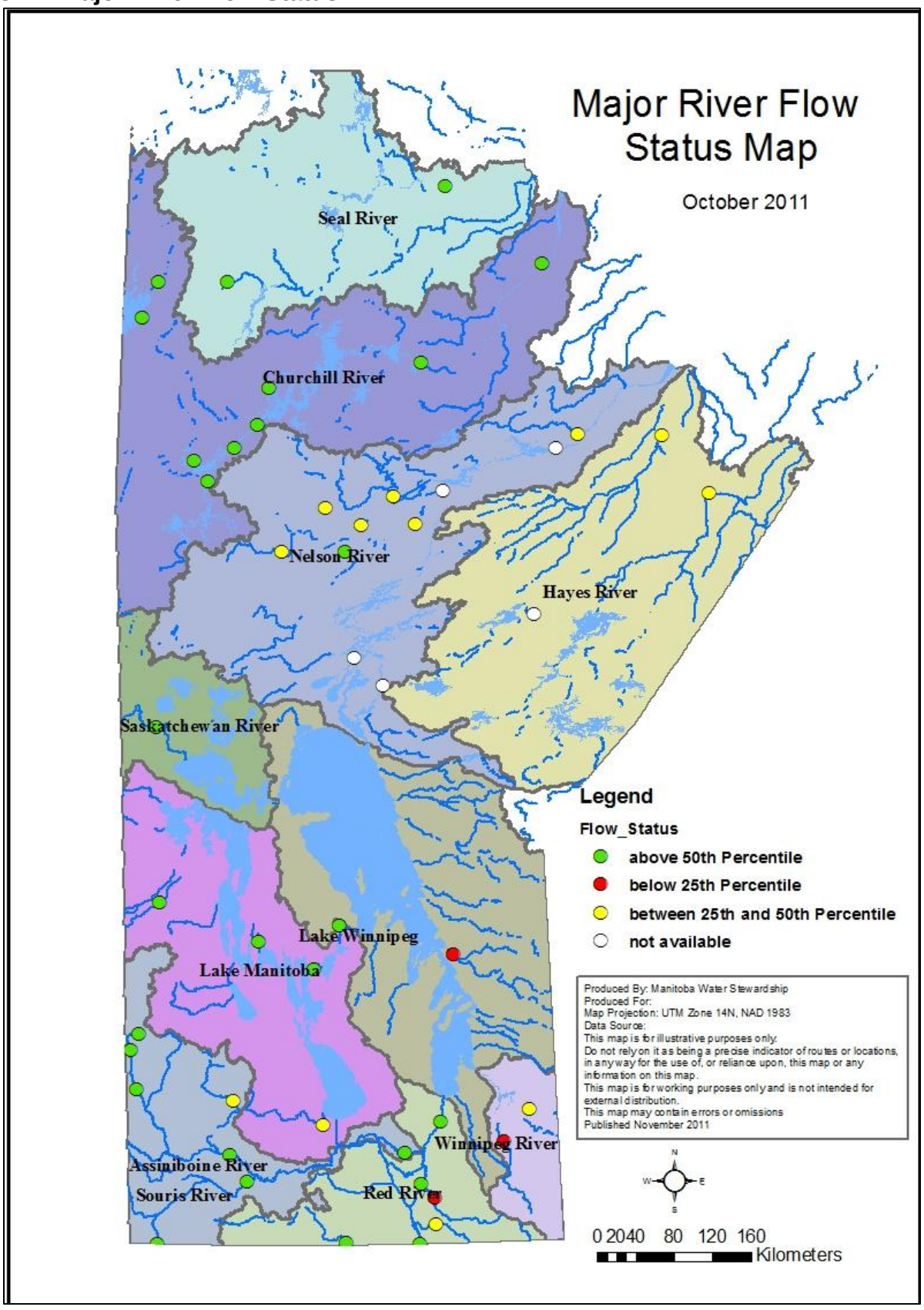


2. Standard Precipitation Index (SPI)

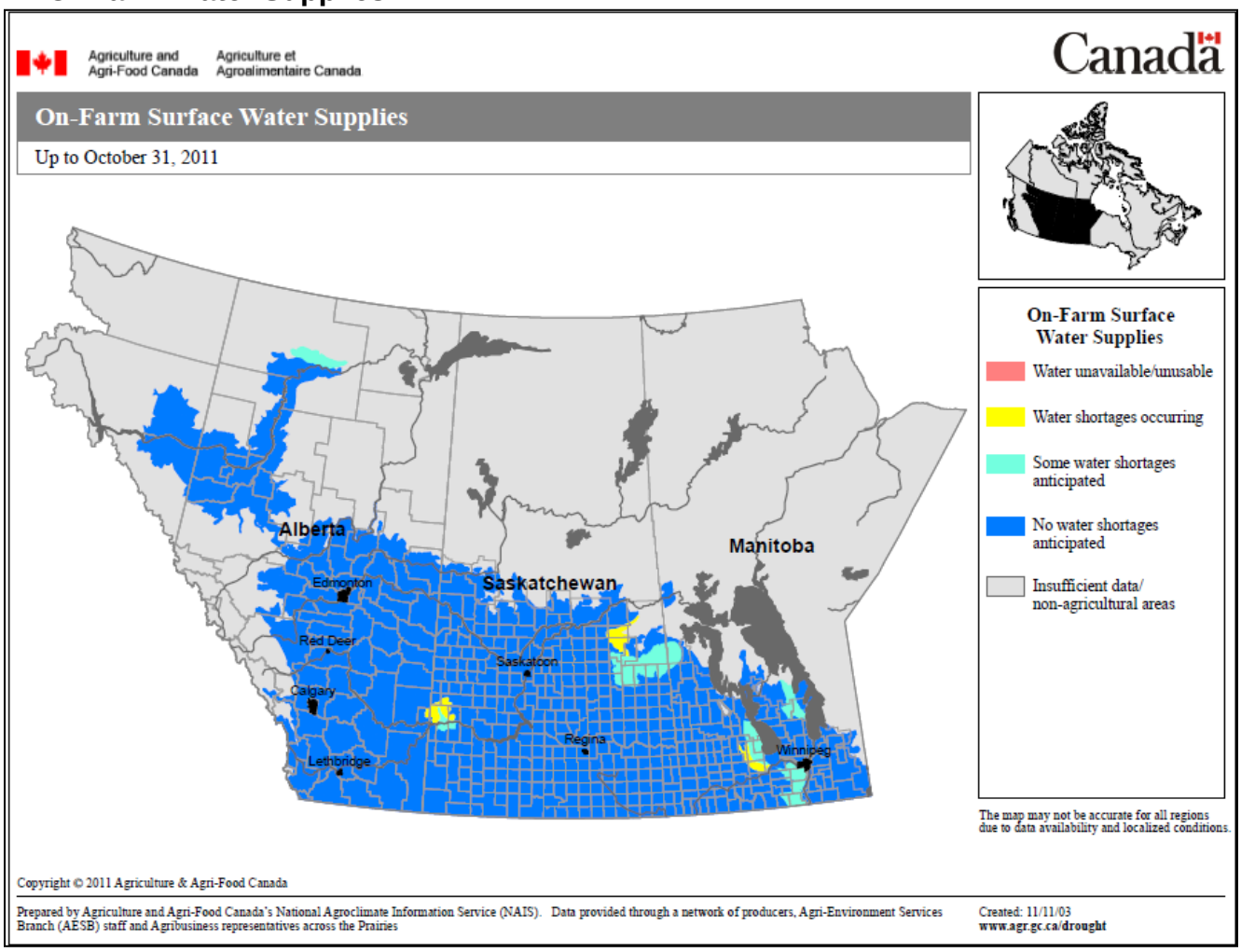


Note: Drought severity increases as Standard Precipitation Indices decline to more negative values.

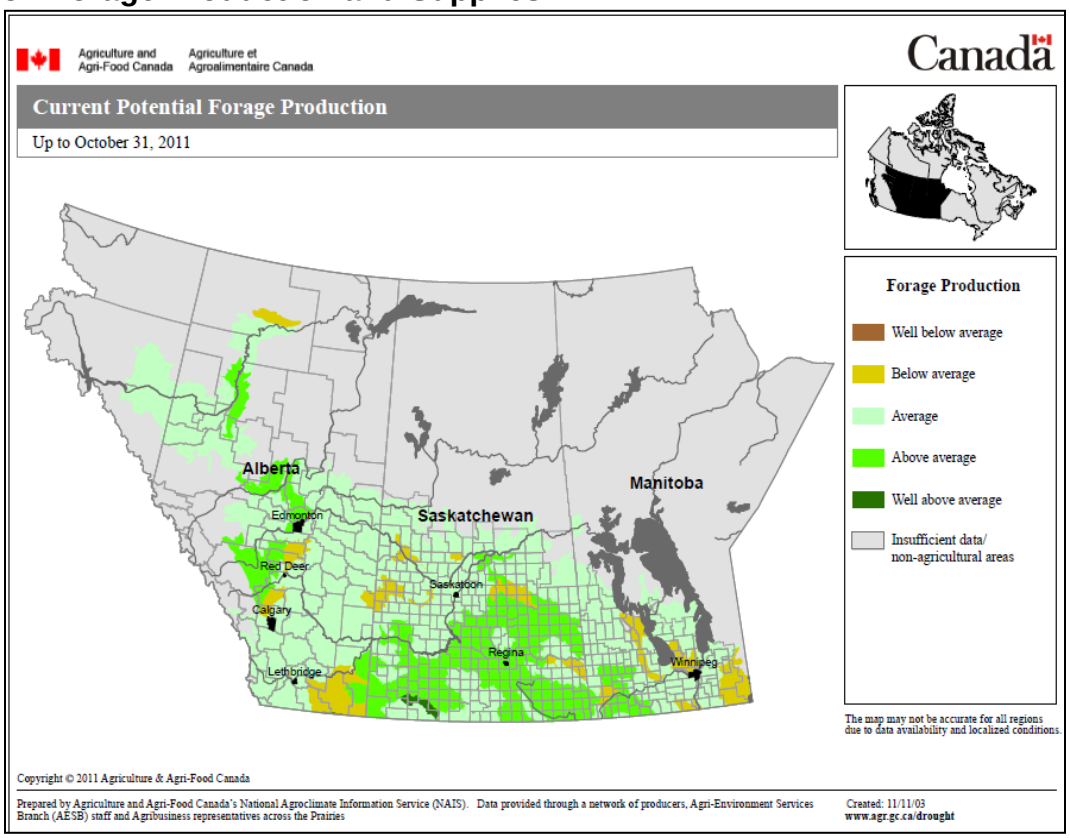
3. Major River Flow Status

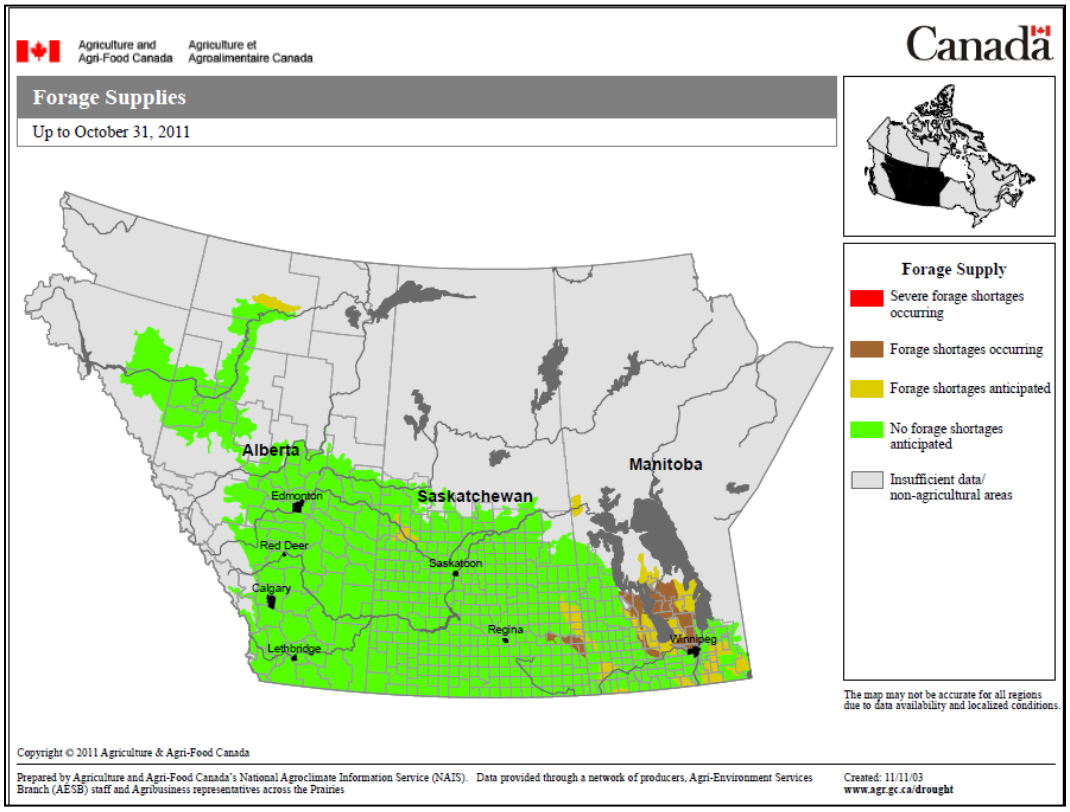


4. On-farm Water Supplies

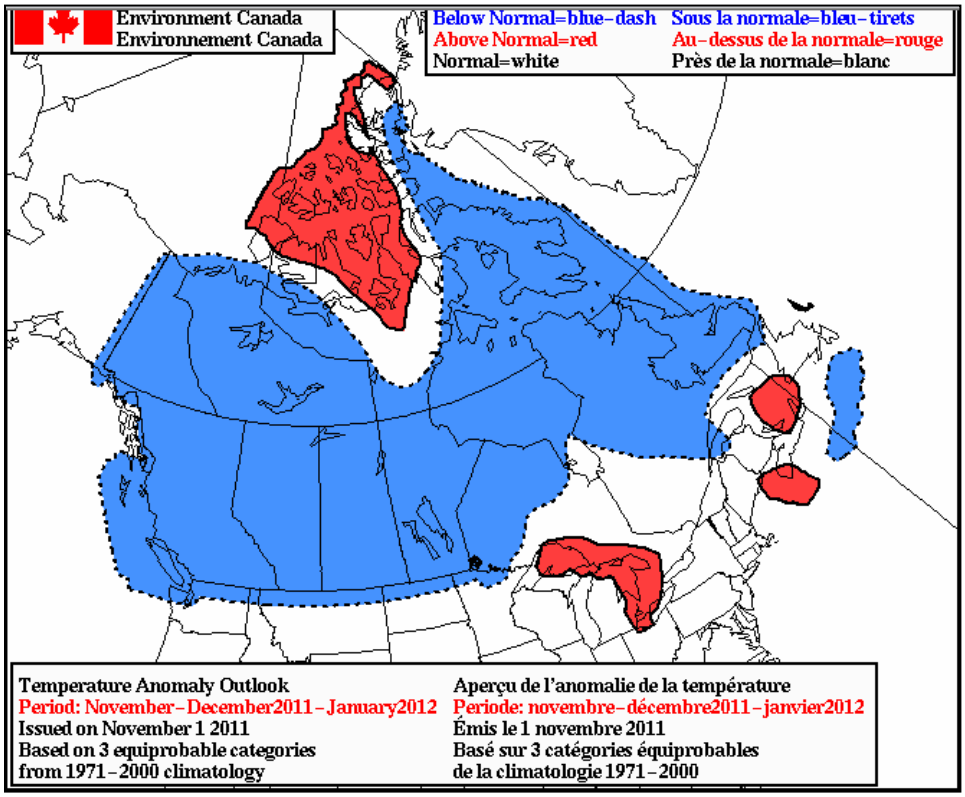


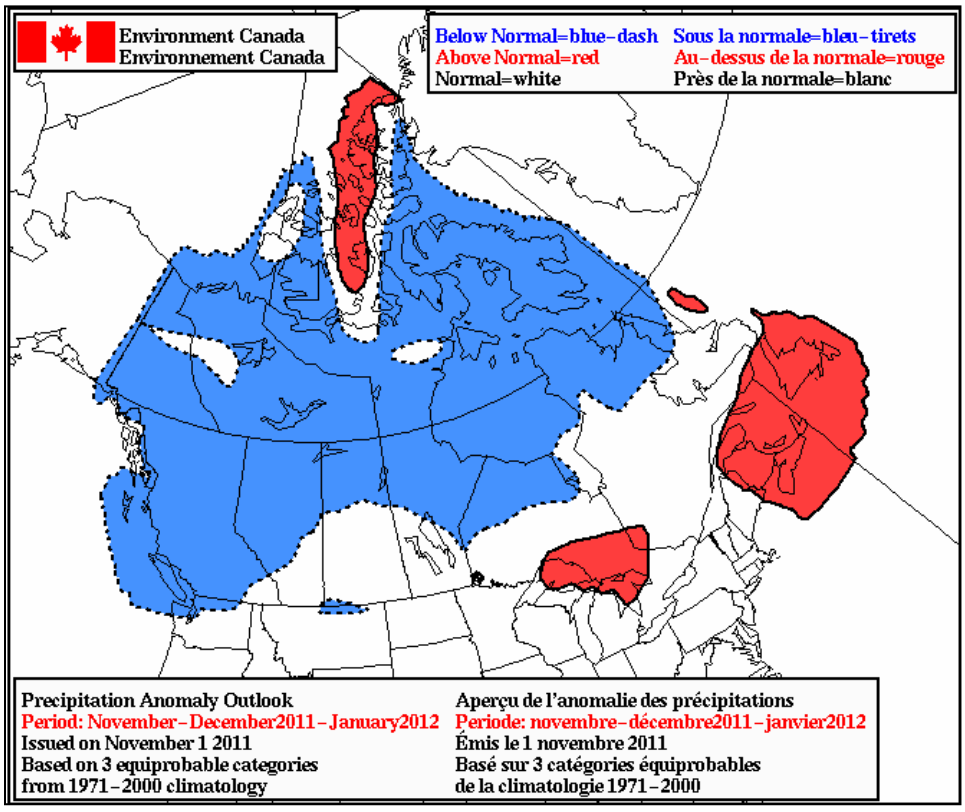
5. Forage Production and Supplies





6. Environment Canada 3 Months Outlook





7. Major River Basins