



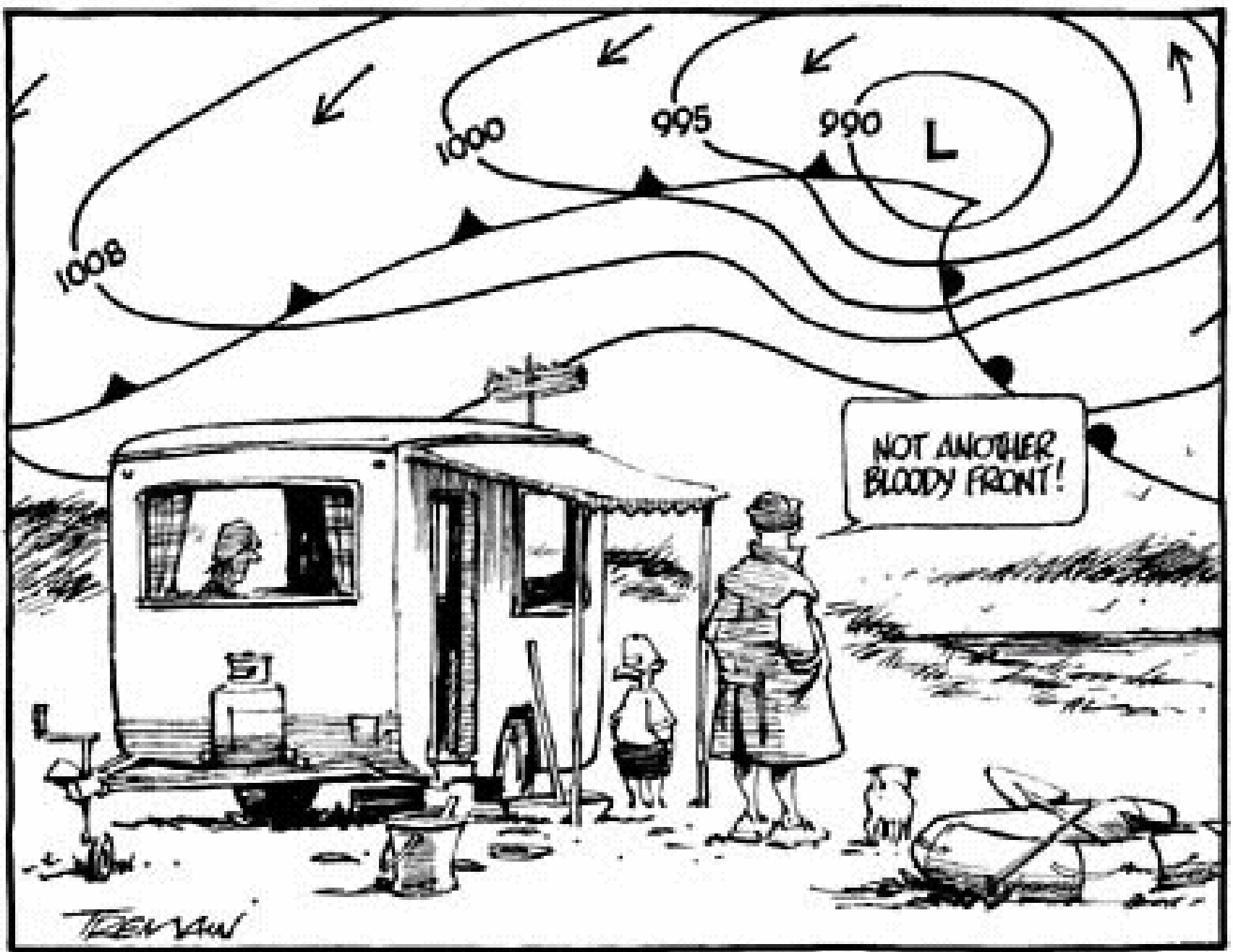
# Weather Outlook

Crop Production Days  
January 13, 2006



# Western Canada

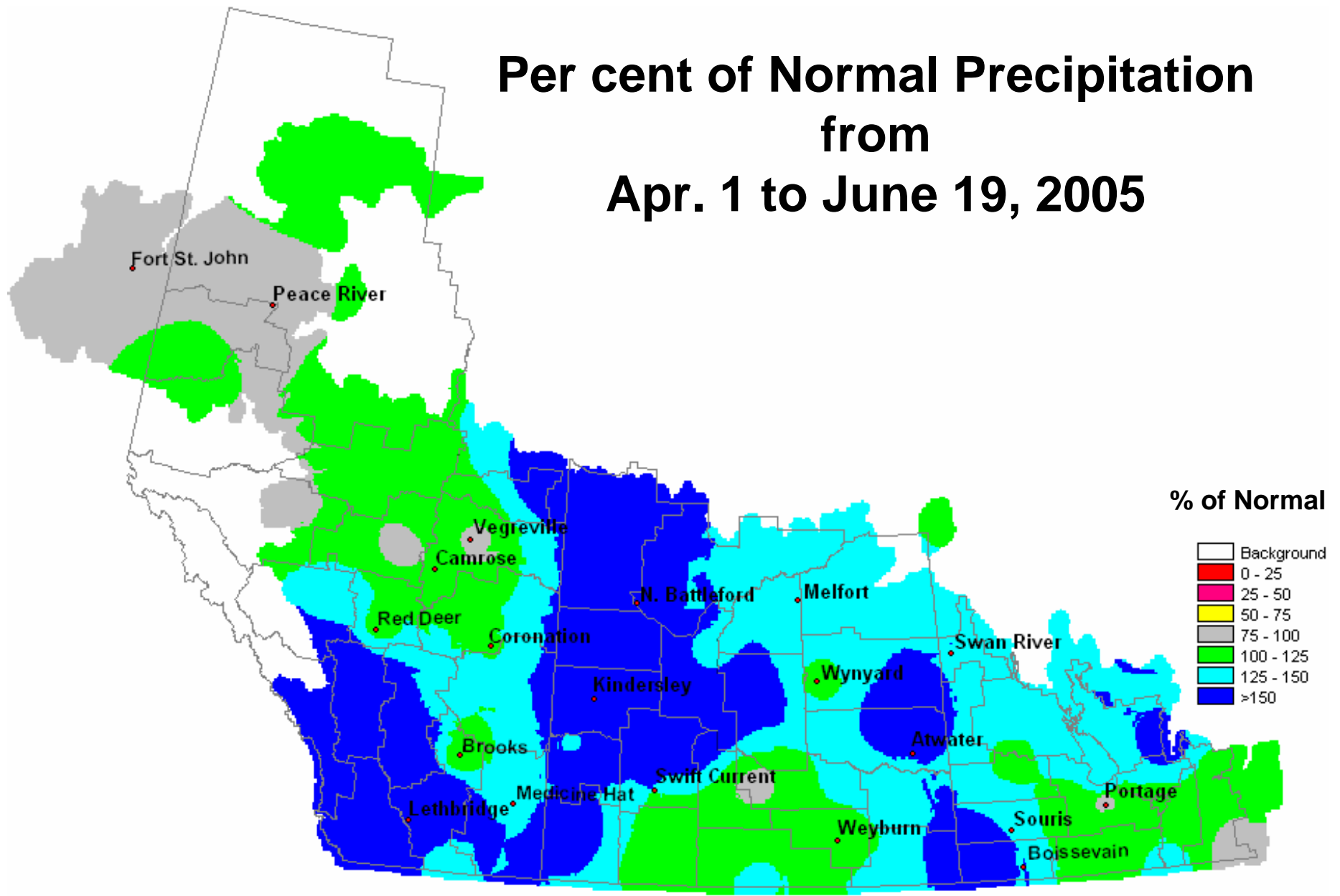
2005 Review



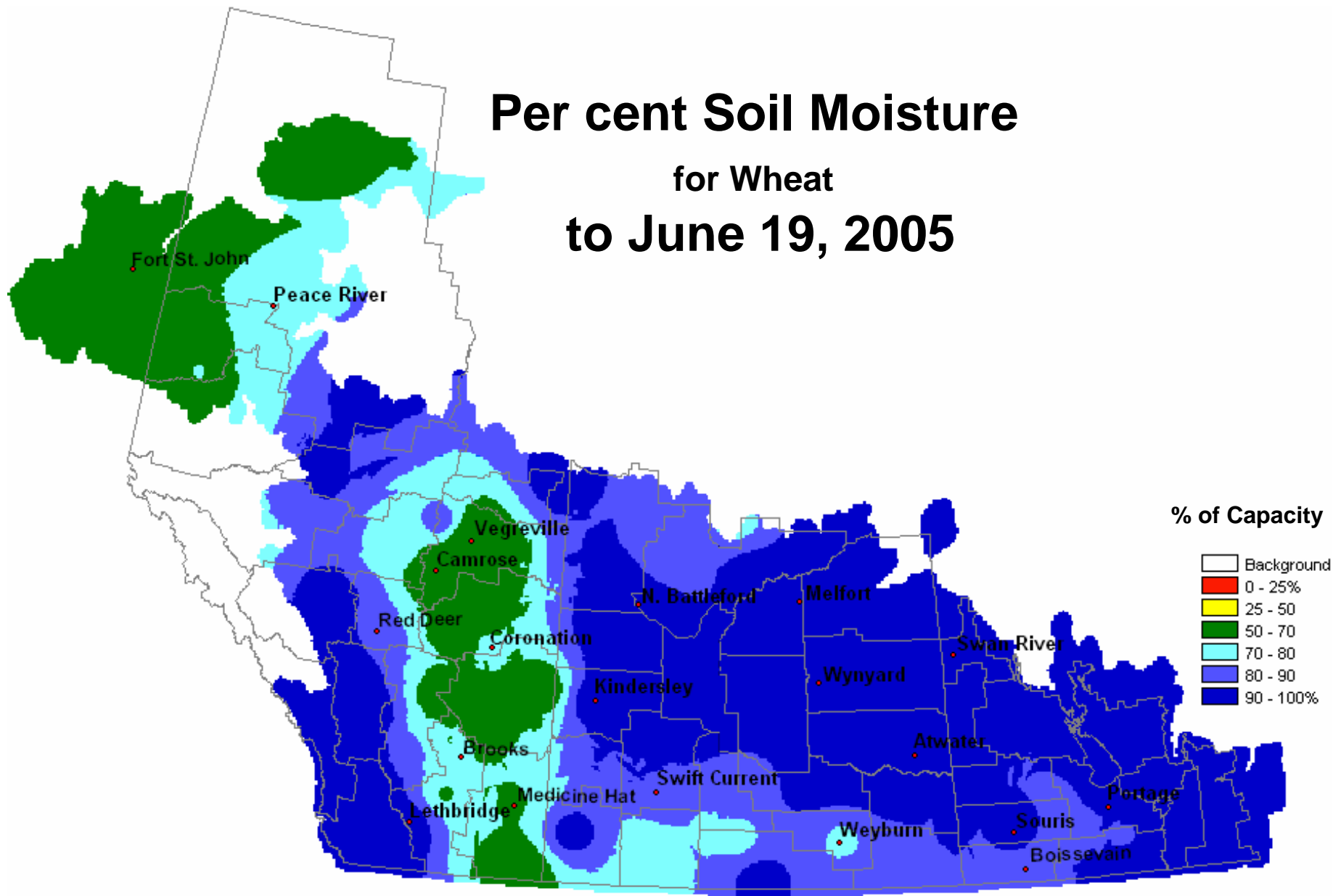
# Weather in 2005

- Moisture conditions were ideal through most of the Prairies during the 2005 growing season
- Exceptions were the areas in Alberta and Manitoba that experienced flooding during the spring and early summer
- Cooler than normal temperatures slowed crop development and kept stress to a minimum
- Heavy rains in Alberta and Saskatchewan in late August and early September hurt crop quality

# Per cent of Normal Precipitation from Apr. 1 to June 19, 2005

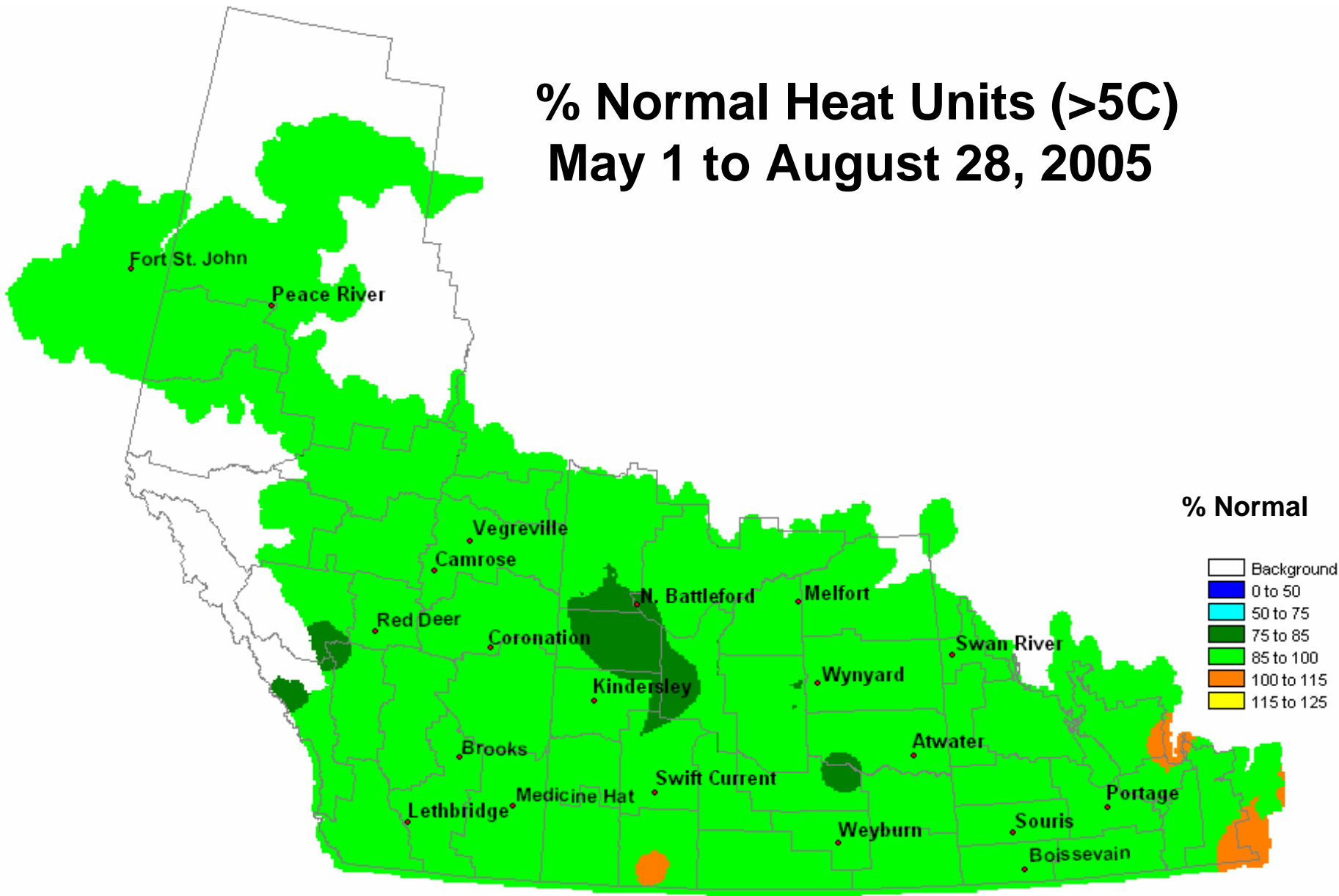


# Per cent Soil Moisture for Wheat to June 19, 2005

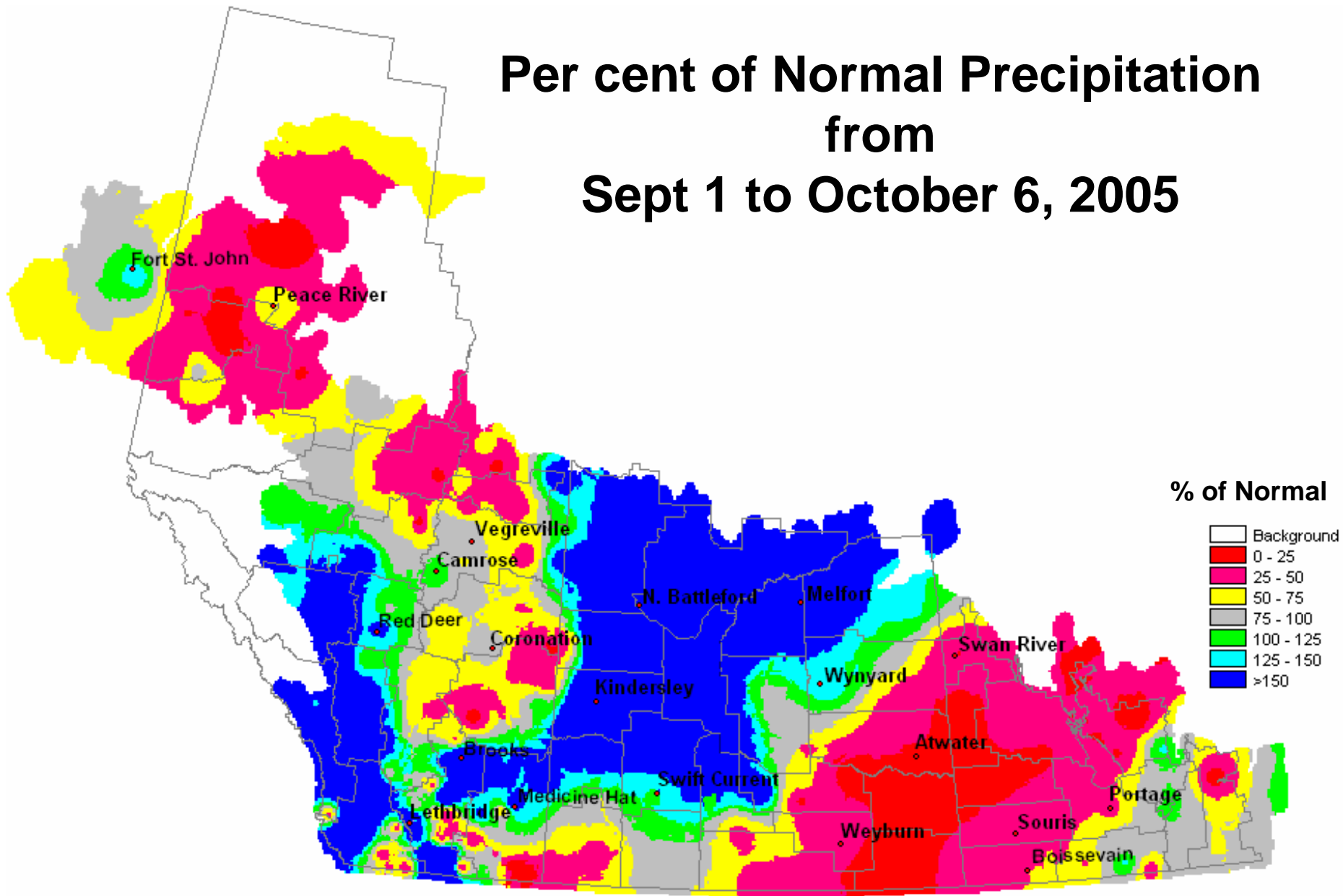




# % Normal Heat Units (>5C) May 1 to August 28, 2005



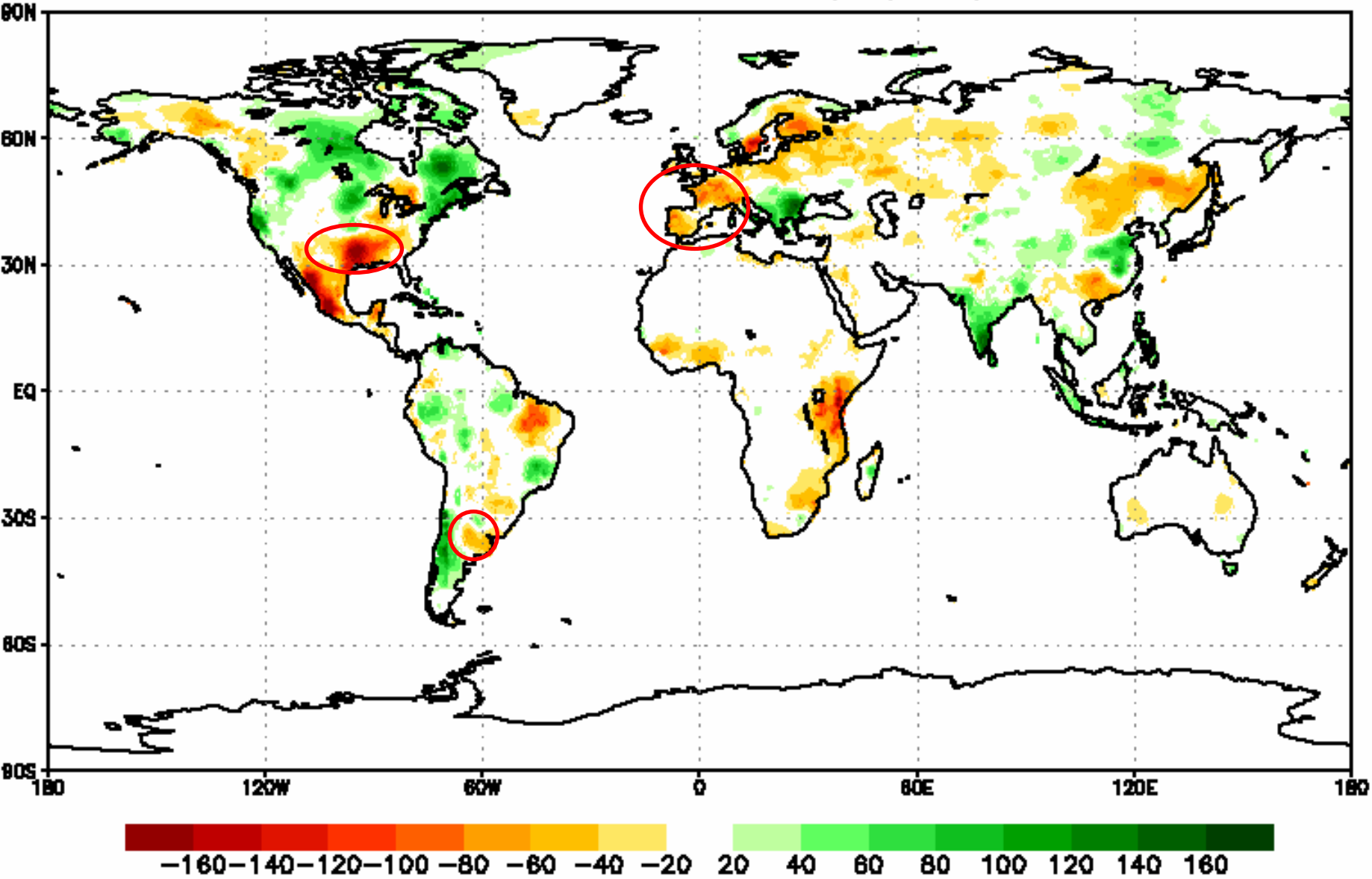
# Per cent of Normal Precipitation from Sept 1 to October 6, 2005

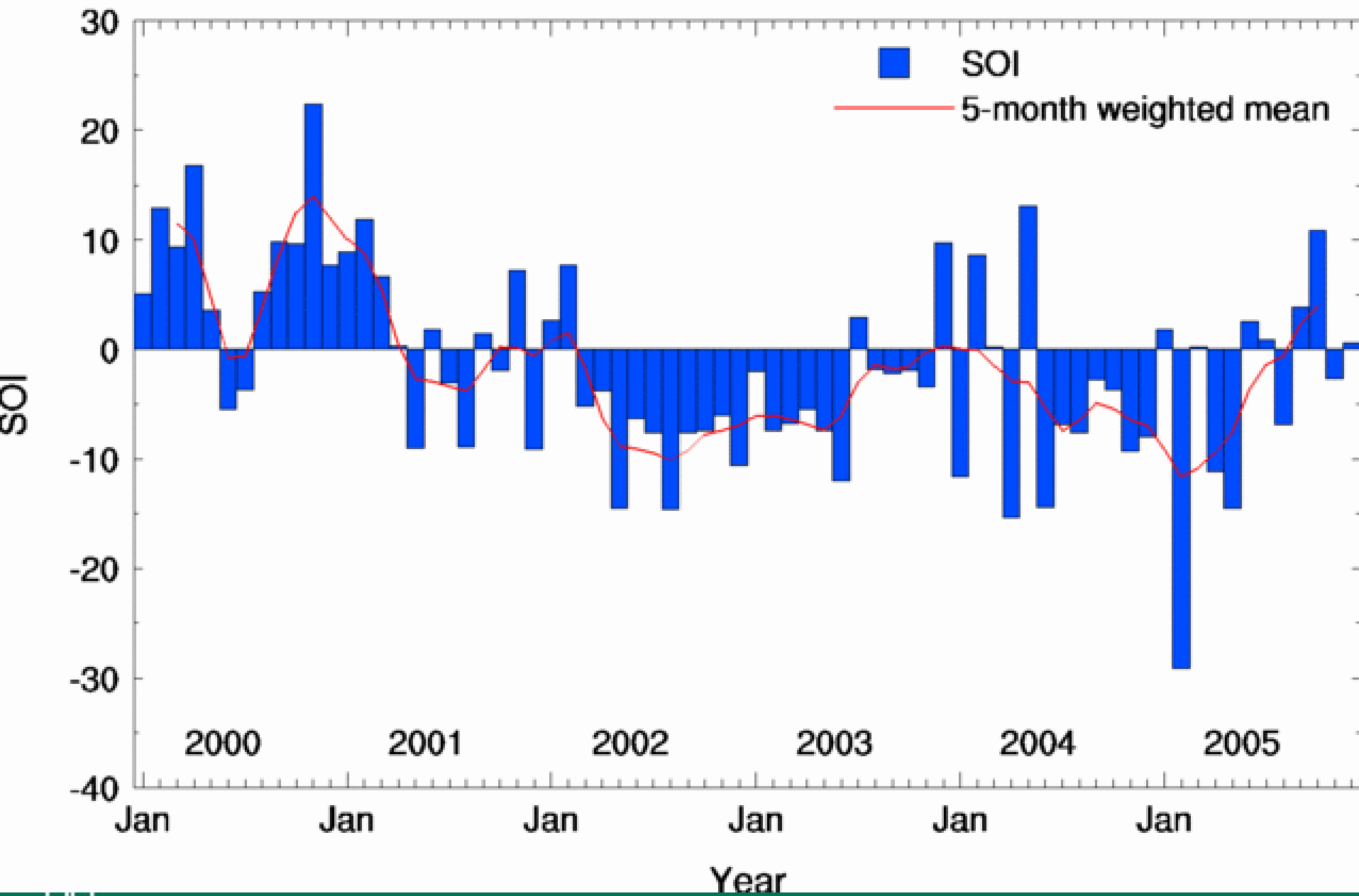




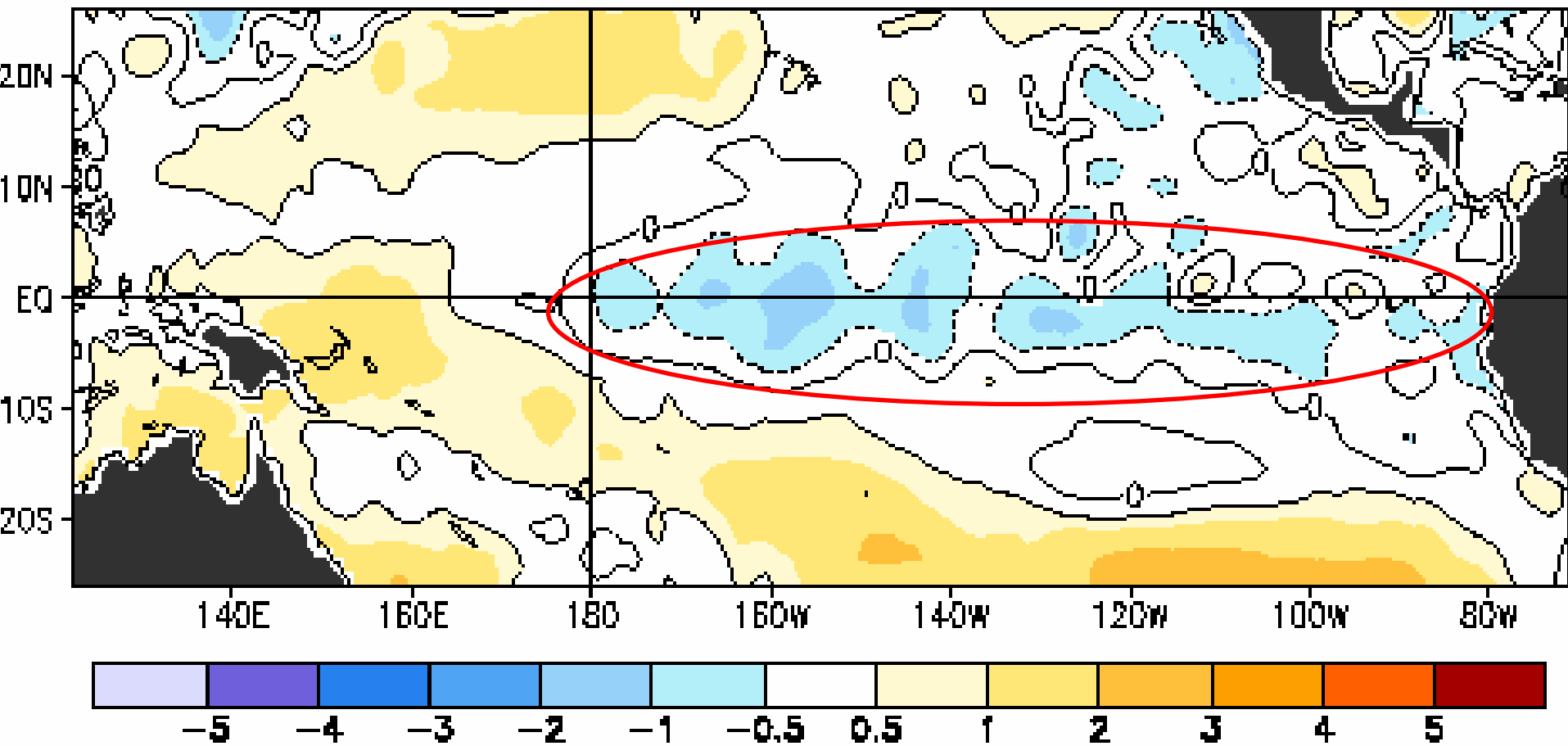
# World Weather

Calculated Soil Moisture Anomaly (mm) DEC, 2005



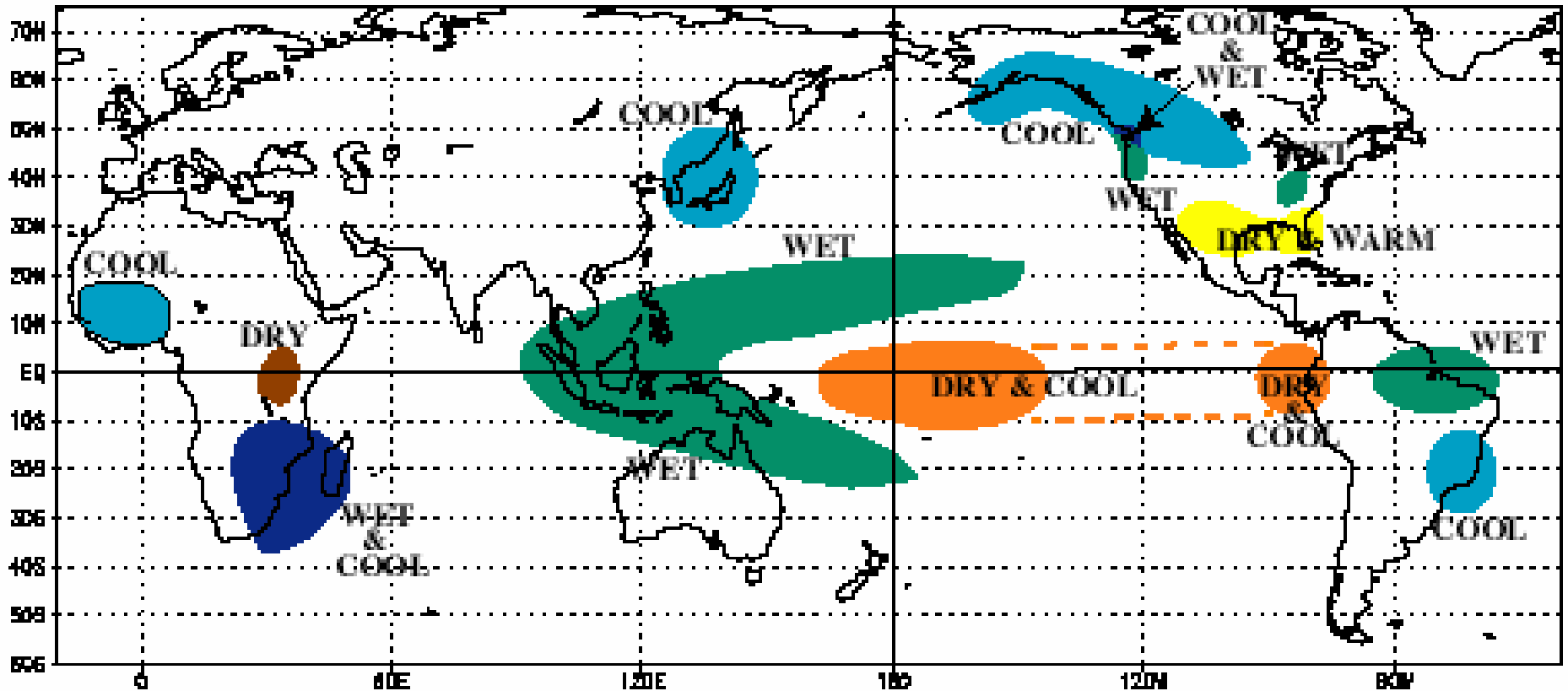


# Observed Sea Surface Temperature Anomalies (°C)



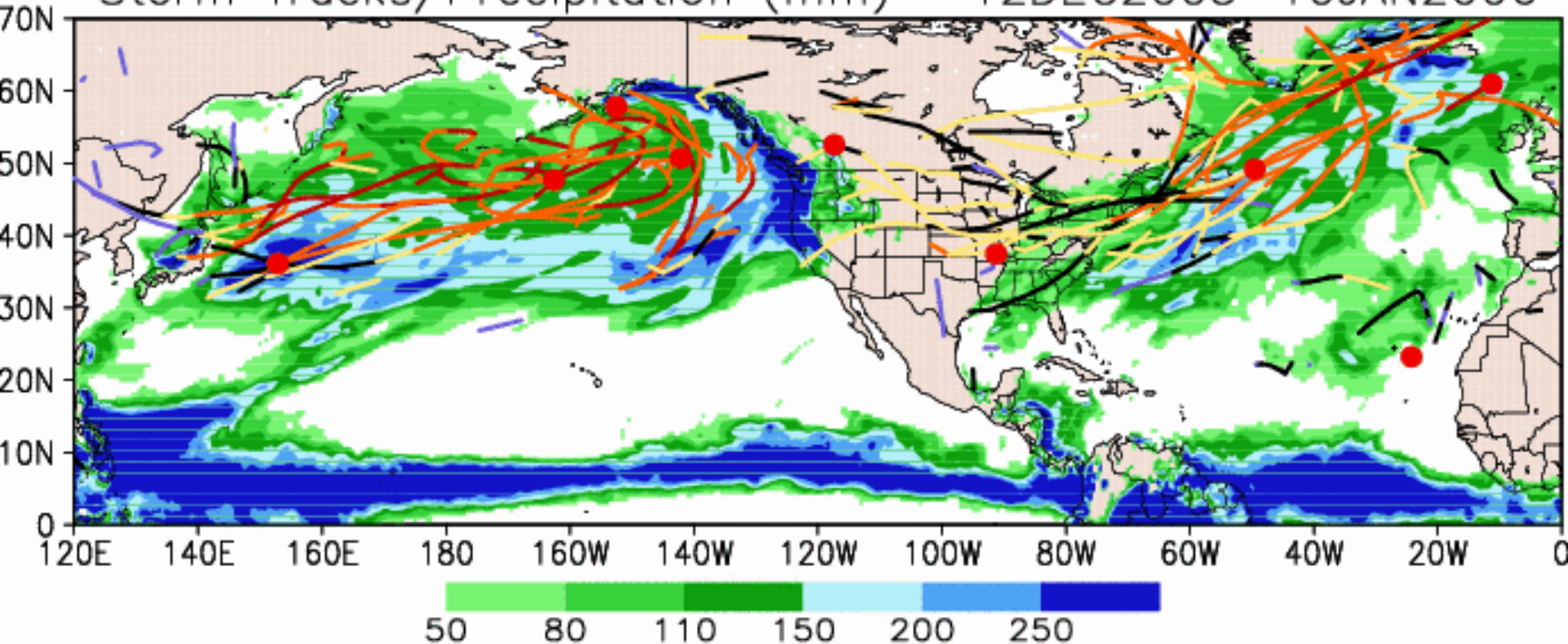
7-day Average Centered on 04 January 2006

# COLD EPISODE RELATIONSHIPS DECEMBER - FEBRUARY



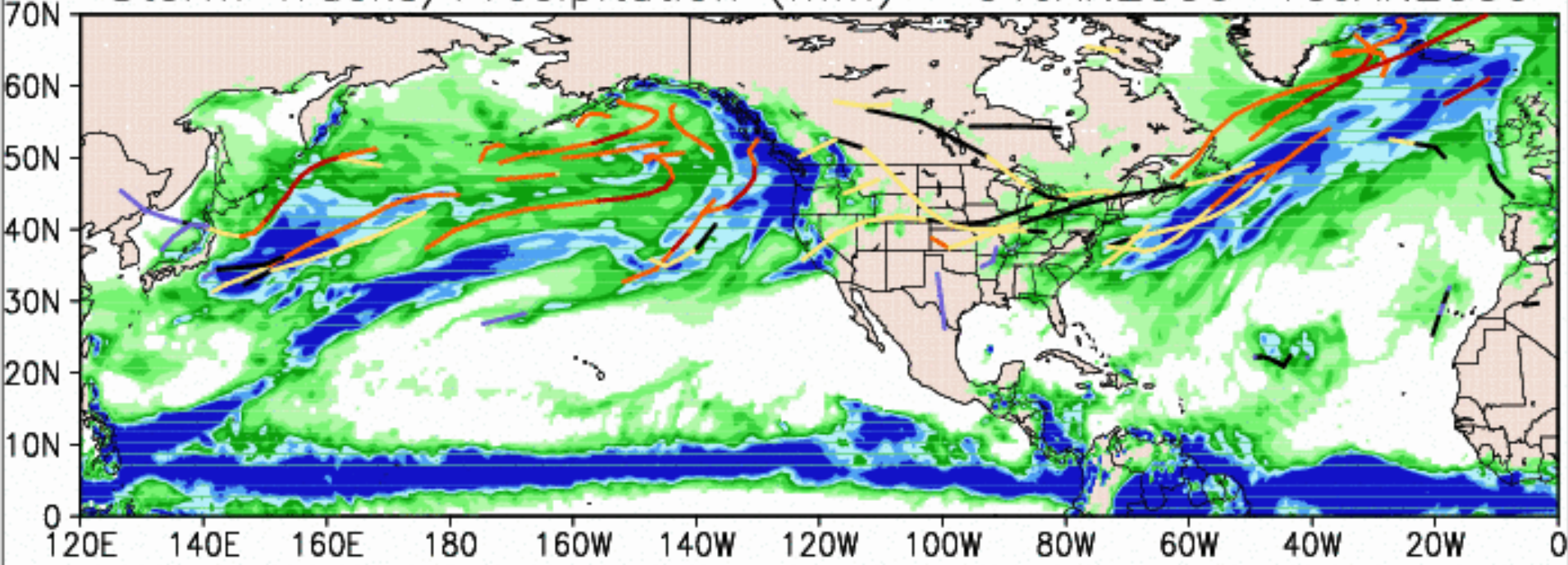


# Storm Tracks/Precipitation (mm) -- 12DEC2005 - 10JAN2006



STORM TRACK KEY:  
< 972 mb                    —  
972 mb - 992 mb           —  
992 mb - 1004 mb         —  
1004 mb - 1012 mb       —  
> 1012 mb                 —

# Storm Tracks/Precipitation (mm) -- 01 JAN 2006 -- 10 JAN 2006



STORM TRACK KEY:

< 972 mb	Red line
972 mb - 992 mb	Orange line
992 mb - 1004 mb	Yellow line
1004 mb - 1012 mb	Black line
> 1012 mb	Purple line

# Model Forecasts of ENSO from Dec 2005

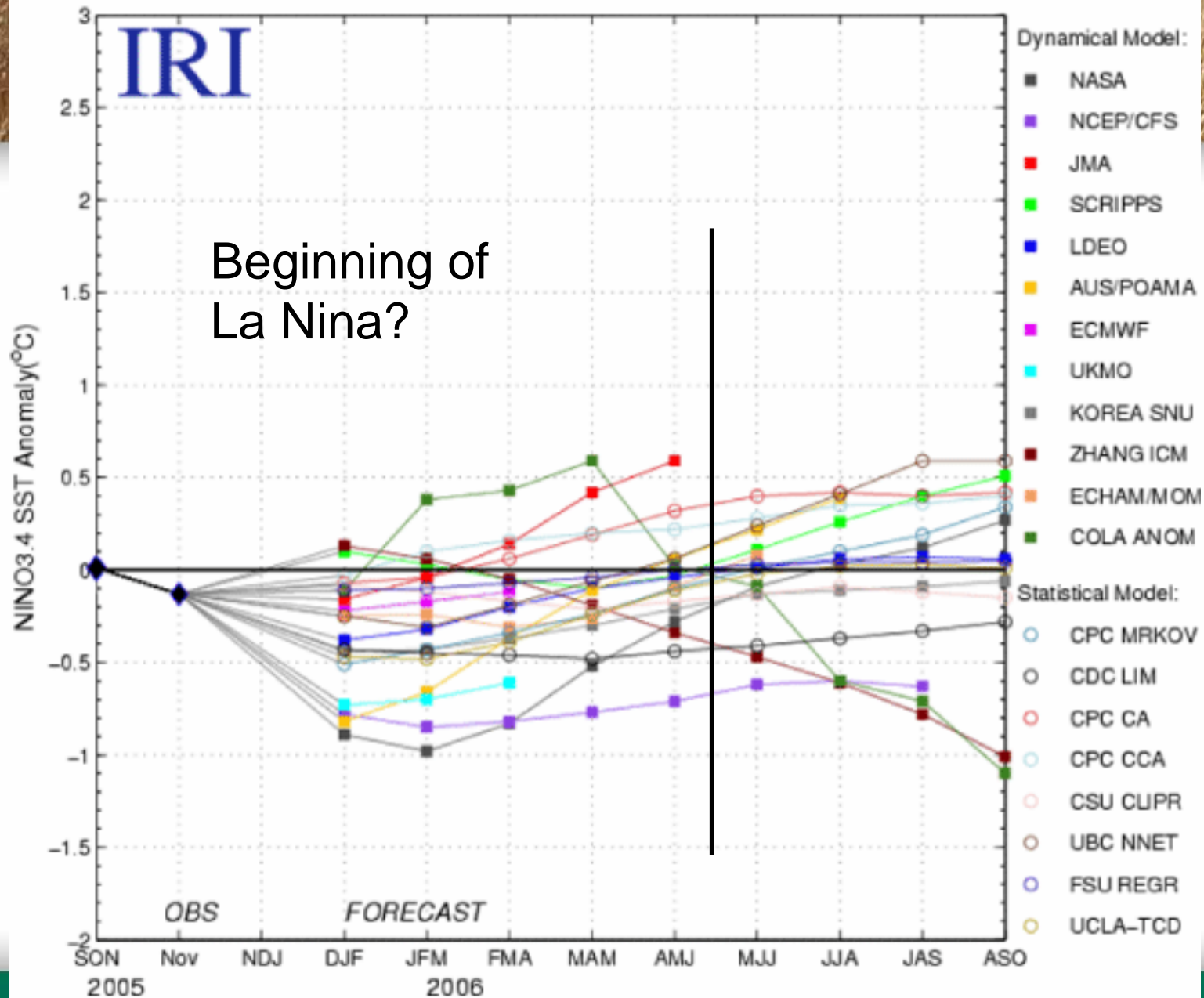
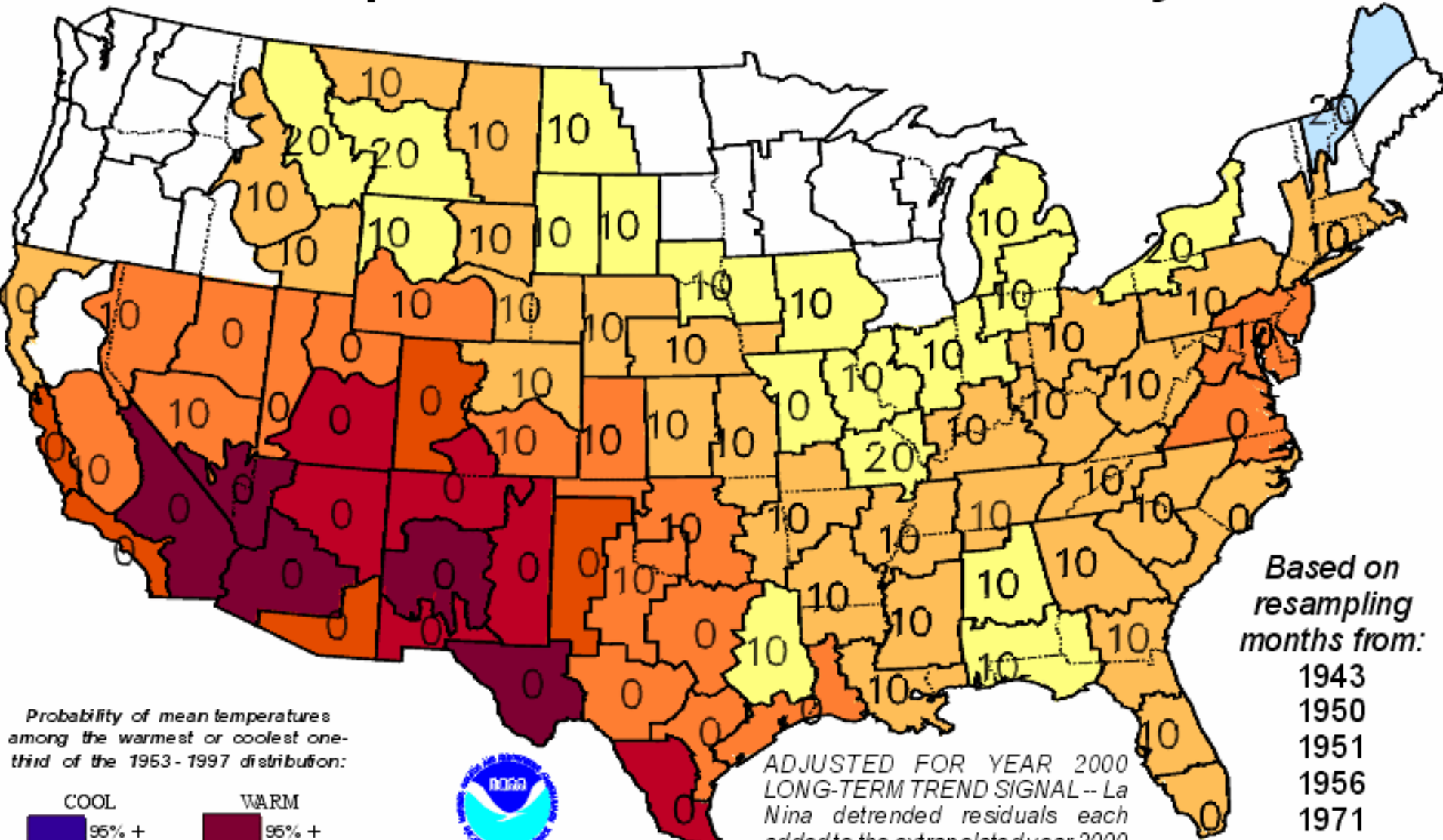


Figure 4. Forecasts of the SST anomalies for the Niño 3.4 region. Figure courtesy of the International Research Institute (IRI) for Climate Prediction.

# La Niña Temperature Probabilities – January - March



*Based on resampling months from:*

- 1943
- 1950
- 1951
- 1956
- 1971
- 1974
- 1976
- 1989
- 1999

*Probability of mean temperatures among the warmest or coolest one-third of the 1953-1997 distribution:*

COOL		WARM	
[Dark Blue]	95% +	[Dark Red]	95% +
[Medium Blue]	85% - 95%	[Red]	85% - 95%
[Light Blue]	75% - 85%	[Orange-Red]	75% - 85%
[Lighter Blue]	65% - 75%	[Orange]	65% - 75%
[Very Light Blue]	55% - 65%	[Light Orange]	55% - 65%
[Lightest Blue]	45% - 55%	[Yellow]	45% - 55%

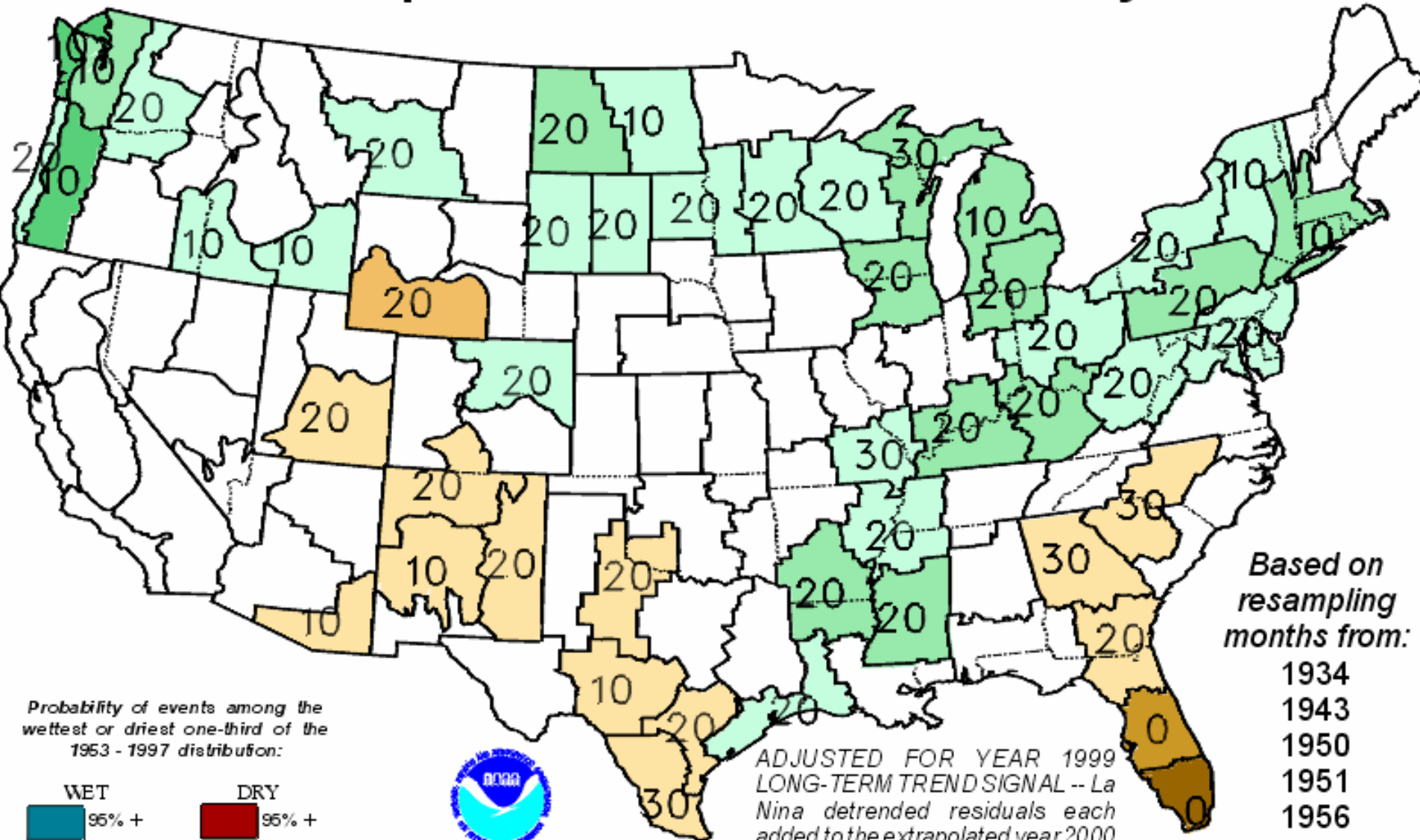


CLIMATE PREDICTION CENTER

*ADJUSTED FOR YEAR 2000 LONG-TERM TREND SIGNAL -- La Niña detrended residuals each added to the extrapolated year 2000 'expected' average temperature & compared against the 1953-1997 climatological distribution.*

**NOTE:** Plotted value indicates the probability (%) of mean temperatures in the OPPOSITE extreme one-third of the historical distribution rounded to the nearest 10%.

# La Nina Precipitation Probabilities – January - March



Probability of events among the wettest or driest one-third of the 1953 - 1997 distribution:



CLIMATE PREDICTION CENTER

**NOTE:** Plotted value indicates the probability (%) of precipitation totals in the OPPOSITE extreme one-third of the historical distribution rounded to the nearest 10%.

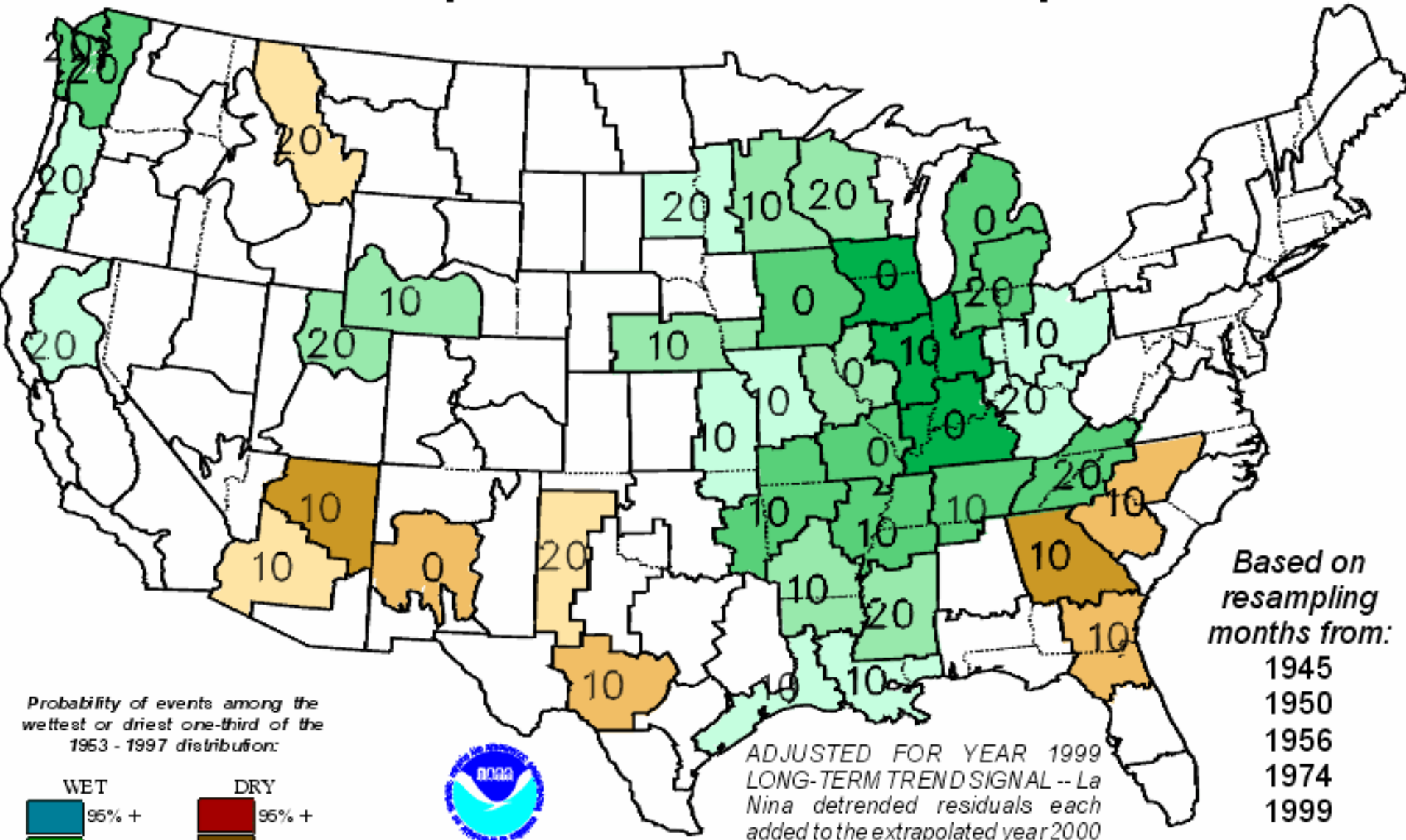
ADJUSTED FOR YEAR 1999  
LONG-TERM TREND SIGNAL -- La Nina detrended residuals each added to the extrapolated year 2000 'expected' precipitation & compared against the 1953-1997 climatological distribution.

Based on resampling months from:

- 1934
- 1943
- 1950
- 1951
- 1956
- 1971
- 1974
- 1976
- 1989
- 1999



# La Nina Precipitation Probabilities – April - June



Based on resampling months from:  
 1945  
 1950  
 1956  
 1974  
 1999

Probability of events among the wettest or driest one-third of the 1953 - 1997 distribution:

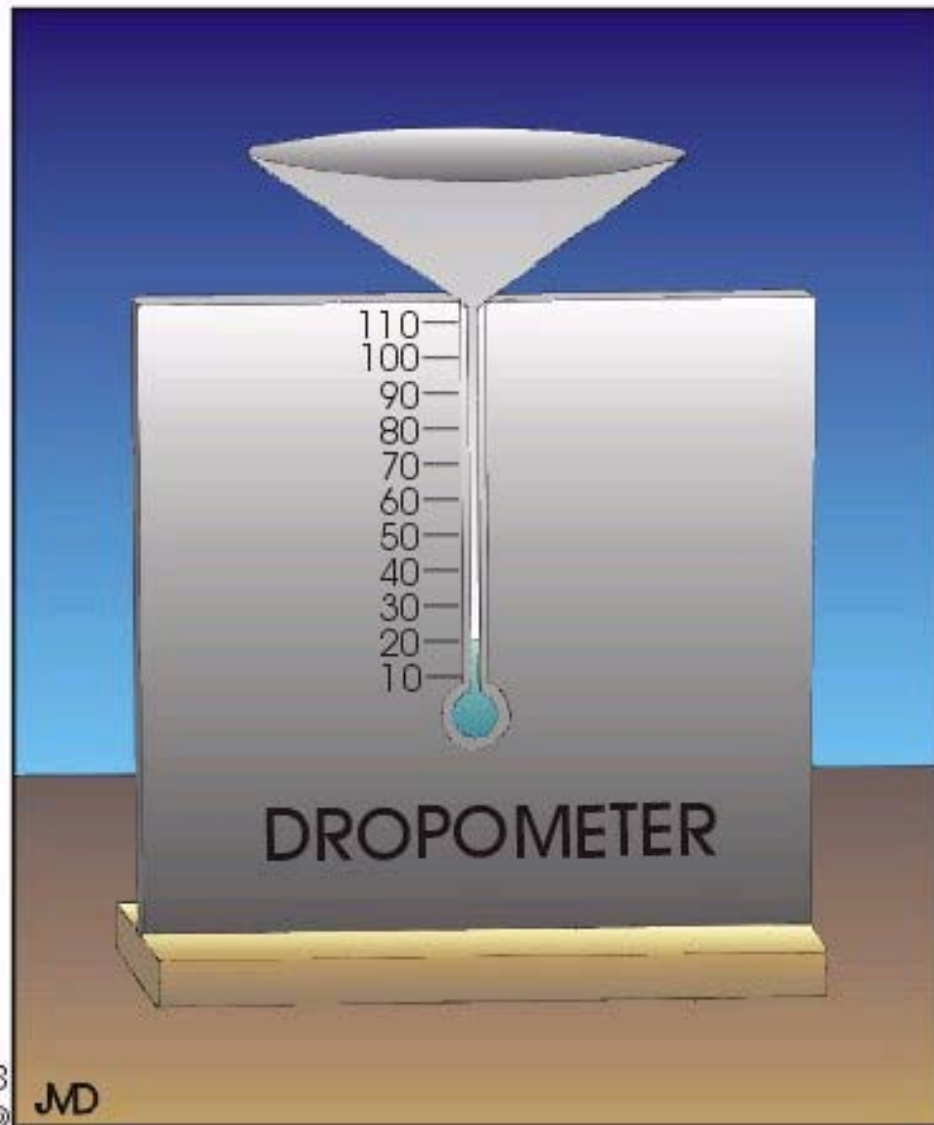
WET		DRY	
[Dark Blue]	95% +	[Dark Red]	95% +
[Dark Green]	85% - 95%	[Dark Brown]	85% - 95%
[Medium Green]	75% - 85%	[Medium Brown]	75% - 85%
[Light Green]	65% - 75%	[Light Brown]	65% - 75%
[Very Light Green]	55% - 65%	[Orange]	55% - 65%
[Pale Green]	45% - 55%	[Light Orange]	45% - 55%



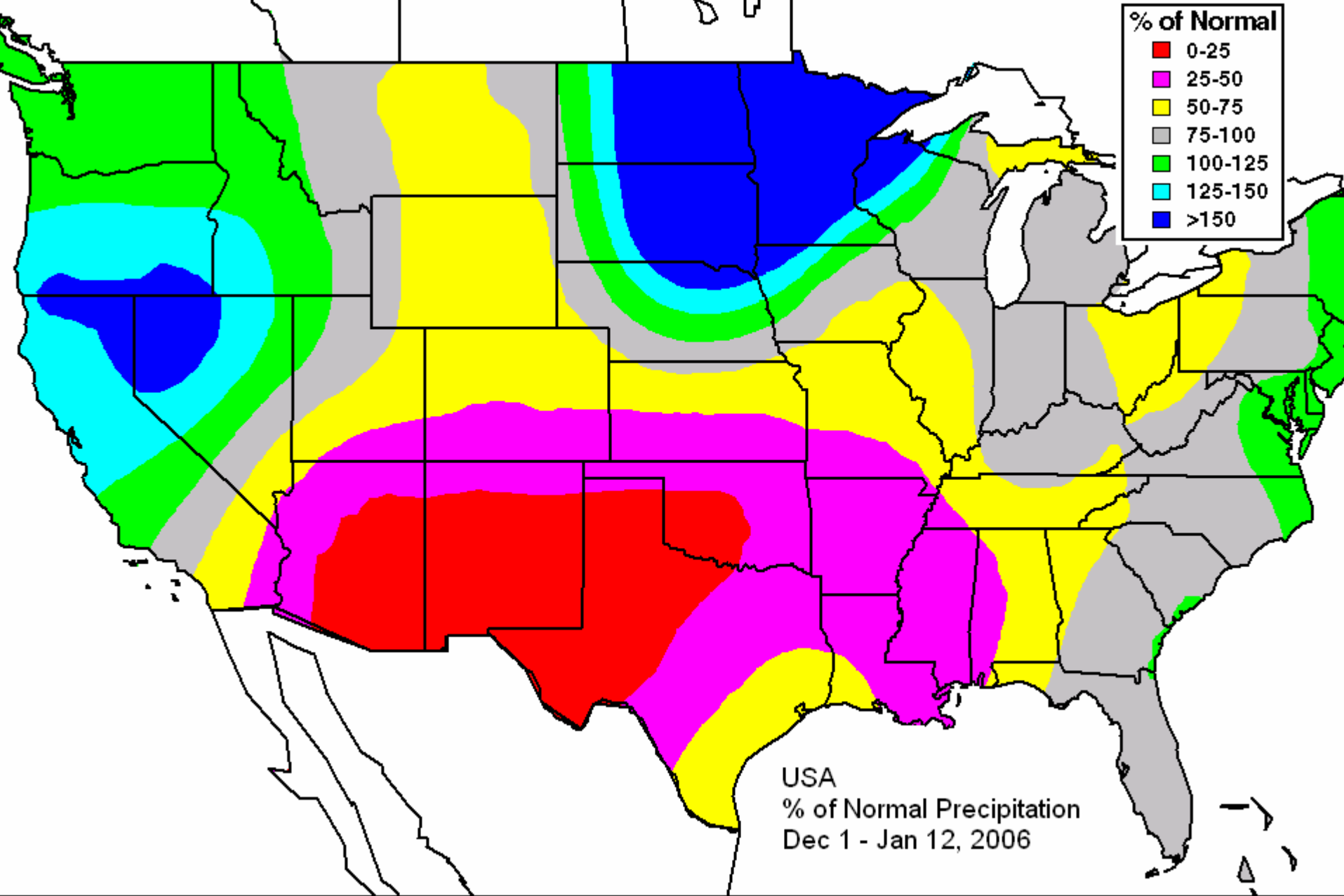
CLIMATE PREDICTION CENTER

ADJUSTED FOR YEAR 1999  
 LONG-TERM TREND SIGNAL -- La Nina detrended residuals each added to the extrapolated year 2000 'expected' precipitation & compared against the 1953-1997 climatological distribution.

**NOTE:** Plotted value indicates the probability (%) of precipitation totals in the OPPOSITE extreme one-third of the historical distribution rounded to the nearest 10%.



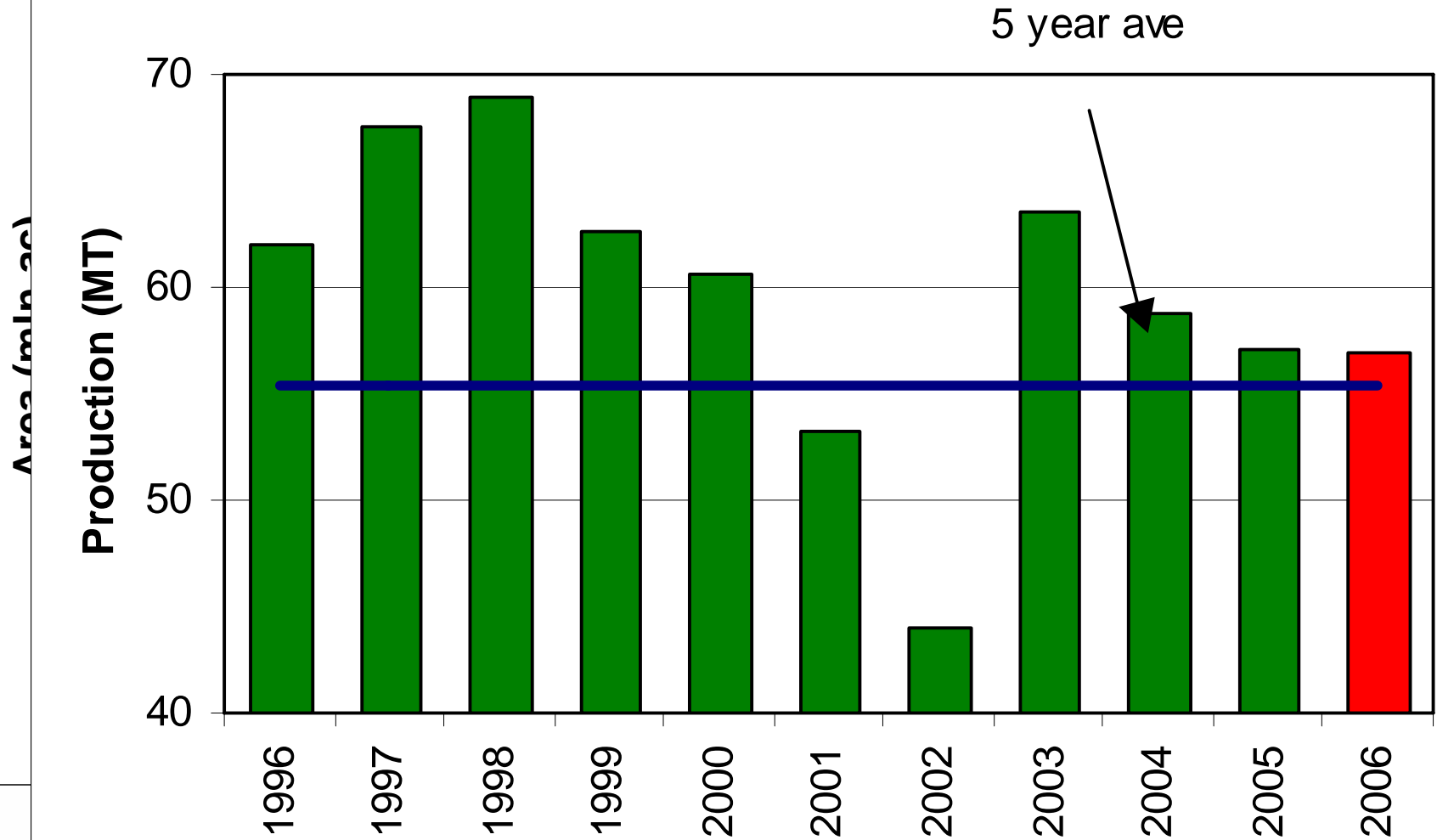
Since conventional rain measurements don't apply in New Mexico, meteorologists were forced to develop a new device.



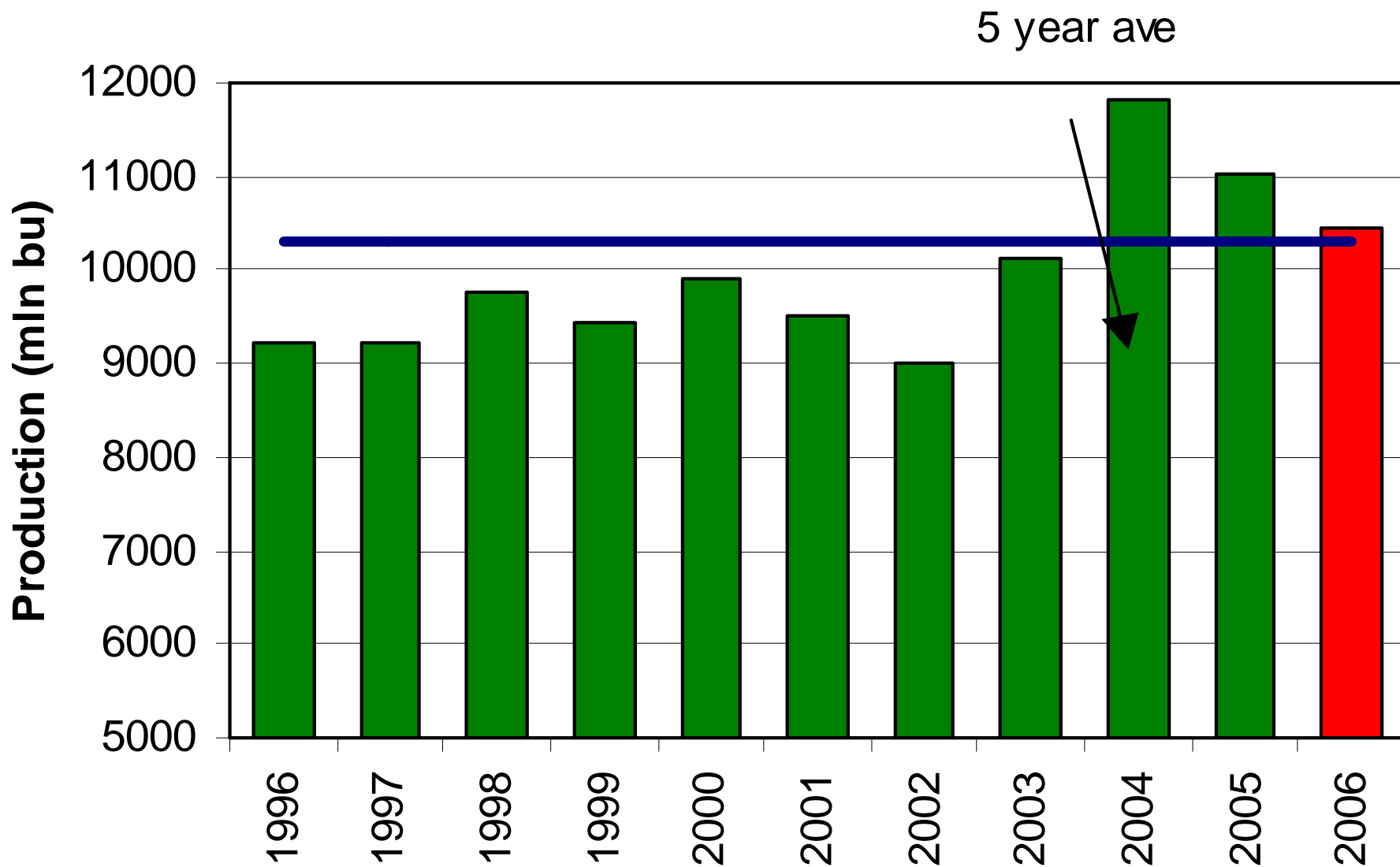
# USA

- Winter wheat area increased by 2% from last year
- HRW plantings were down slightly at slightly under 30 million acres
- SRW plantings increased by 1.16 mln ac to 7.3 mln ac
- Spring wheat plantings are expected to be slightly lower in the Northern Plains this year. Durum is expected to be unchanged, but desert durum is down by 10,000 ac
- Barley plantings are expected to be down from last year

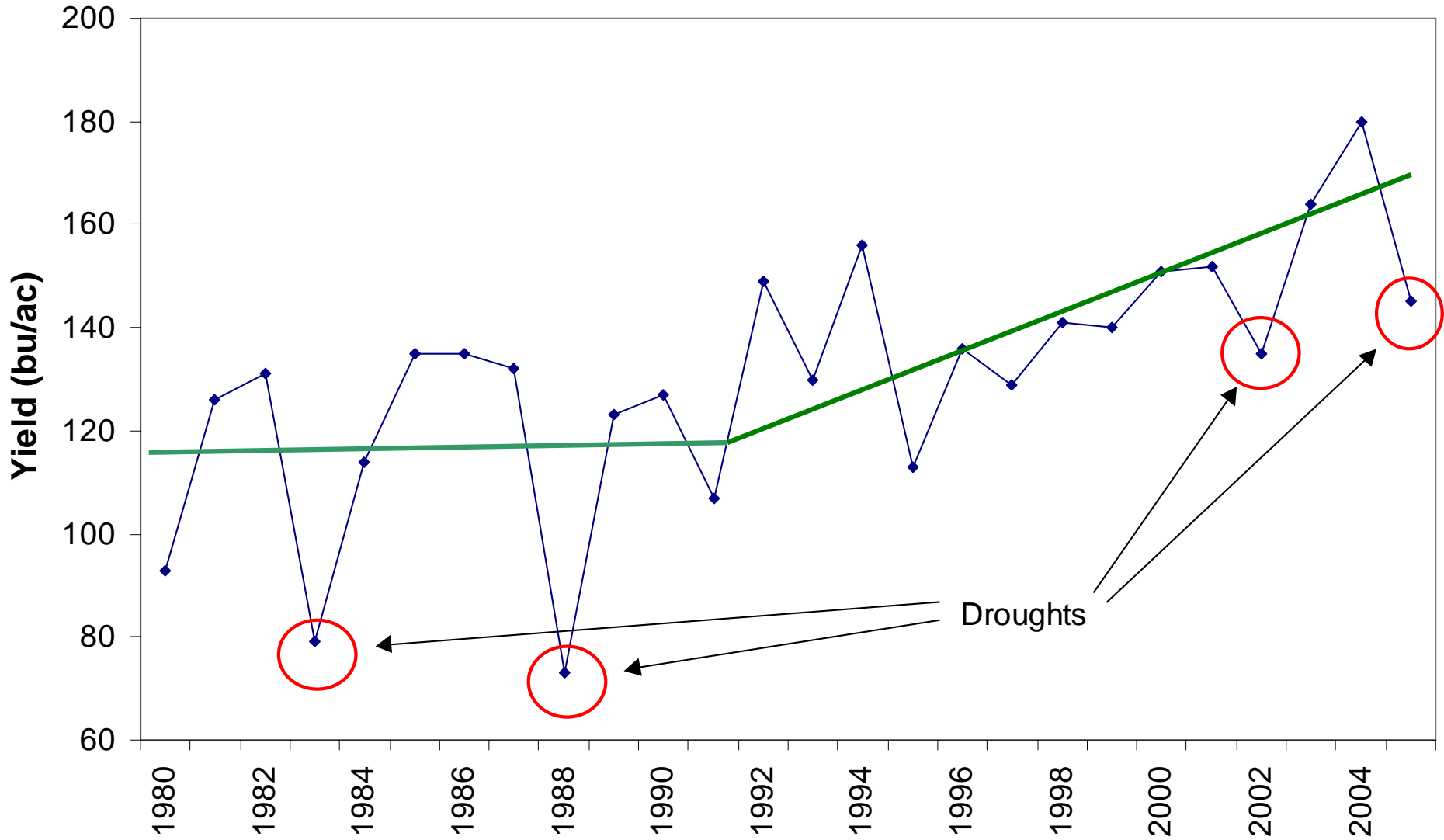
# USA Wheat Production



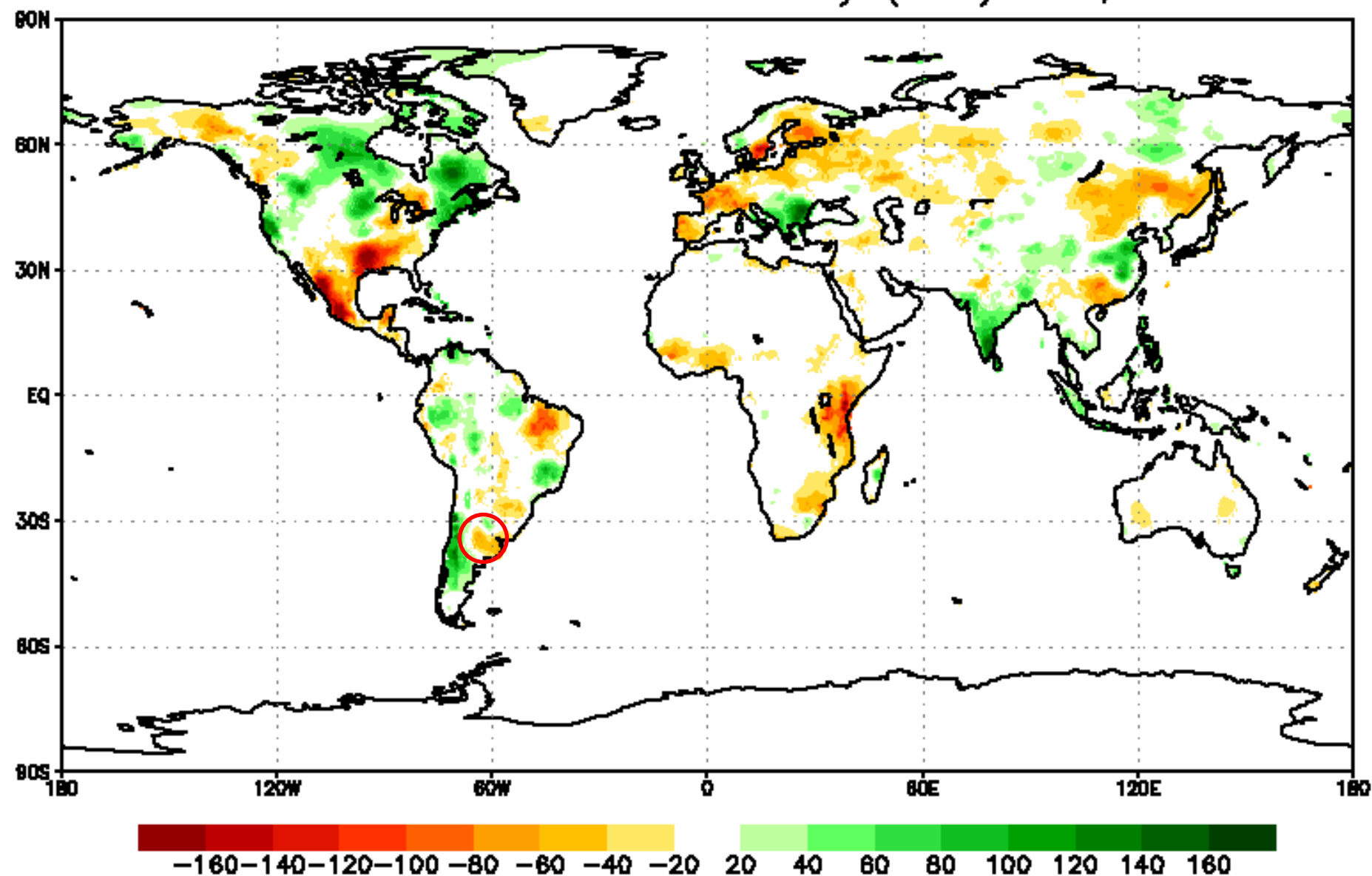
# USA Corn Production

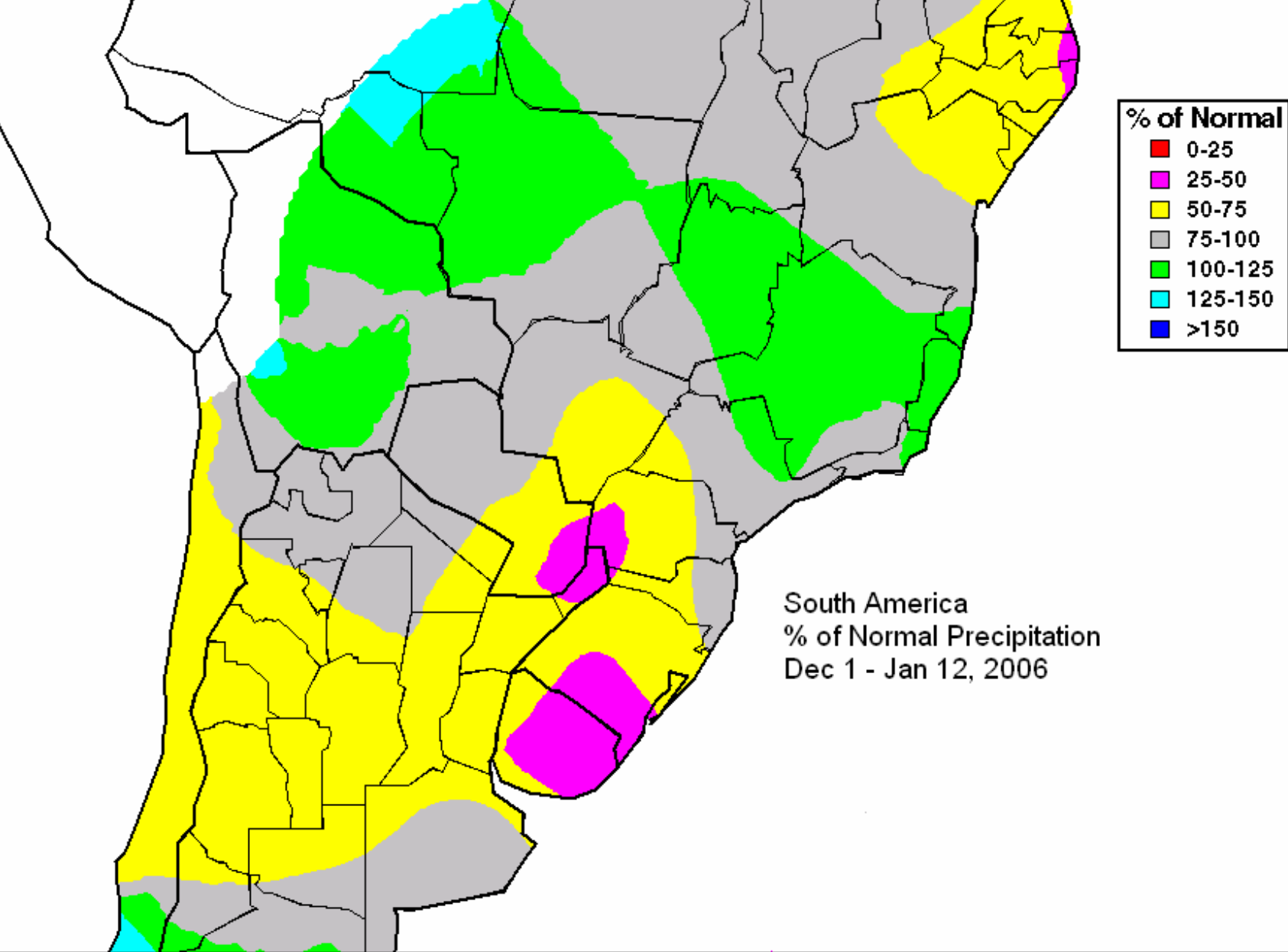


# Illinois Corn Yields

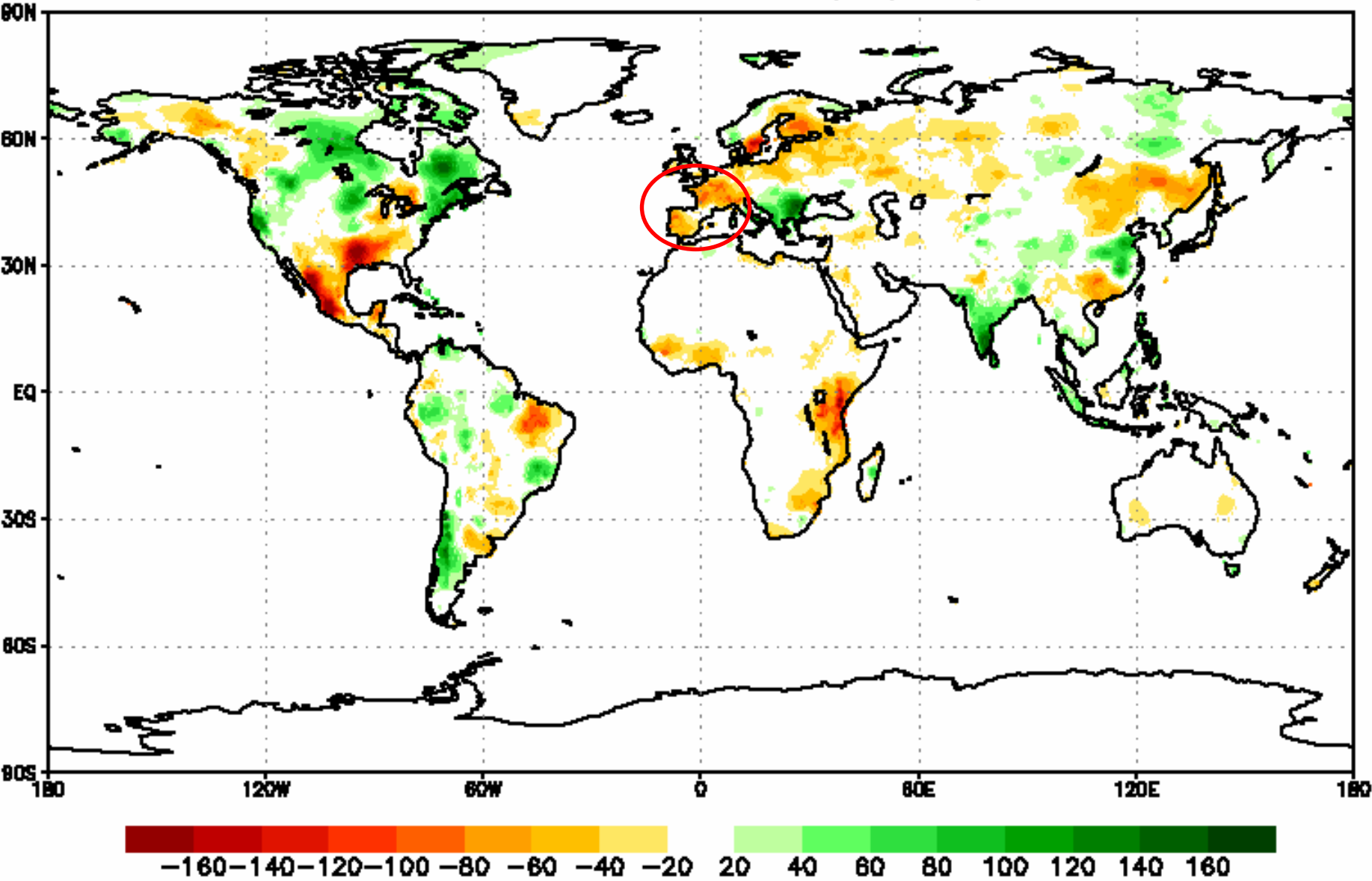


Calculated Soil Moisture Anomaly (mm) DEC, 2005



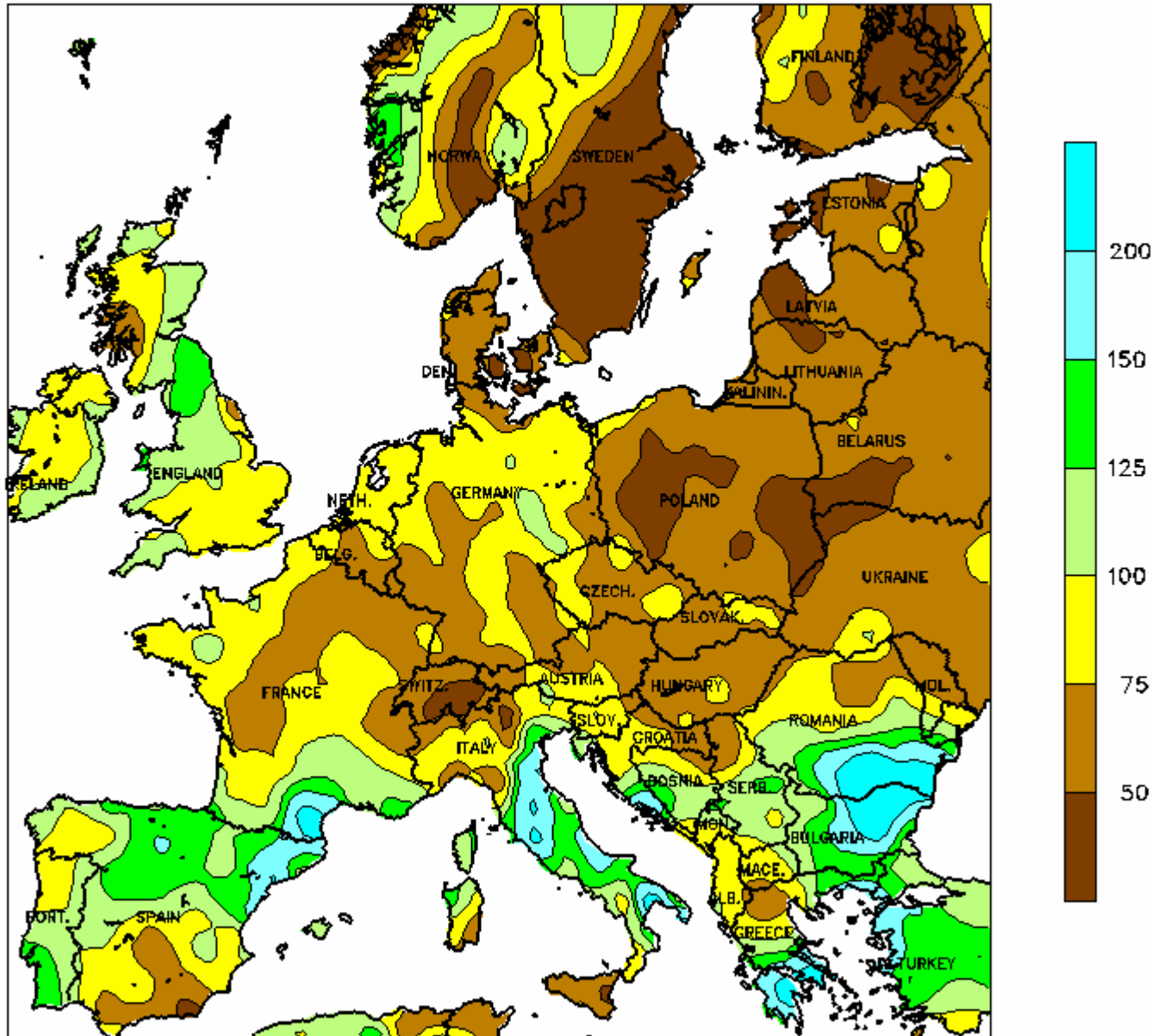


Calculated Soil Moisture Anomaly (mm) DEC, 2005



# EUROPE

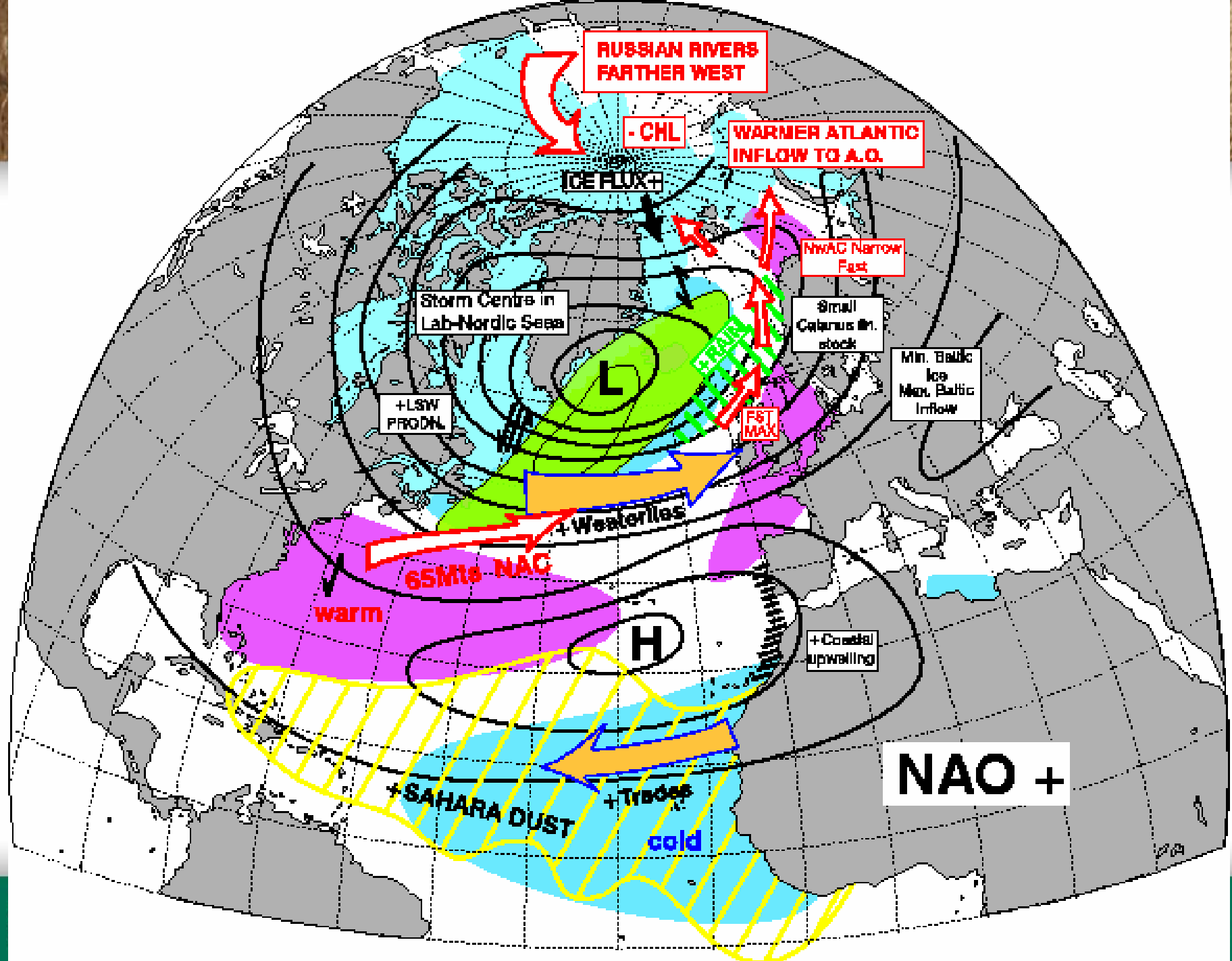
Percent of Normal Precipitation  
SEP 1 - NOV 30, 2005



CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



vide



RUSSIAN RIVERS FARTHER WEST

- CHL

WARMER ATLANTIC INFLOW TO A.O.

ICE FLUX +

NwAC Narrow Fast

Storm Centre in Lab-Nordic Seas

Small Calanus fin. stock

+LSW PRODN.

Min. Baltic Ice  
Max. Baltic Inflow

Fst MAX

+Westerlies

65Mts NAC

warm

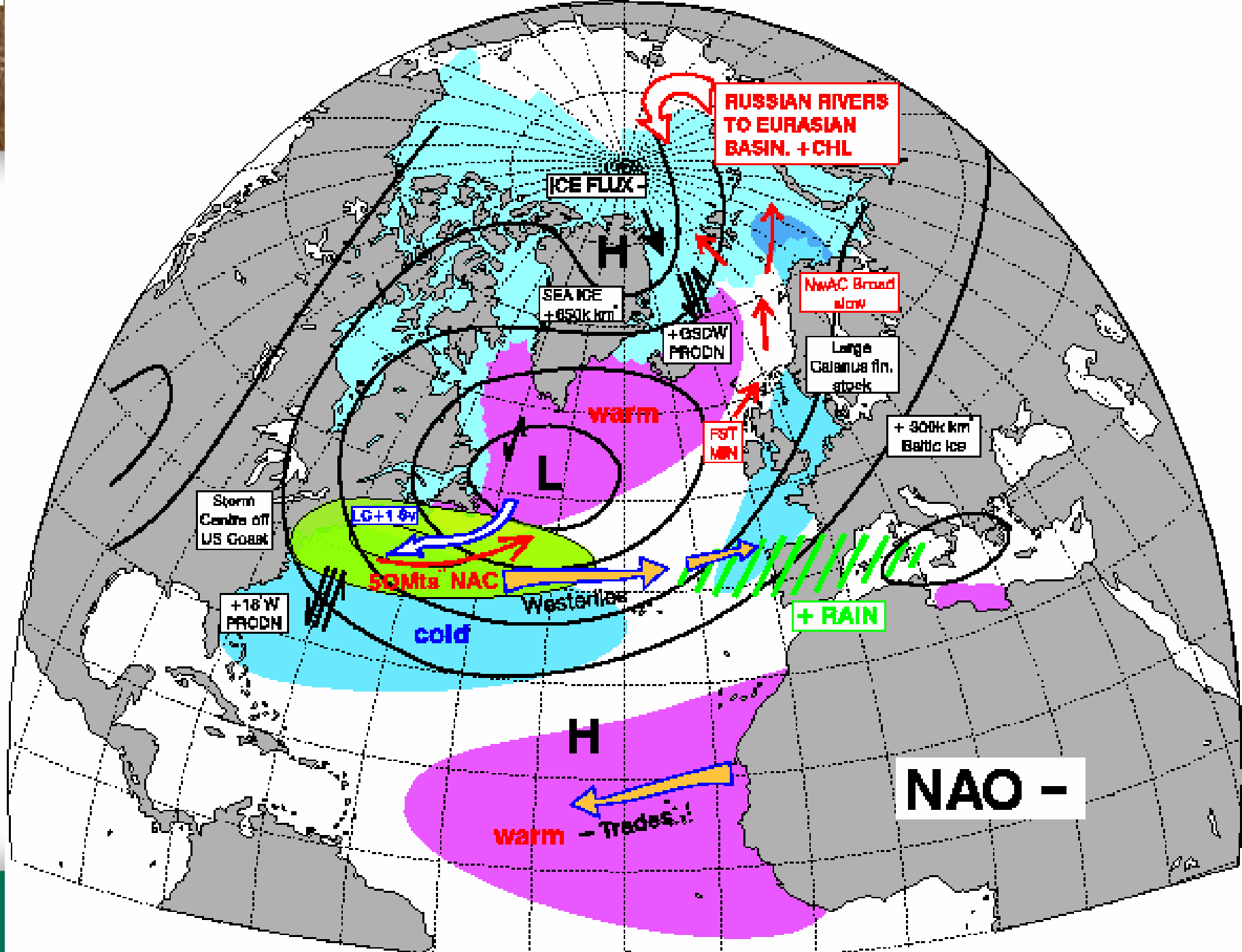
+ Coastal upwelling

NAO +

+SAHARA DUST

+Tboses

cold



**RUSSIAN RIVERS TO EURASIAN BASIN. + CHL**

**ICE FLUX -**

**H**

**SEA ICE + 650k km<sup>2</sup>**

**+ OSDW PRODN**

**NWAC Broad flow**

**Large Calanus fin. stock**

**+ 300k km<sup>2</sup> Baltic Ice**

**warm**

**L**

**FST MIN**

**Storm Centre off US Coast**

**LG + 1 Sv**

**SOMTs NAC**

**Westerlies**

**cold**

**+ 16 W PRODN**

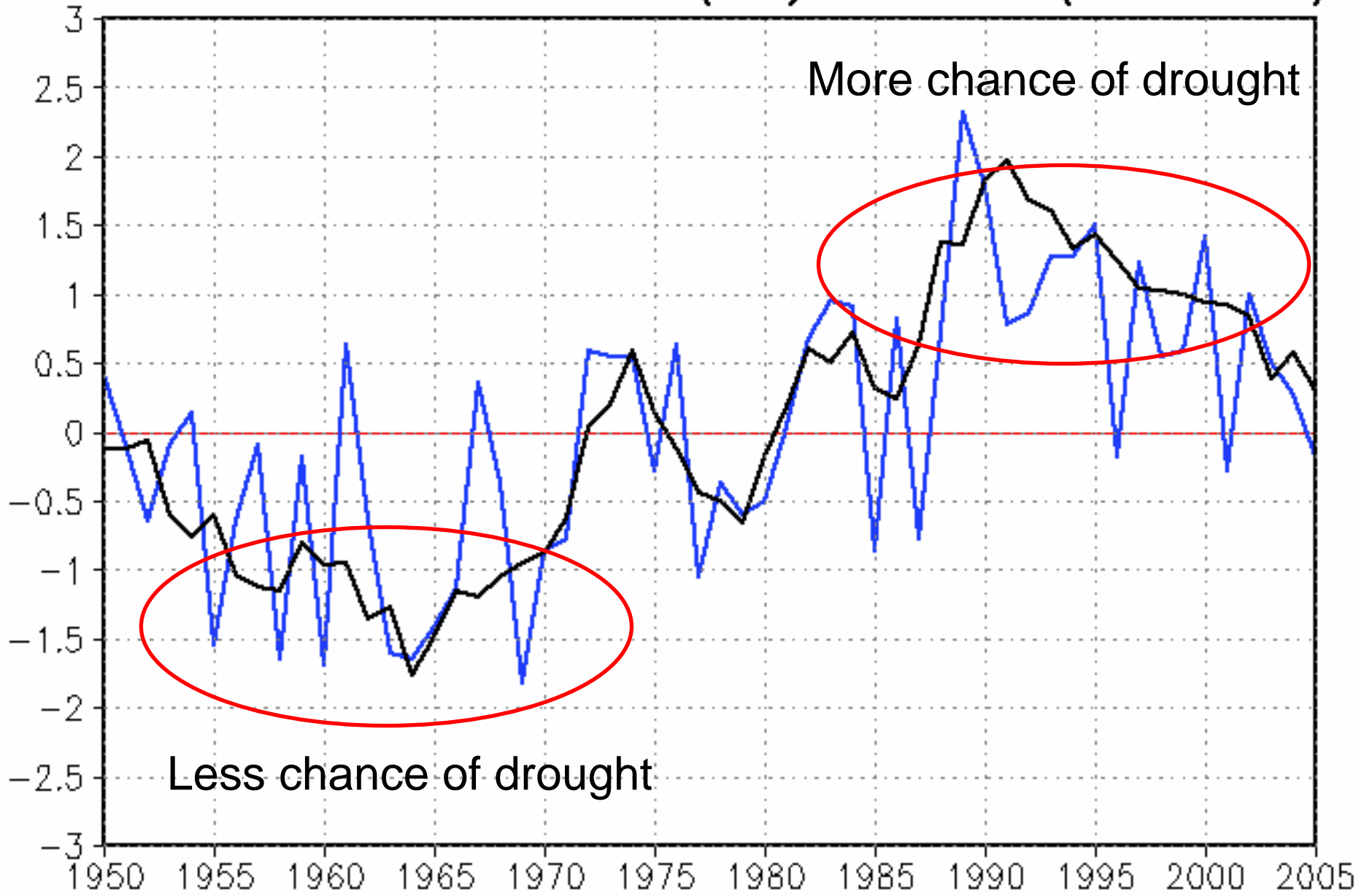
**+ RAIN**

**H**

**warm - Trades**

**NAO -**

Standardized Seasonal Mean (JFM) NAO index (1950–2005)

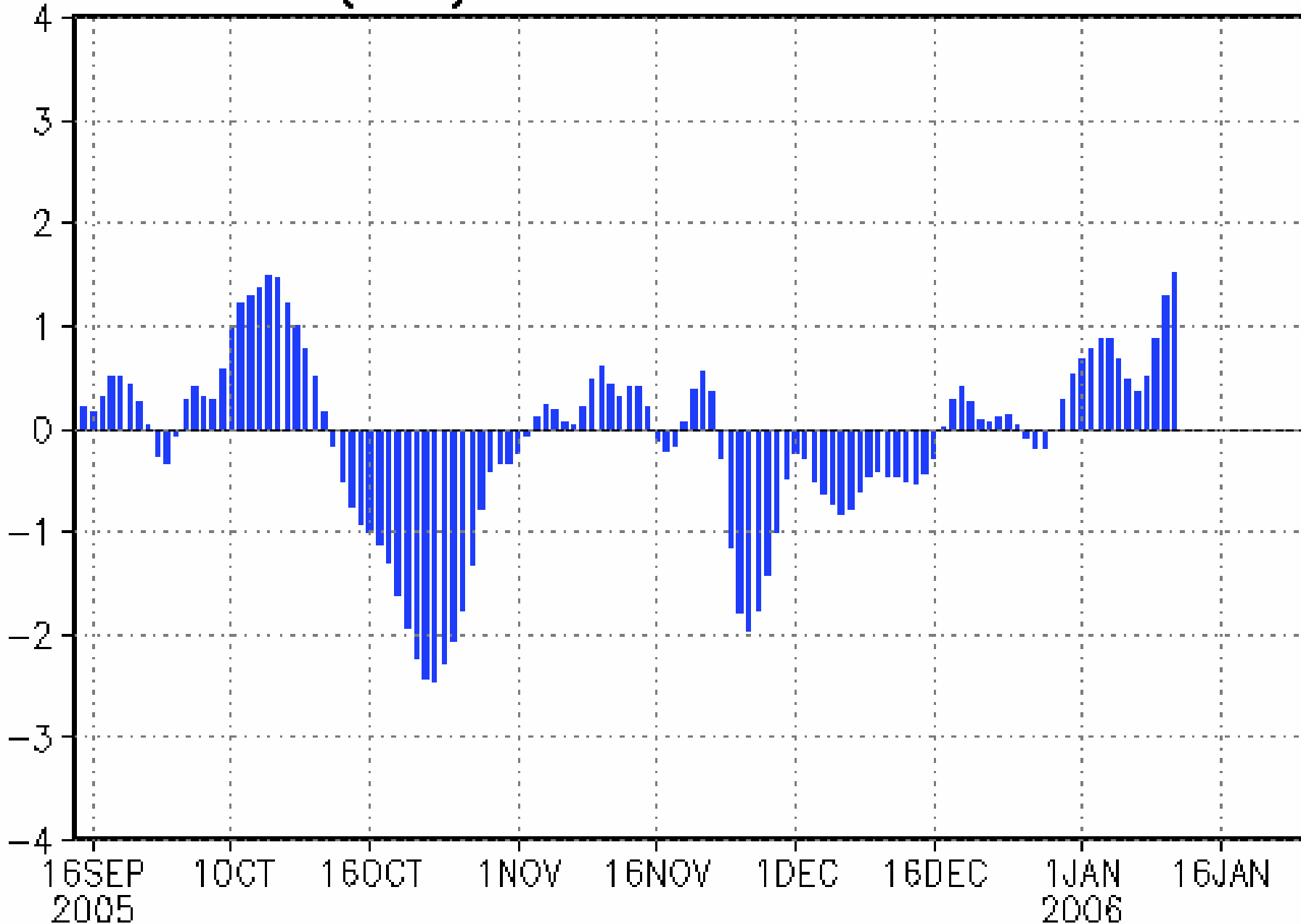


More chance of drought

Less chance of drought

500mb Z (Obs) - 11Jan2006

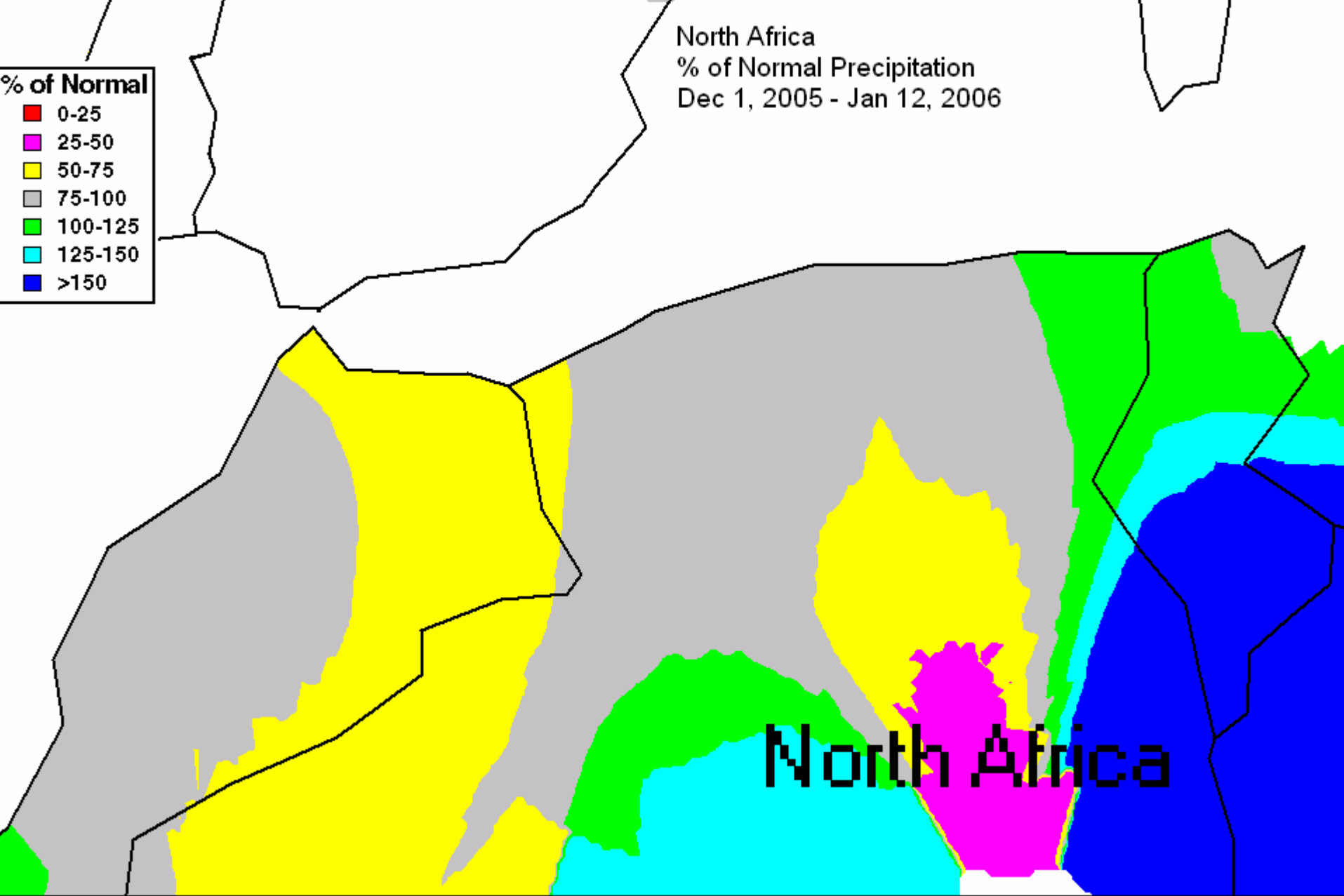
NAO index



**% of Normal**

- 0-25
- 25-50
- 50-75
- 75-100
- 100-125
- 125-150
- >150

North Africa  
% of Normal Precipitation  
Dec 1, 2005 - Jan 12, 2006



North Africa

# Algeria Precipitation (mm)

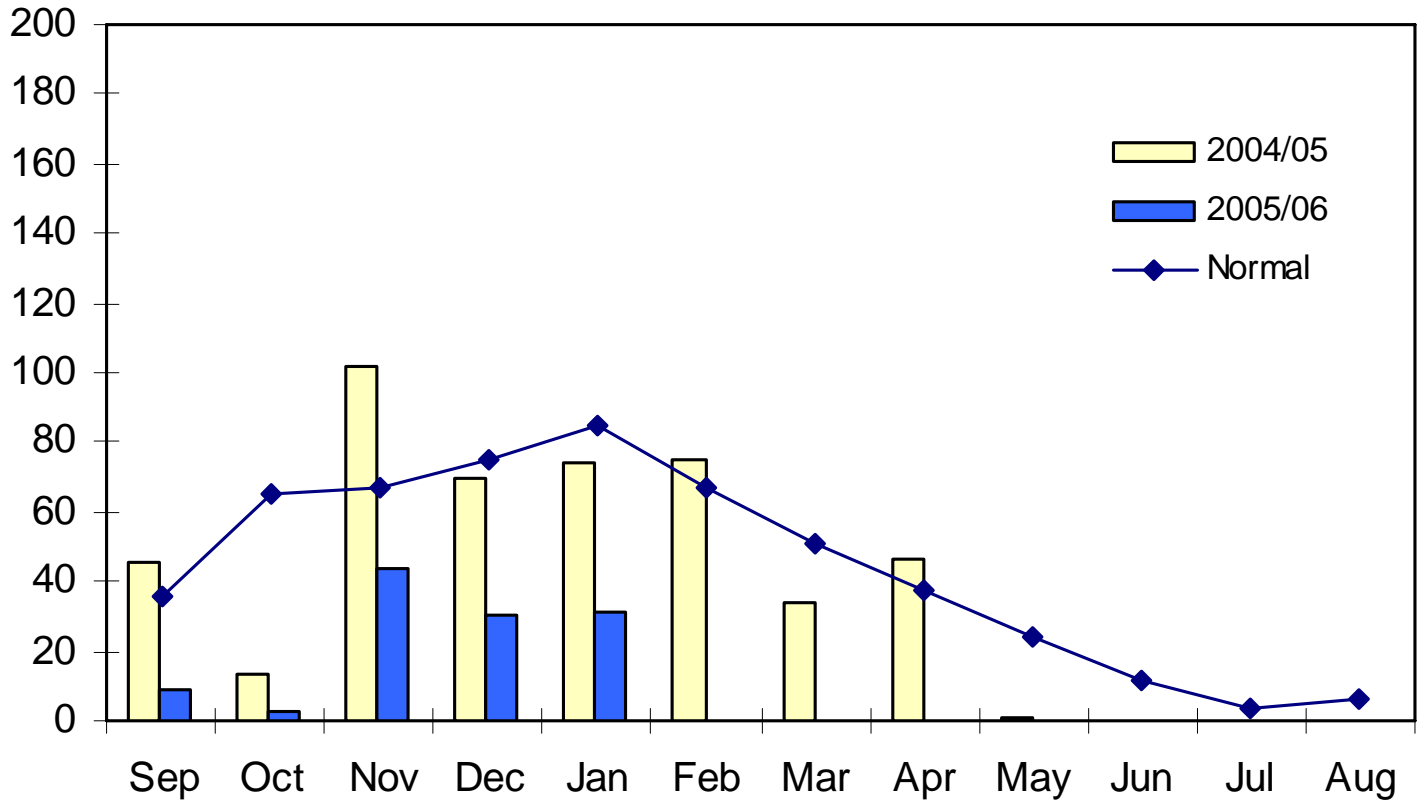
# Morocco Precipitation (mm)

# Tunisia Precipitation (mm)

Precip (mm)

Precip (mm)

Precip (mm)

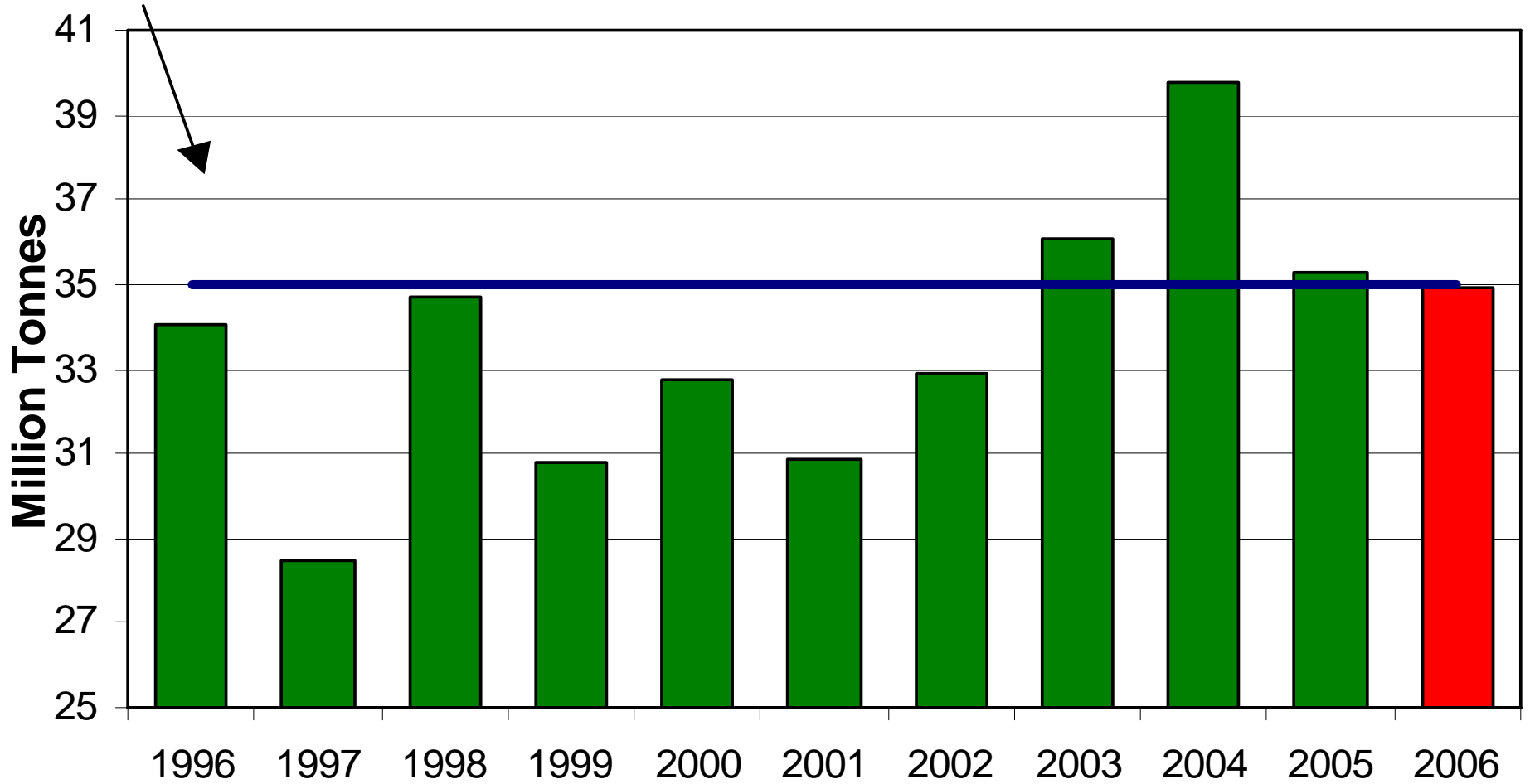


# World Durum Production Trends in 2006

- Durum
  - Planting conditions in the Mediterranean basin have been reasonable in 2005 and early 2006.
  - Crops in North Africa have just been planted and are currently in a slow growth period.
  - Spain and Morocco still have some but there is still time for the rains to come.

# World Durum Production

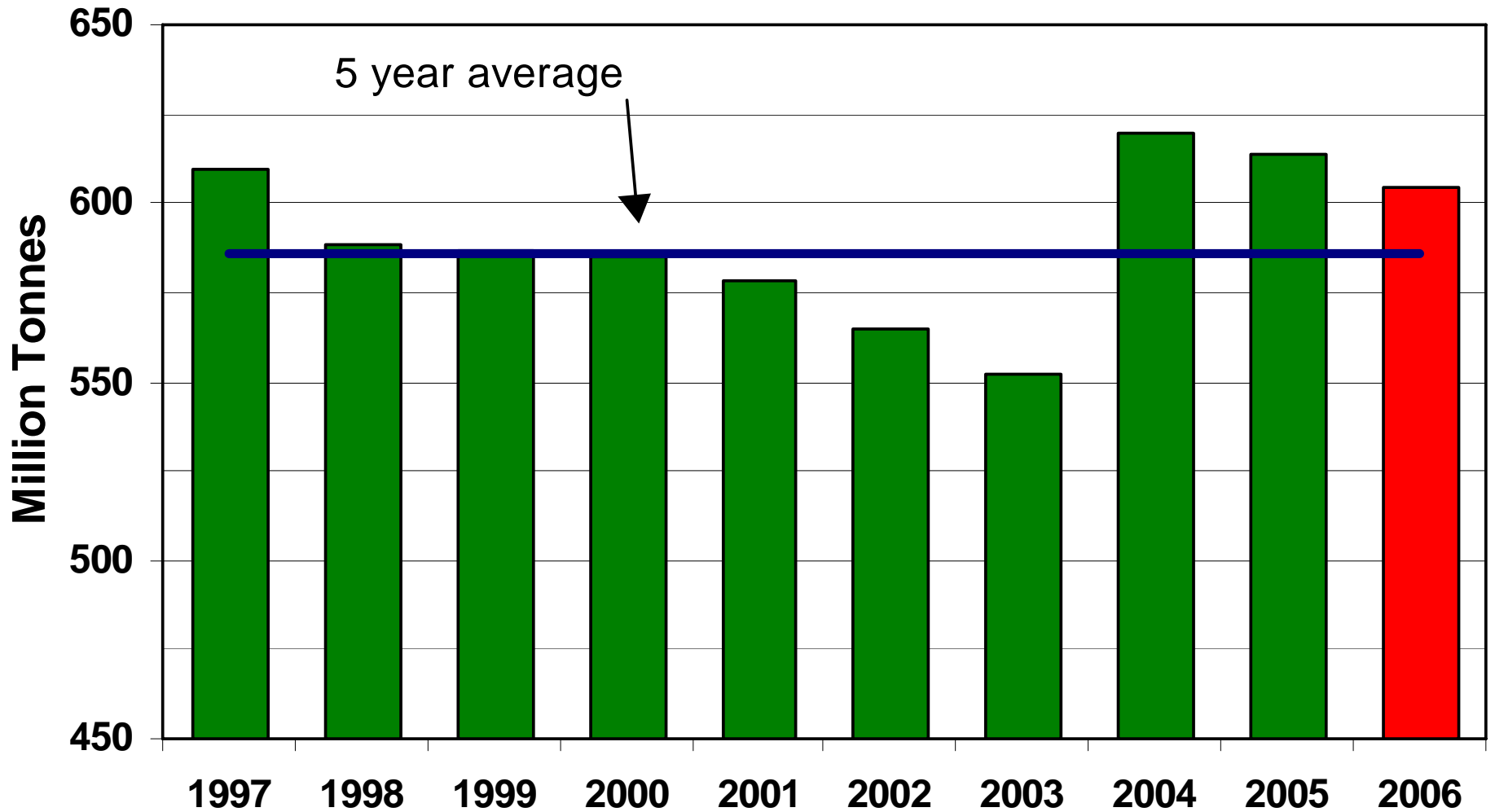
5 Yr. Avg.



# World Wheat Production Trends in 2006

- **Wheat**
  - Expect a modest drop in production from 2005 levels with production near 605 million tonnes
  - Drop in area is expected in the Ukraine, Russia and Kazakhstan
  - Potential production problems in HRW region; spring wheat area in the US should be reduced
  - If La Nina continues to develop, expect good moisture for the upcoming Australian crop

# World wheat production

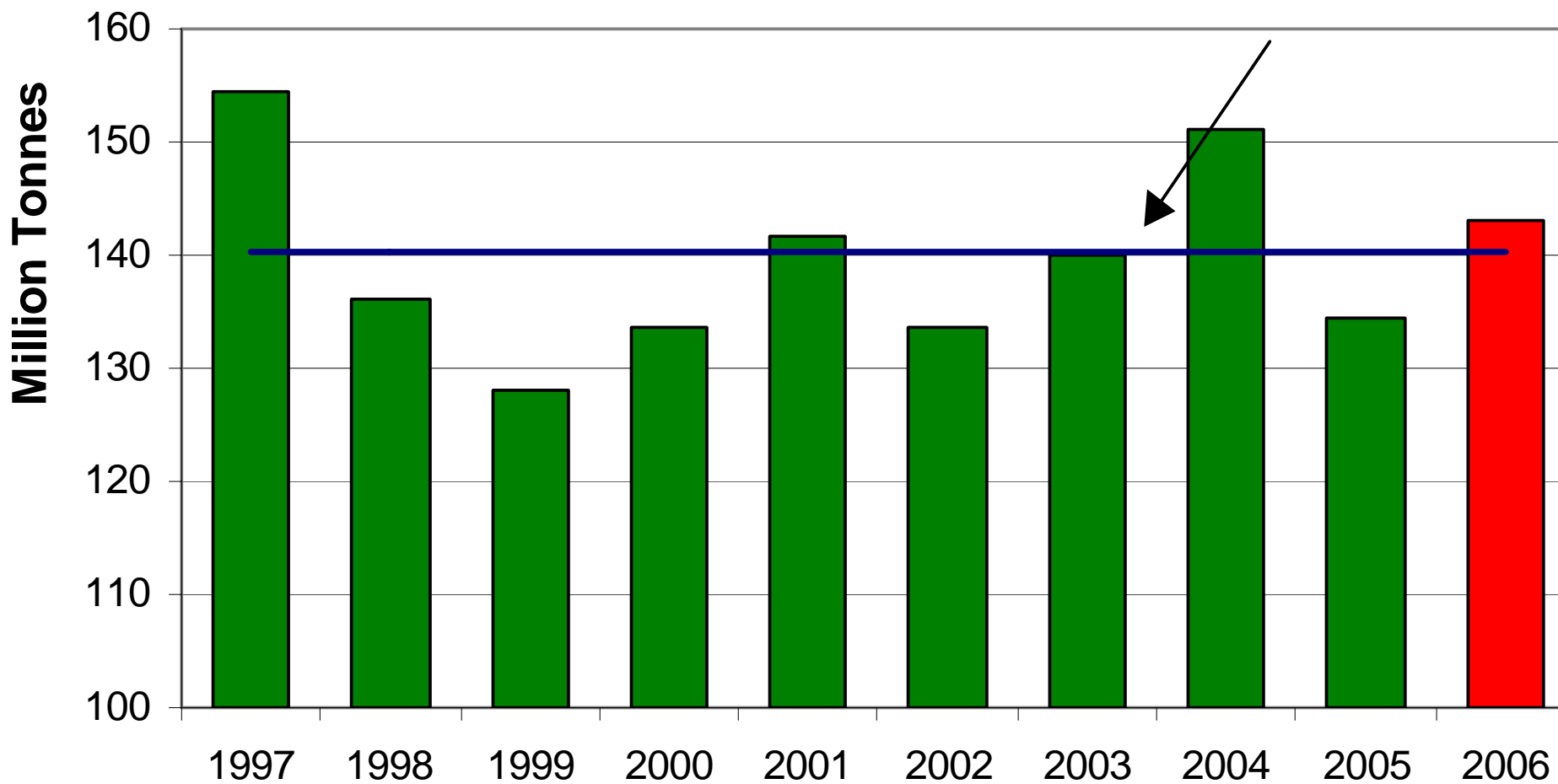


# World Barley Production Trends in 2006

- Barley
  - Large Australian crop in 2005
  - EU and USA are expected to reduce sown area, while Canada, Ukraine and Russia are expected to increase plantings
  - Corn production in the US is expected to be large, but smaller than the 2005 crop.
  - Input prices are going to influence corn plantings this season

# World Barley Production


5 Yr. Avg.





# Western Canada

2006 Outlook

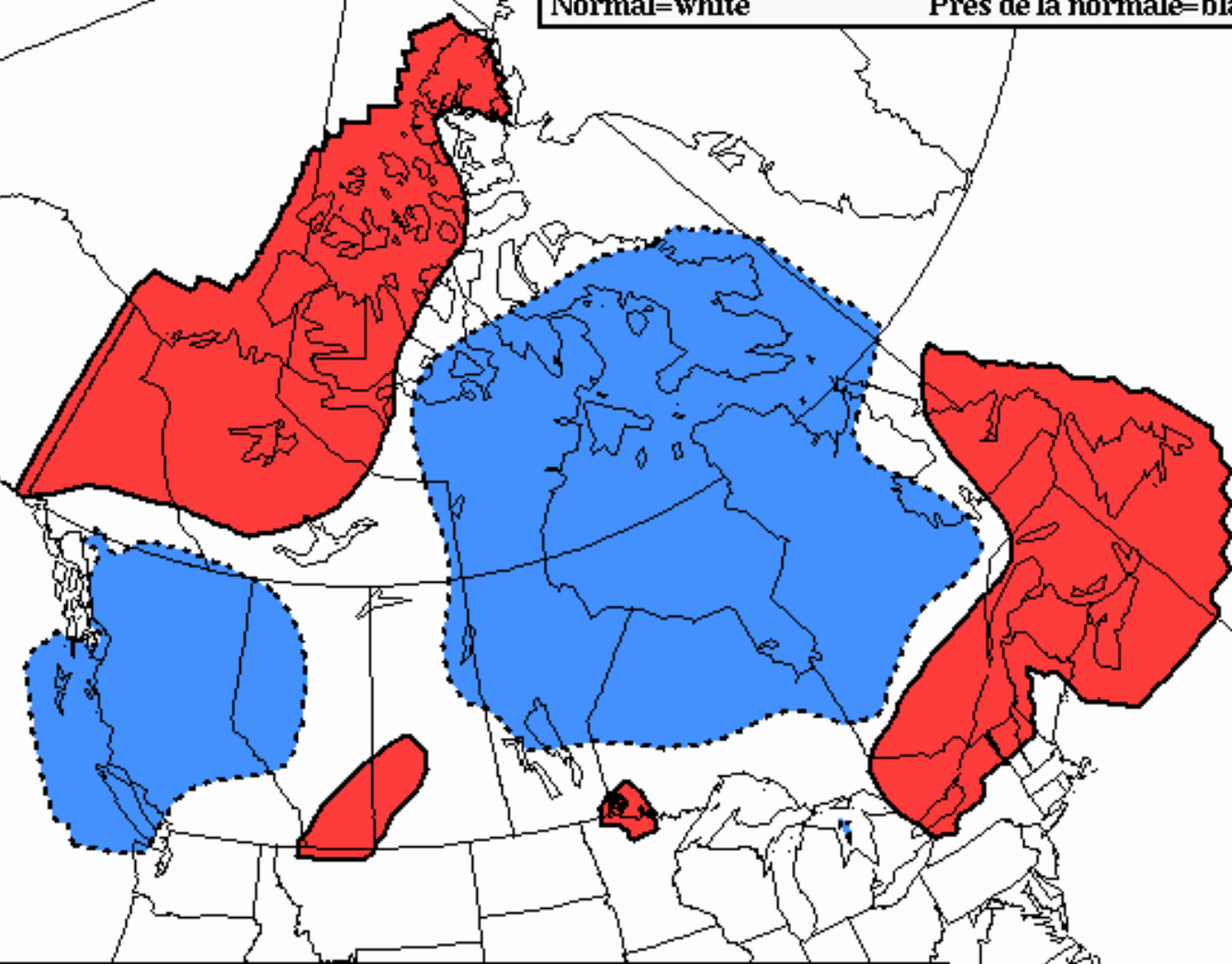
 Environment Canada  
Environnement Canada

**Below Normal=blue-dash**    **Sous la normale=bleu-tirets**  
**Above Normal=red**        **Au-dessus de la normale=rouge**  
**Normal=white**                **Près de la normale=blanc**

Temp  
Period  
Issued  
Based  
from 1

**Precipitation Anomaly Outlook**  
**Period: June-July-August 2006**  
Issued on December 1 2005  
Based on 3 equiprobable categories  
from 1961-1990 climatology

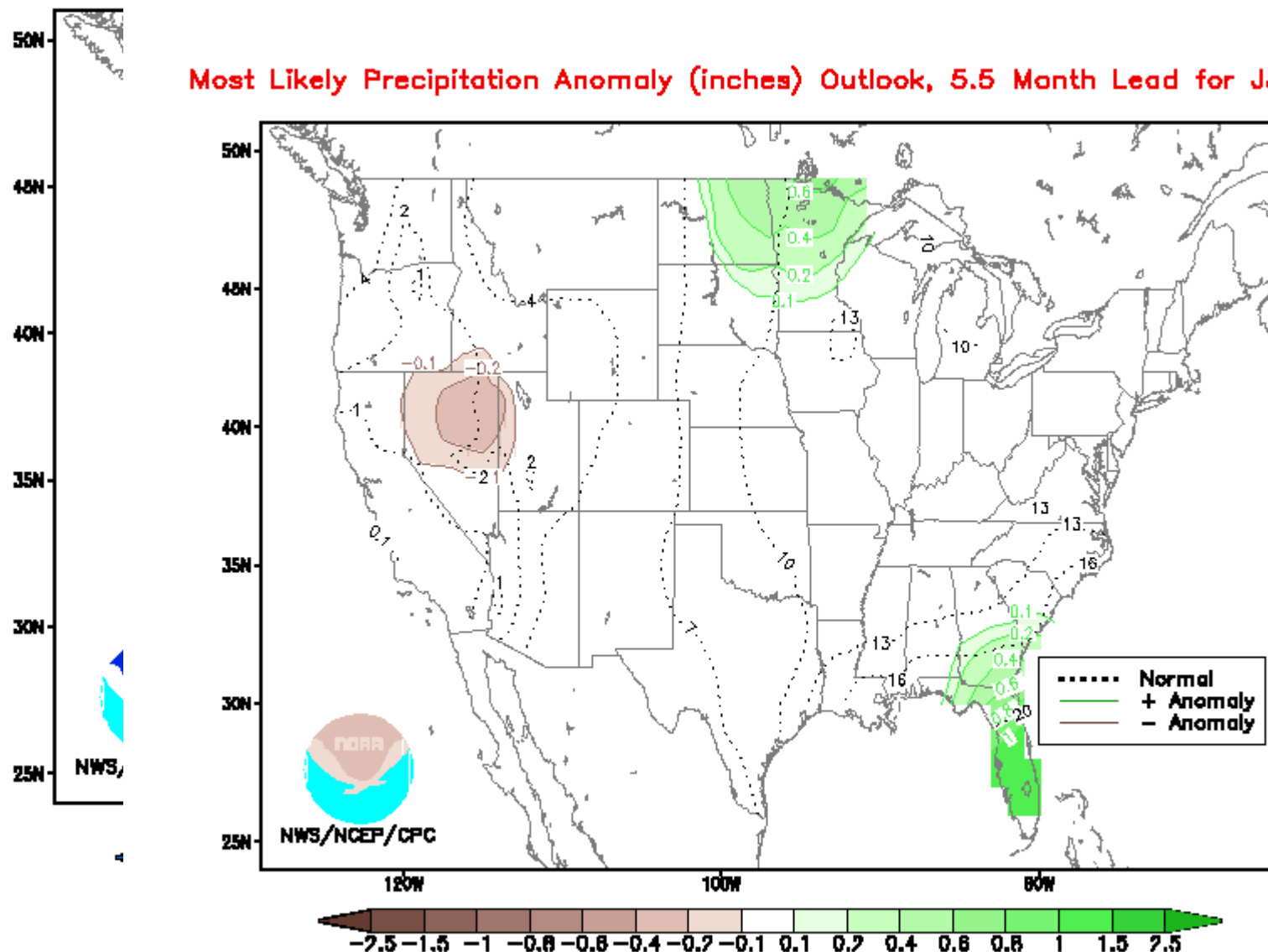
**Aperçu de l'anomalie des précipitations**  
**Periode: juin-juillet-août 2006**  
Émis le 1 décembre 2005  
Basé sur 3 catégories équiprobables  
de la climatologie 1961-1990



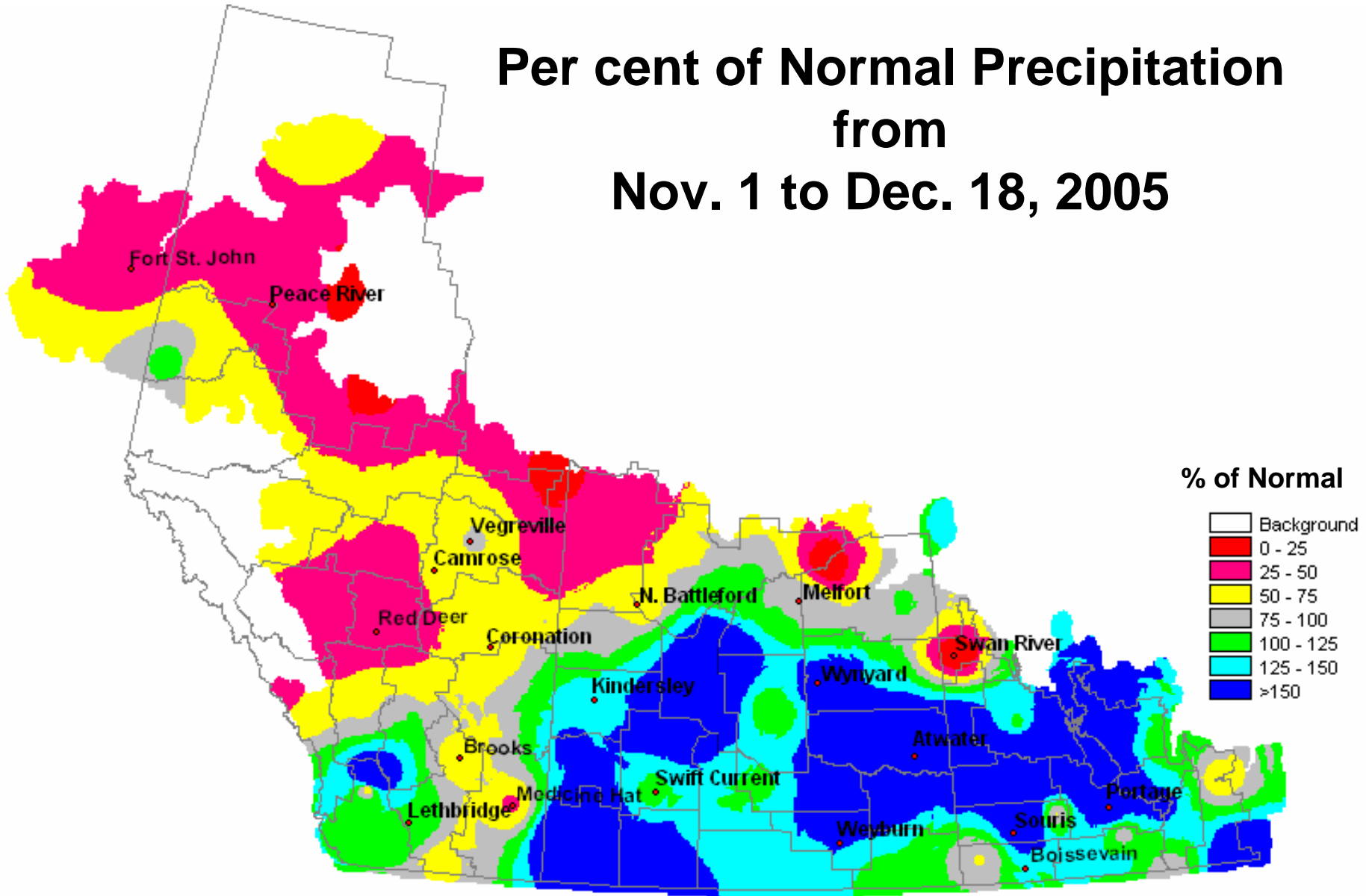
# Most Likely Temperature Anomaly (deg F) Outlook, 5.5 Month Lead for JJA 2006



# Most Likely Precipitation Anomaly (inches) Outlook, 5.5 Month Lead for JJA 2006



# Per cent of Normal Precipitation from Nov. 1 to Dec. 18, 2005



# Acreage Expectations

- Poor outlook for most cropping options at the present moment
- Spring wheat and barley areas should be higher by 5-10 per cent, while durum acreage is expected to be reduced by close to 10 per cent
- Pulses and oilseed acreage should decrease this year due to very low prices



The End