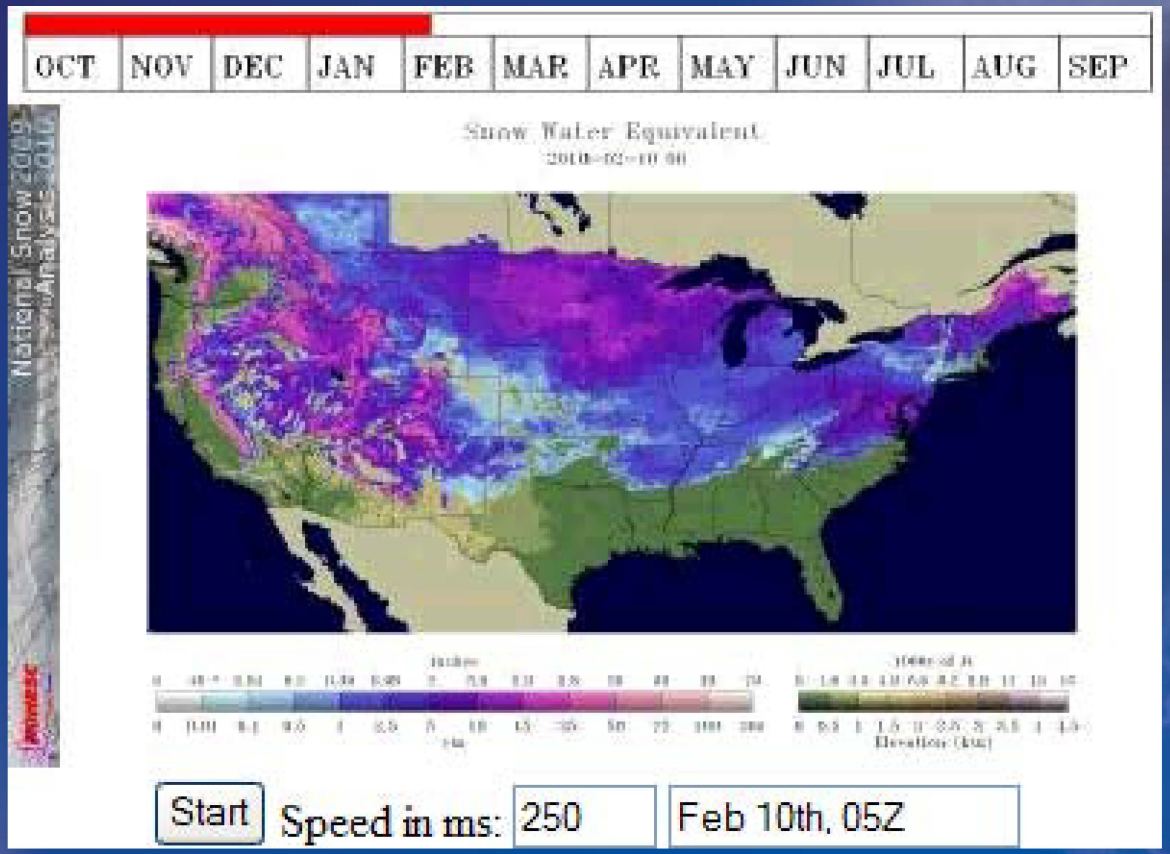
Idaho Weather, Climate and Water Supply Outlook

IDWR Briefing, Feb 11th 2010

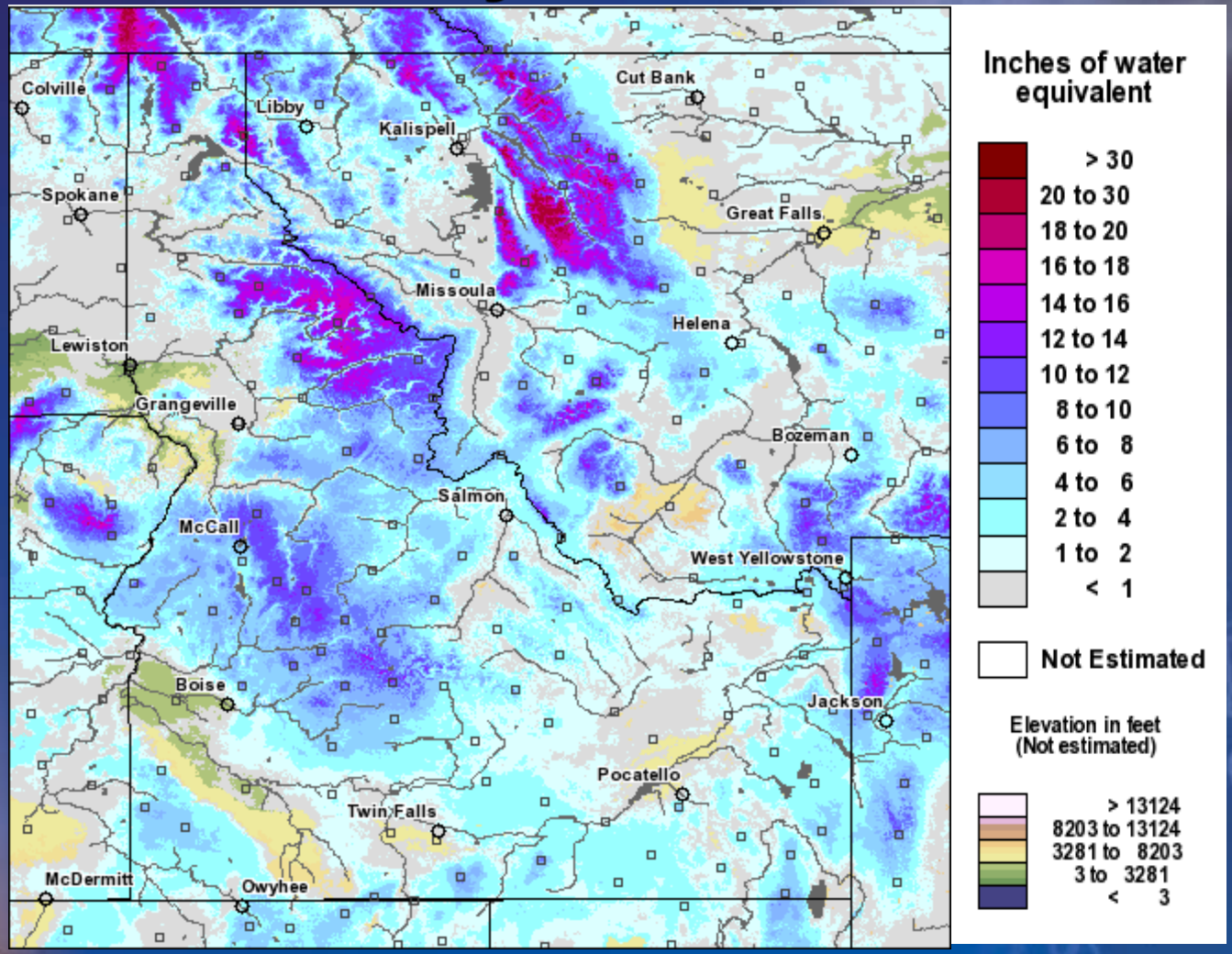
Jay Breidenbach, NOAA National Weather Service

- National Snow Pack
- Temperature and Precipitation Anomalies
- Forecast for next 10 days
- El-Nino Status
- Three Month Climate Outlook
- Water Supply Numbers and Drought Summary

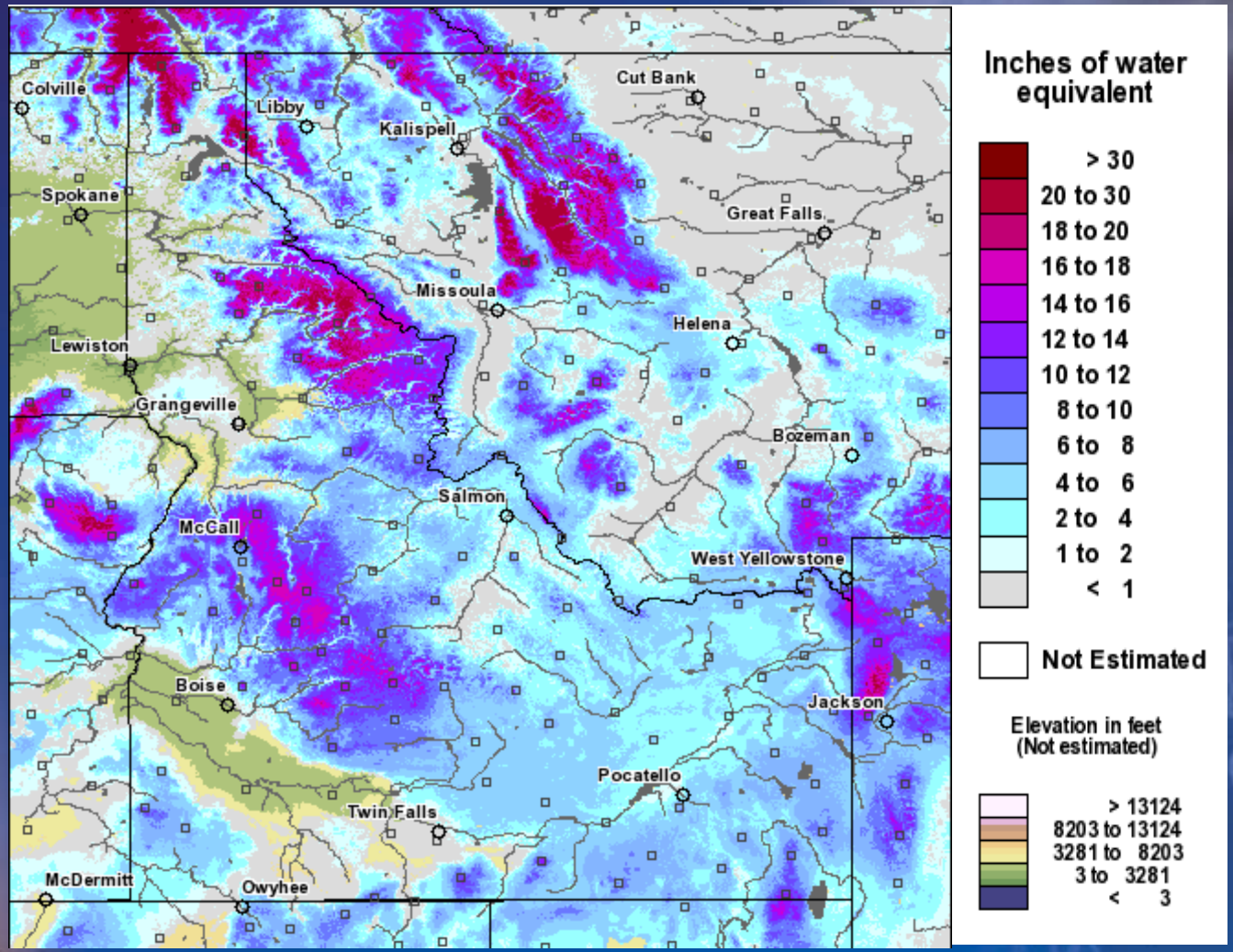
National Snow Water Accumulation Movie



Snow Water Equivalent
January 10th, 2010



Snow Water Equivalent
Feb 10th, 2010



Snow Water Equivalent
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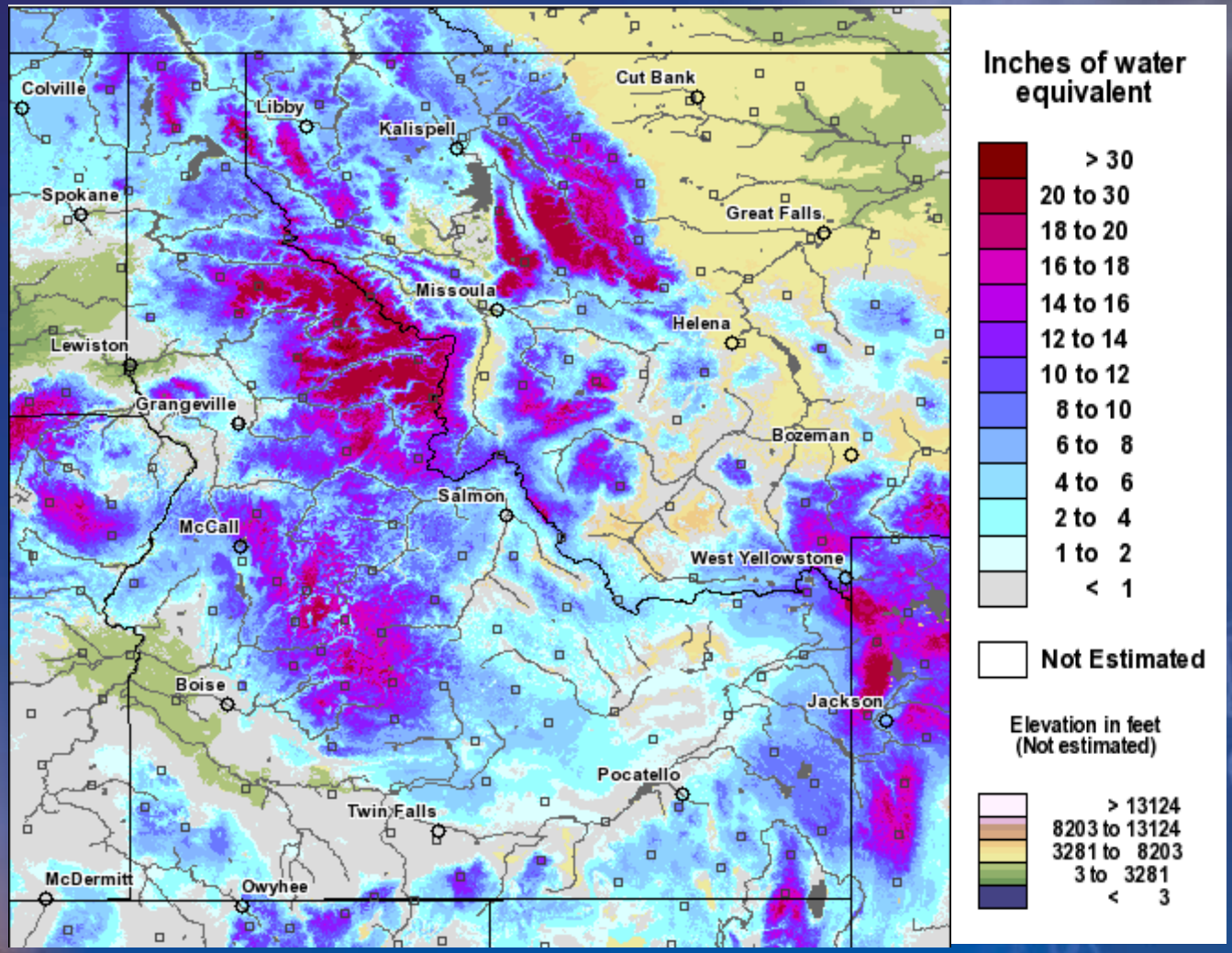
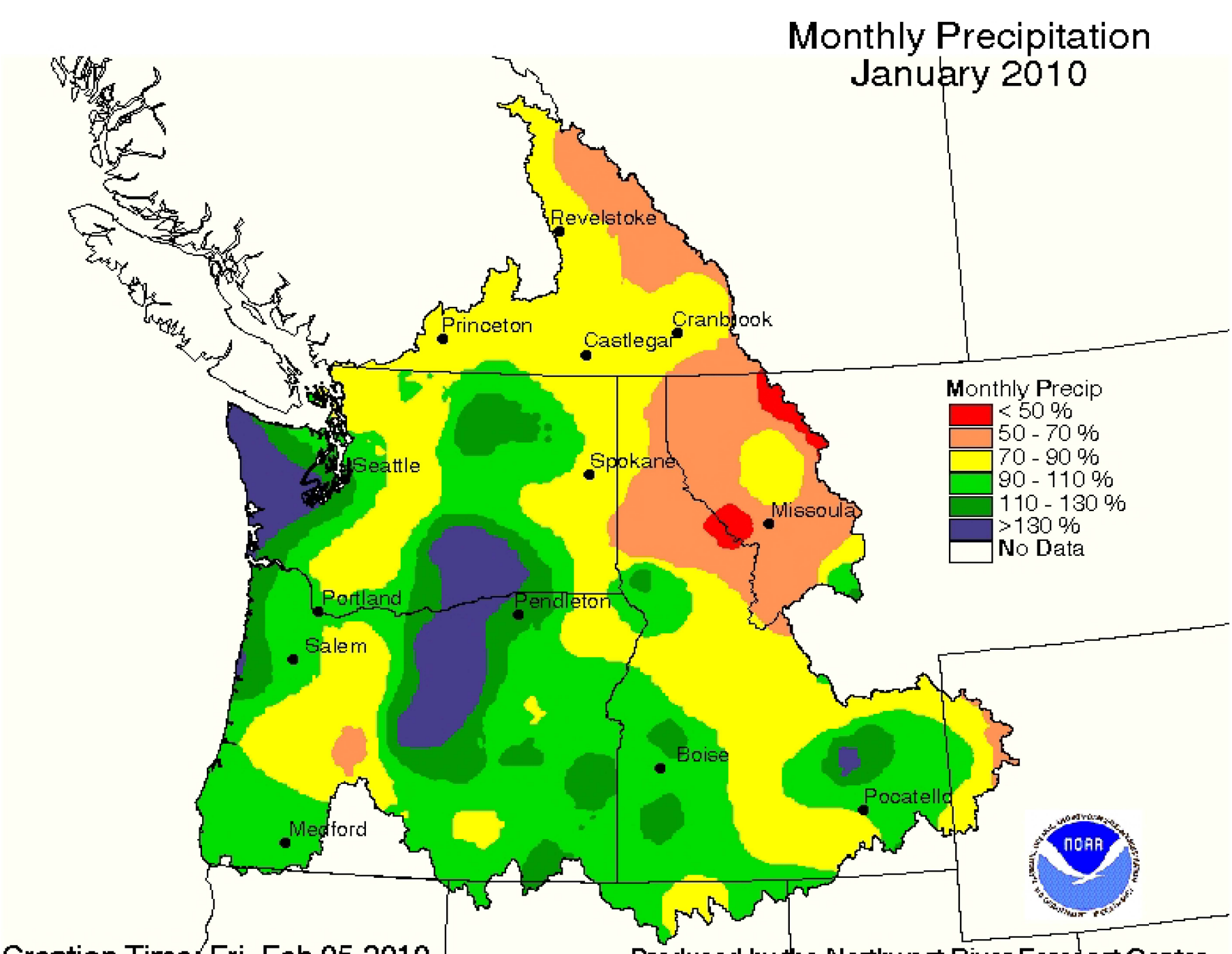
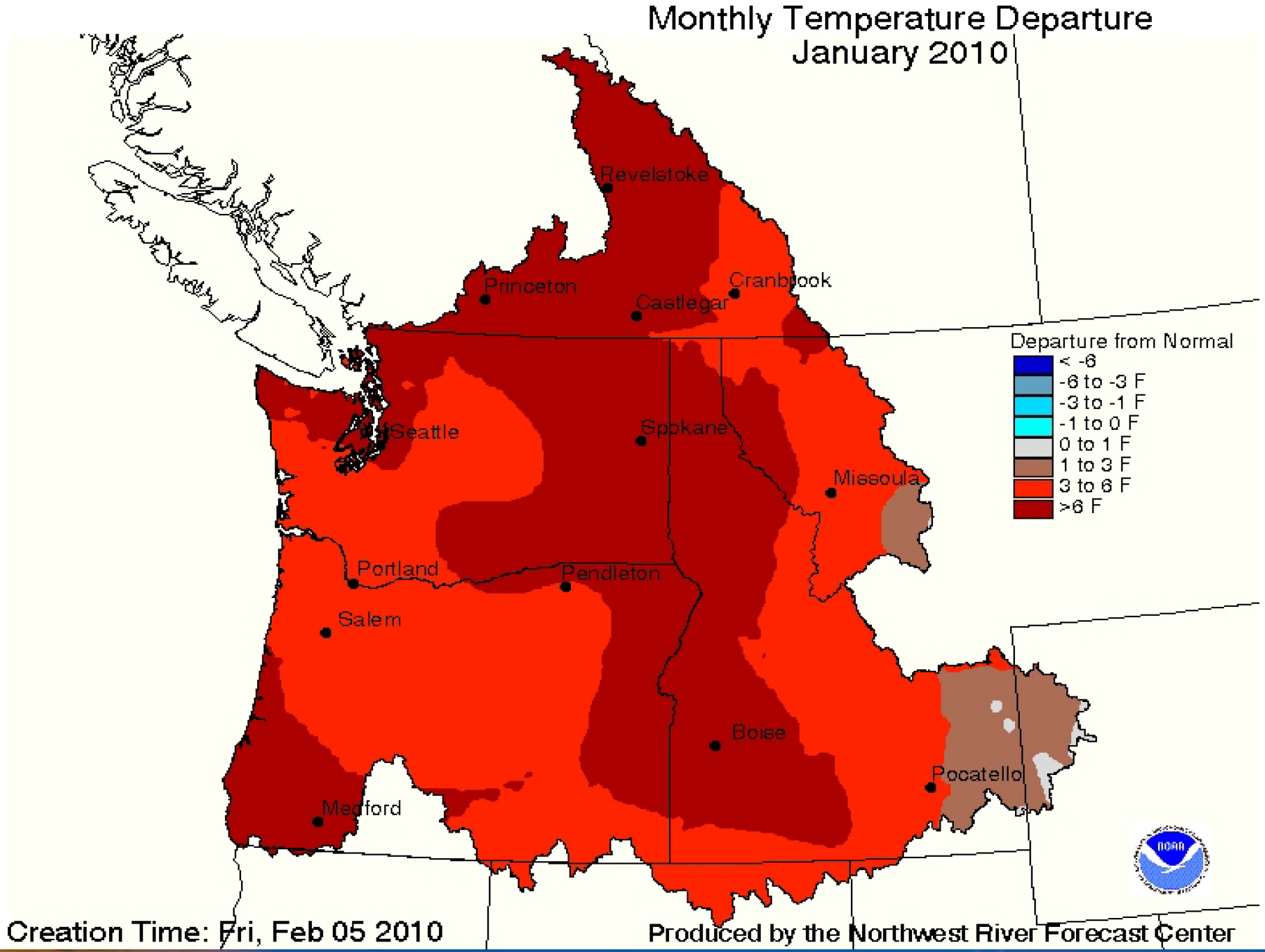
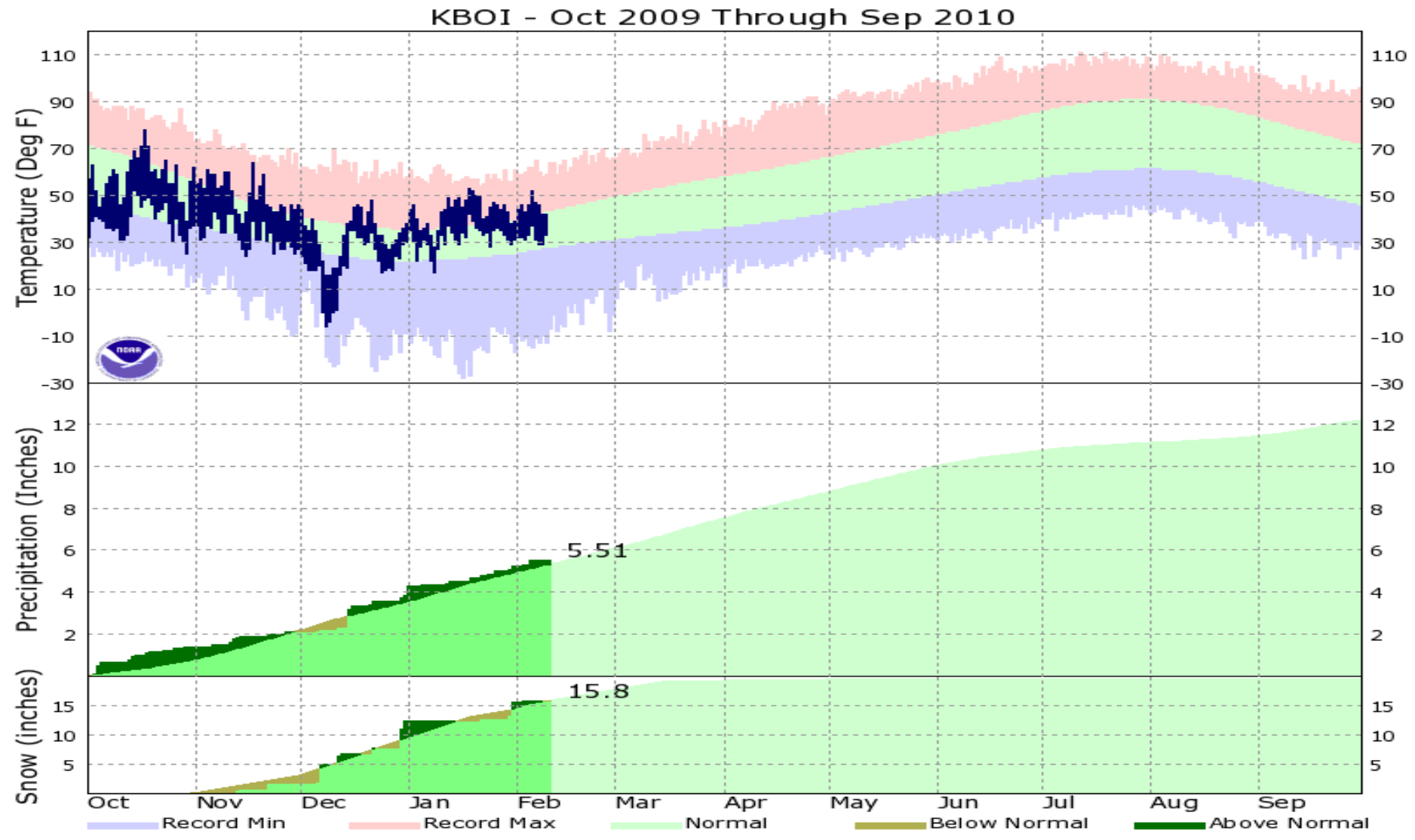


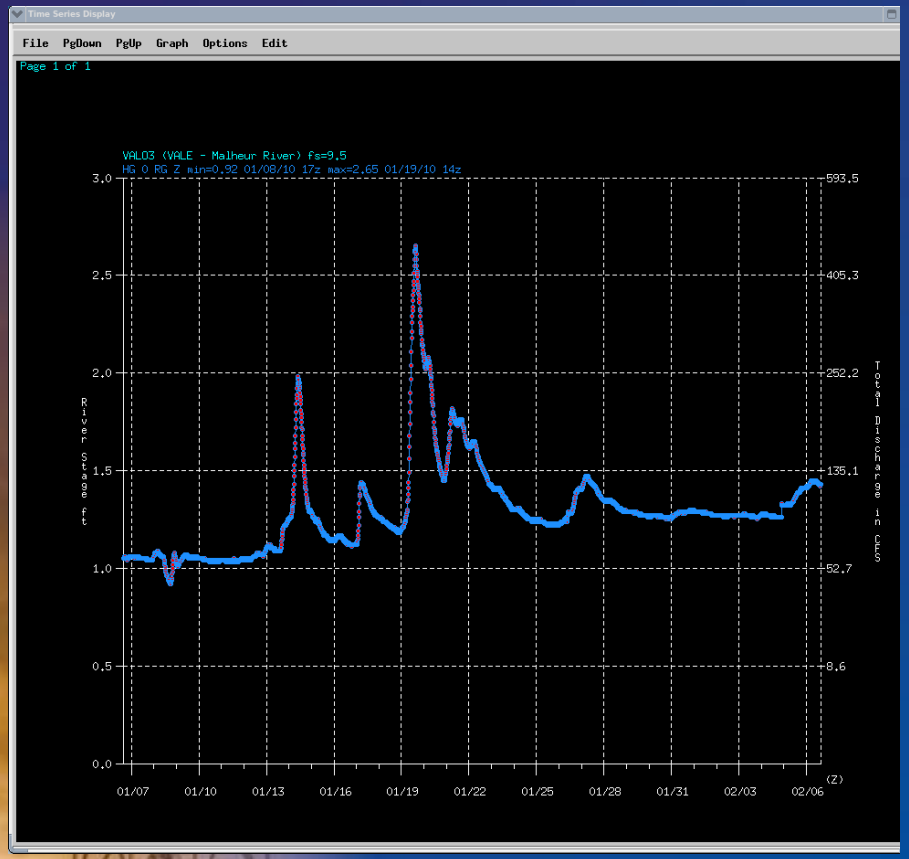

Monthly Precipitation
January 2010
Revelstoke
Princeton
Castlegar
Cranbrook
Seattle
Spokane
Missoula
Portland
Pendleton
Salem
Boise
Pocatello
Medford
Monthly Precip
< 50 %
50 - 70 %
70 - 90 %
90 - 110 %
110 - 130 %
>130 %
No Data
NOAA

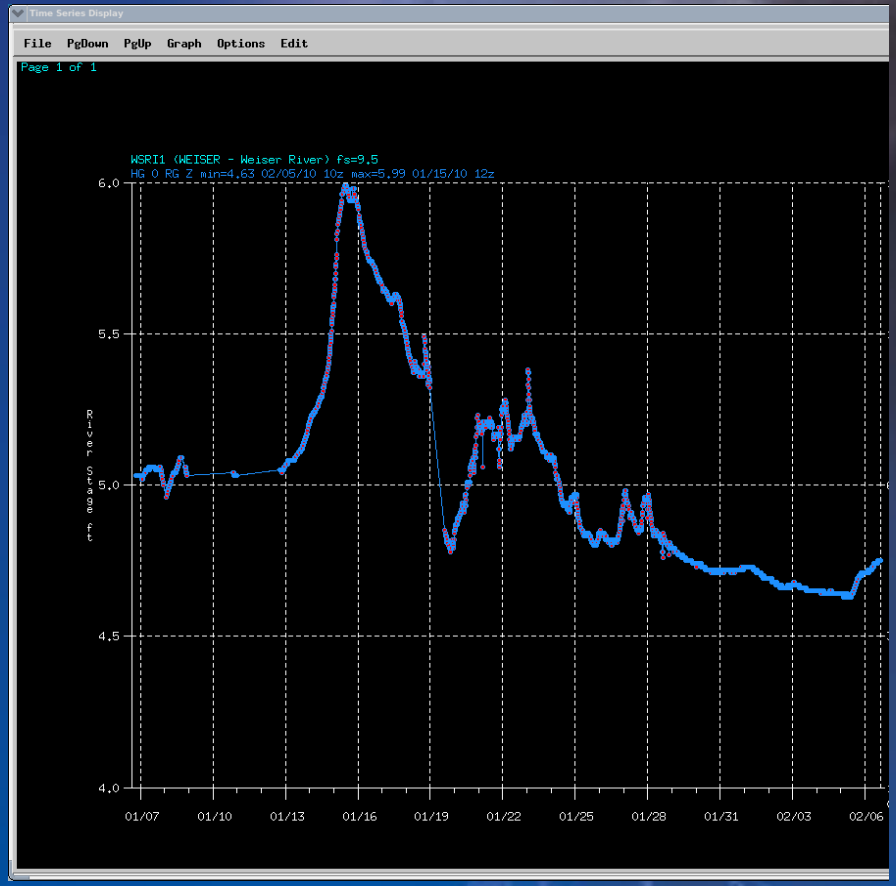

Monthly Temperature Departure
January 2010
Revelstoke
Princeton
Cranbrook
Castlegar
Seattle
Spokane
Missoula
Portland
Pendleton
Salem
Boise
Pocatello
Medford
Departure from Normal
< -6
-6 to -3 F
-3 to -1 F
-1 to 0 F
0 to 1 F
1 to 3 F
3 to 6 F
>6 F
Creation Time: Fri, Feb 05 2010
Produced by the Northwest River Forecast Center

Temperature and Precipitation at Boise



January Hydrologic Thaw

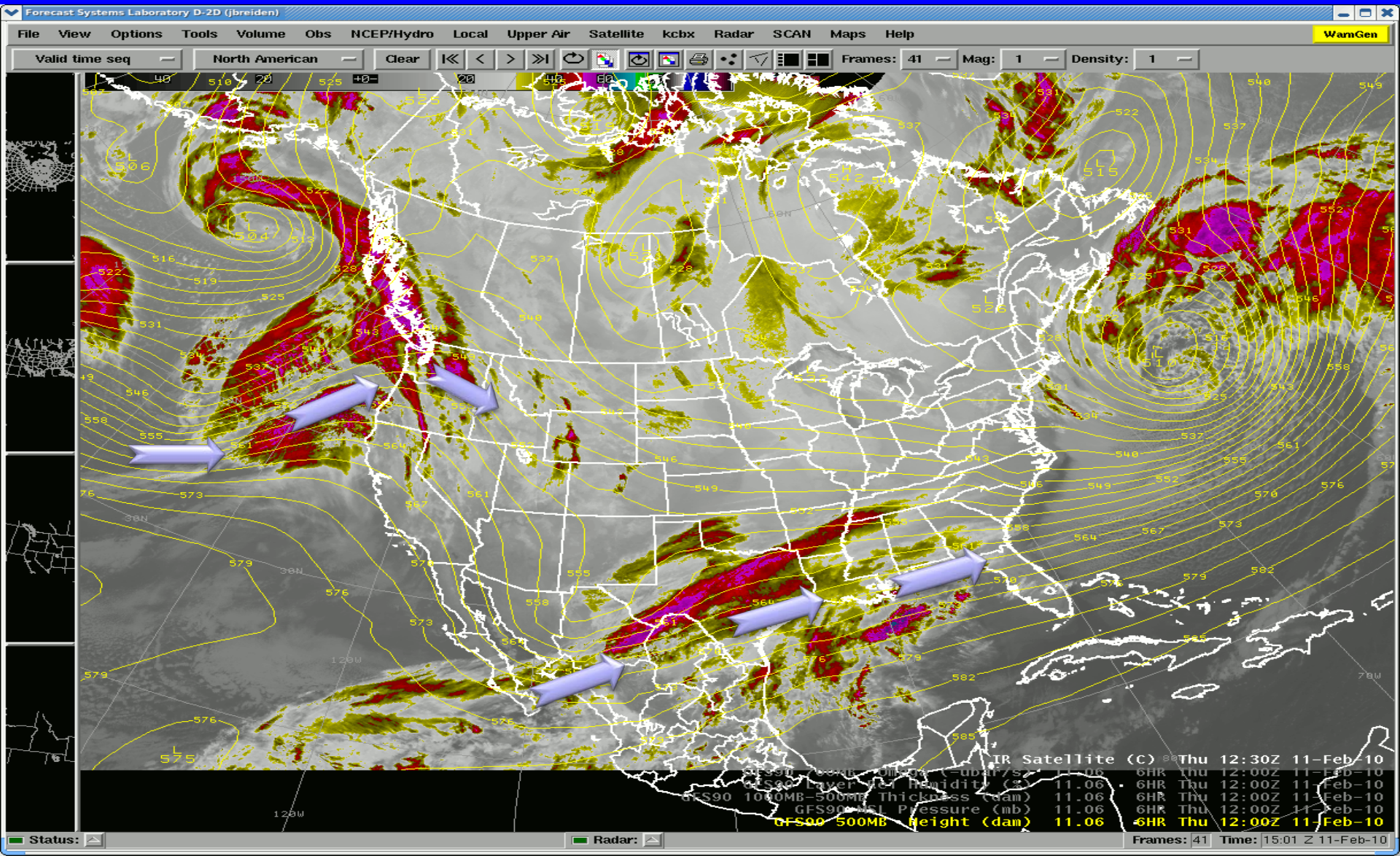




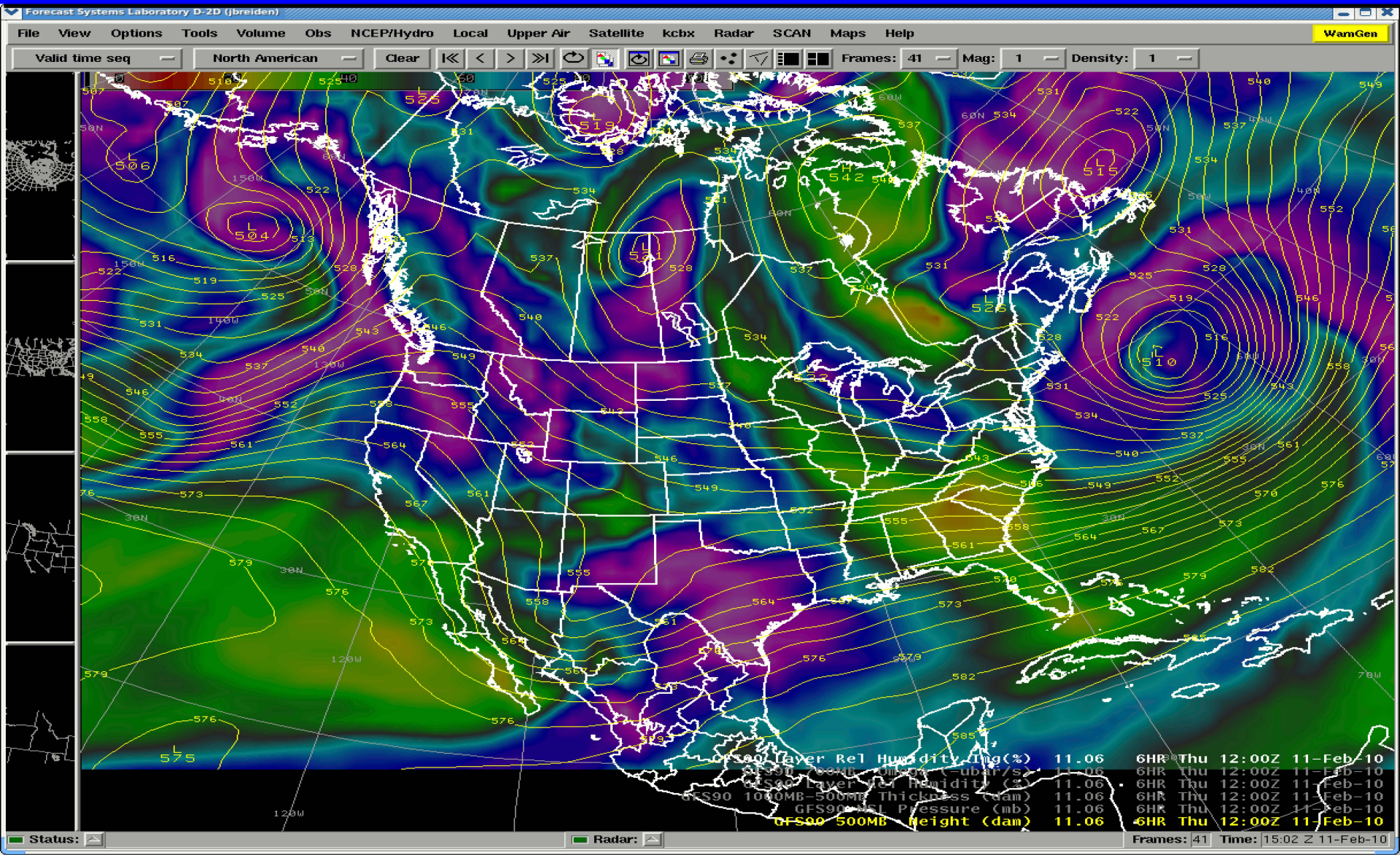
Malheur River

Weiser River

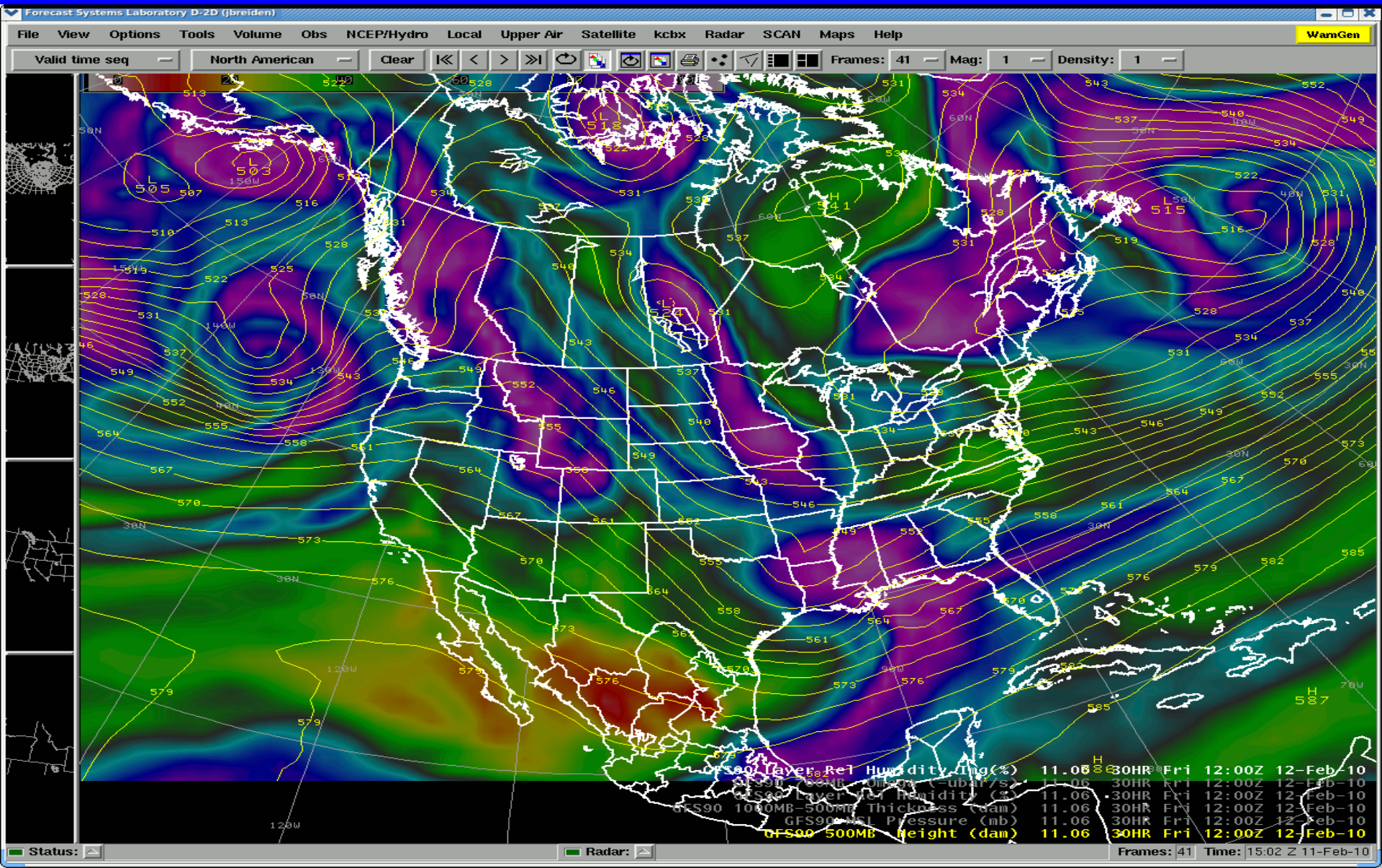
Thursday - Feb 11th
IR Satellite Imagery / 500 mb heights



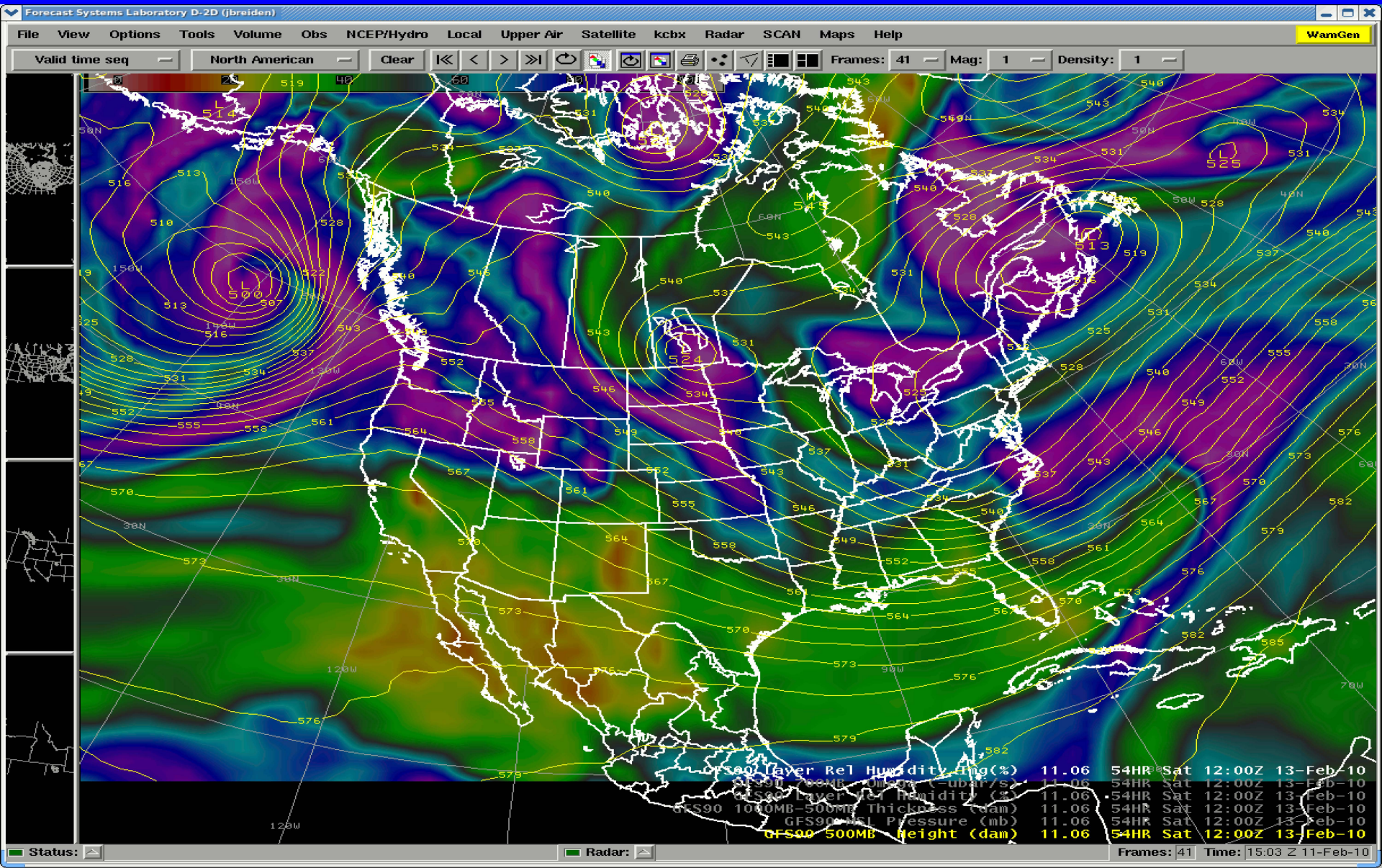
Thursday - Feb 11th
500 mb heights / model precipitation



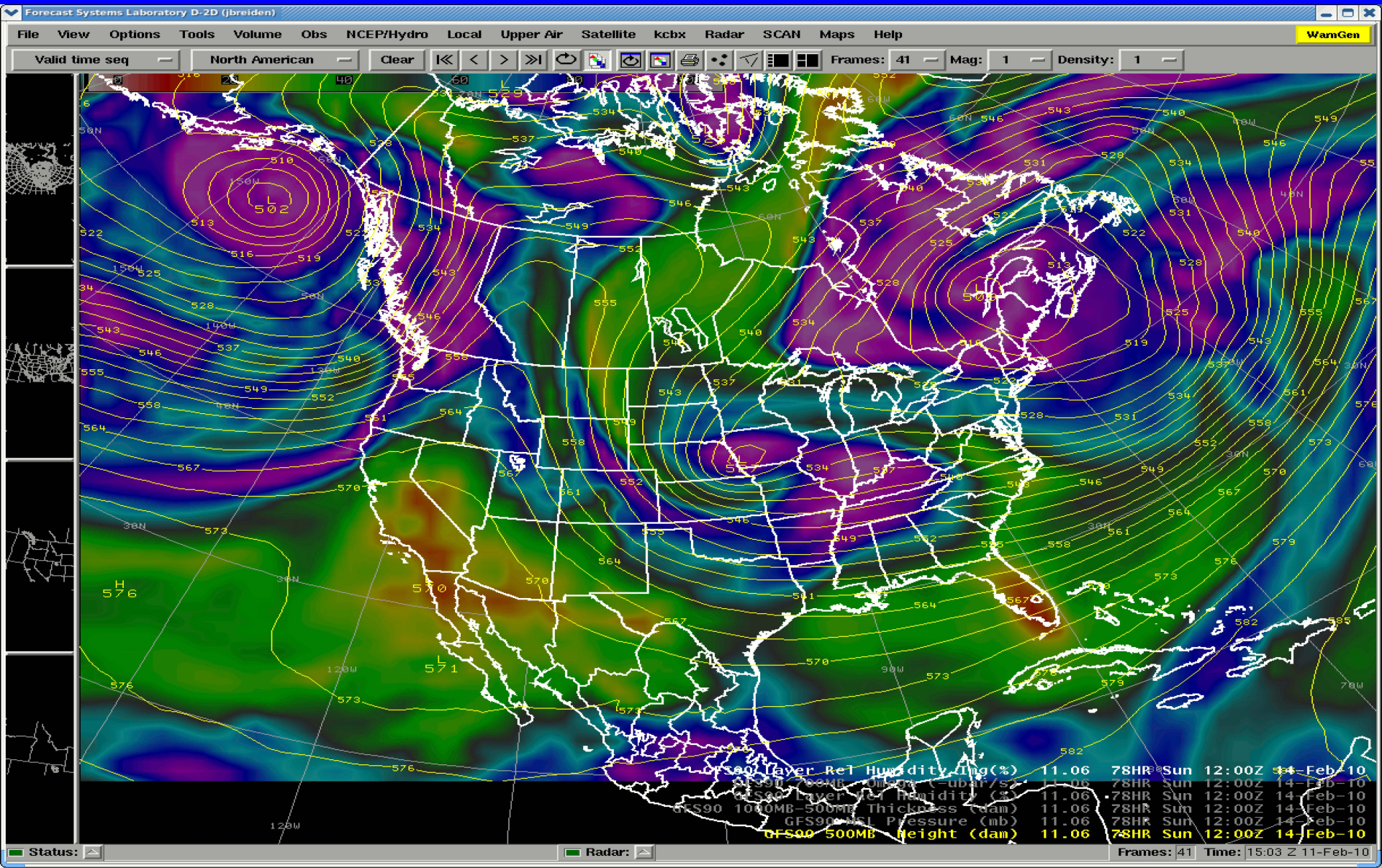
Friday, Feb 12th
500 mb heights / model precipitation



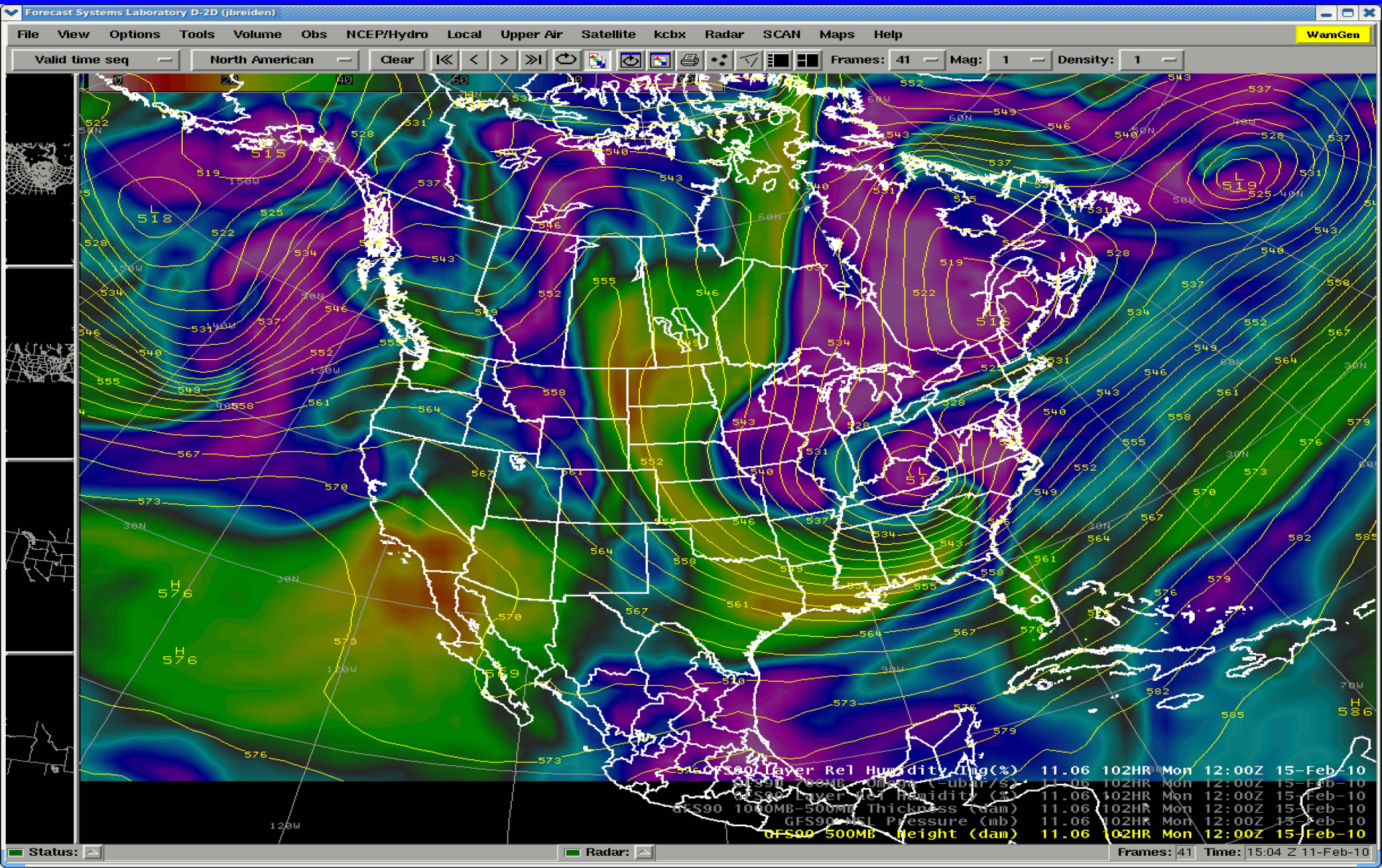
Saturday, Feb 13th



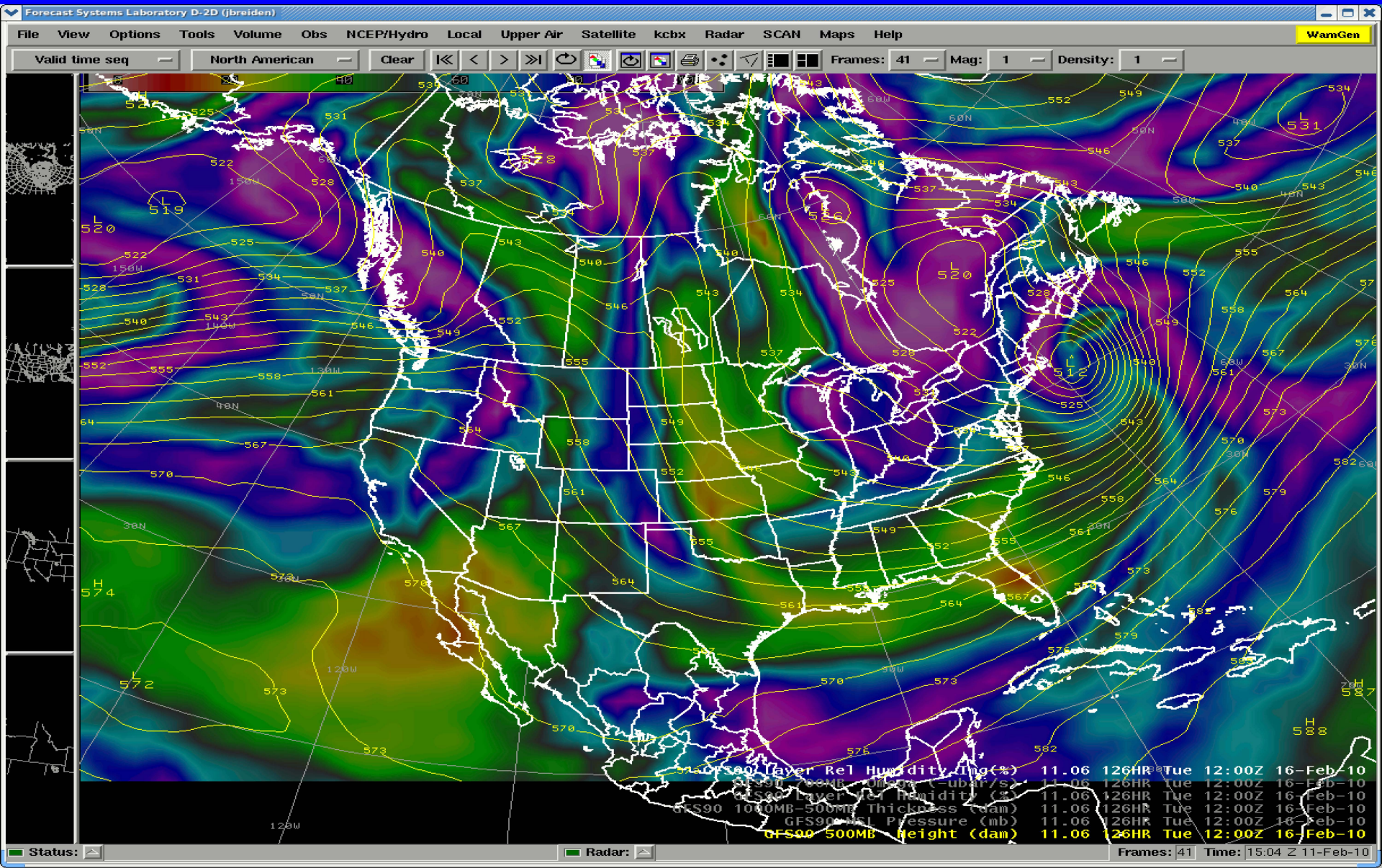
Sunday, Feb 14th



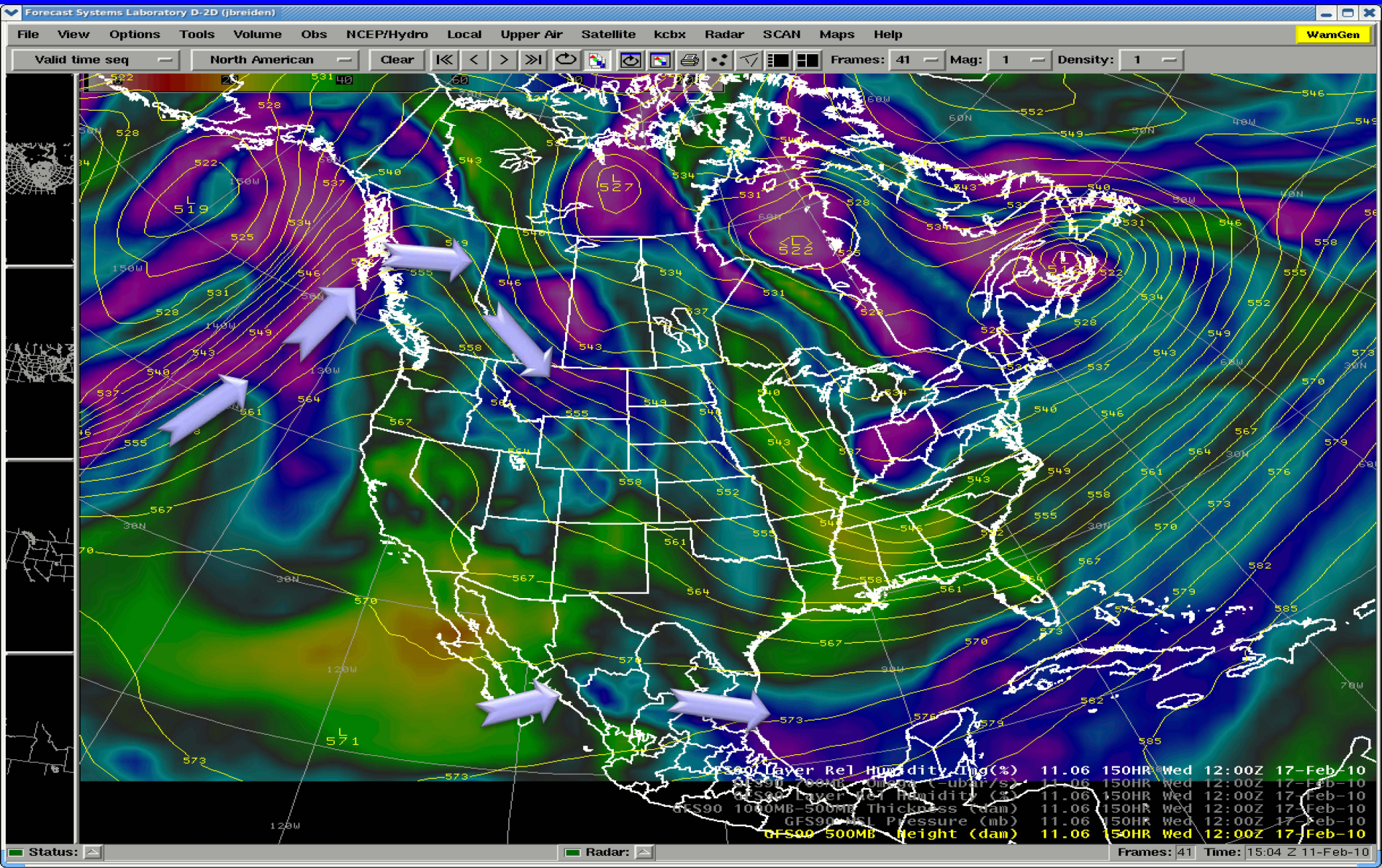
Monday, Feb 15th



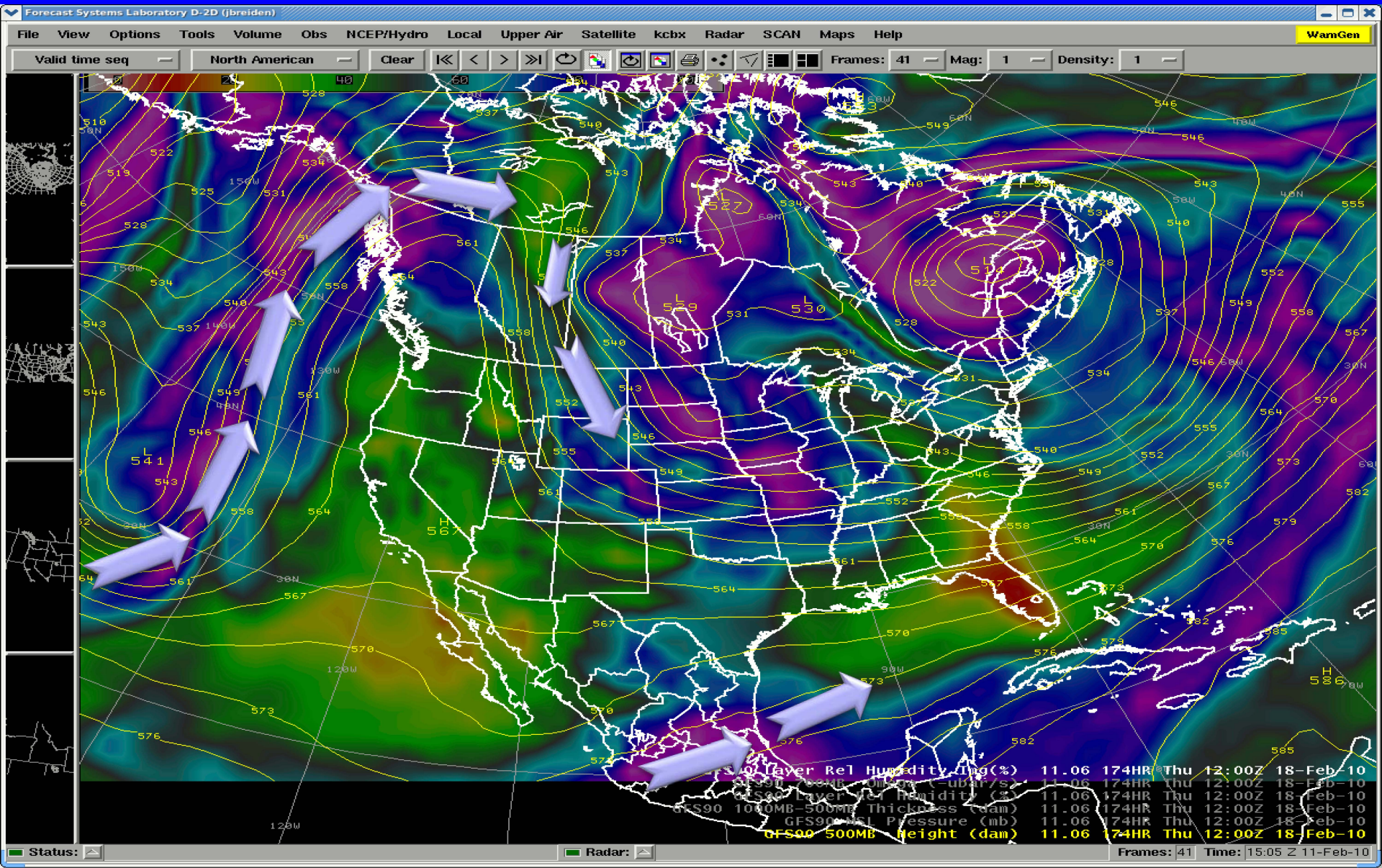
Tuesday, Feb16th



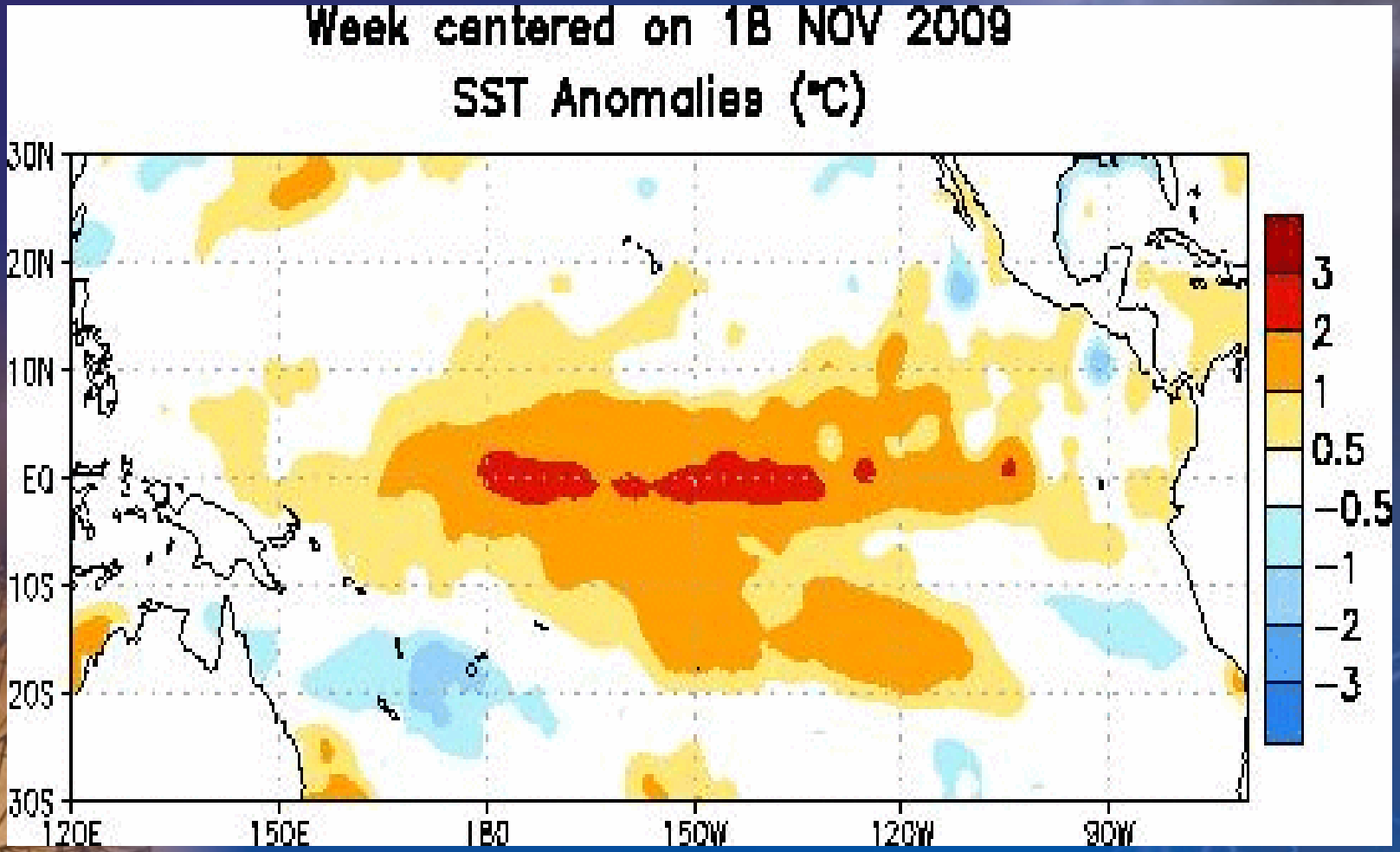
Wednesday, Feb 17th



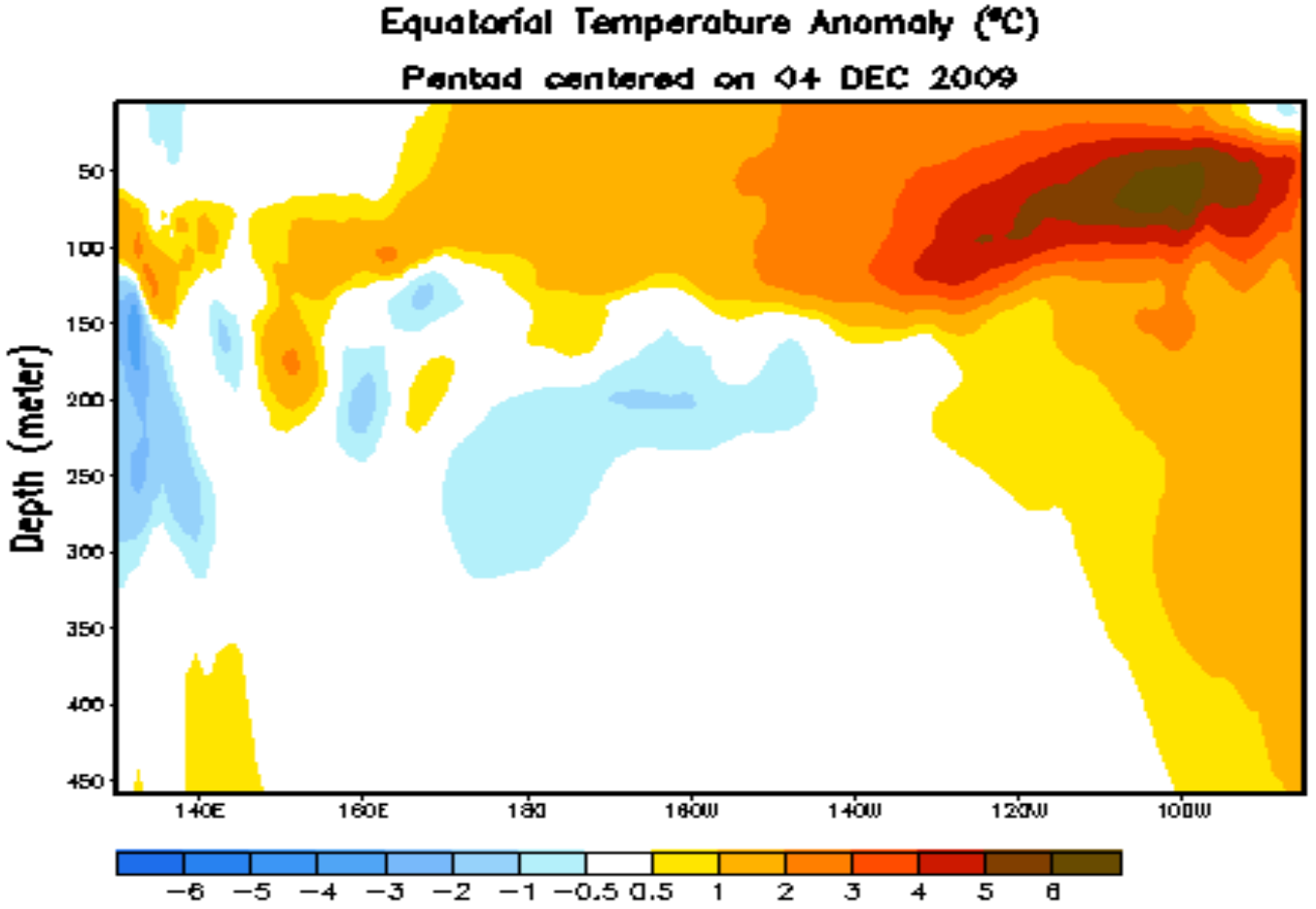
Thursday, Feb 18th



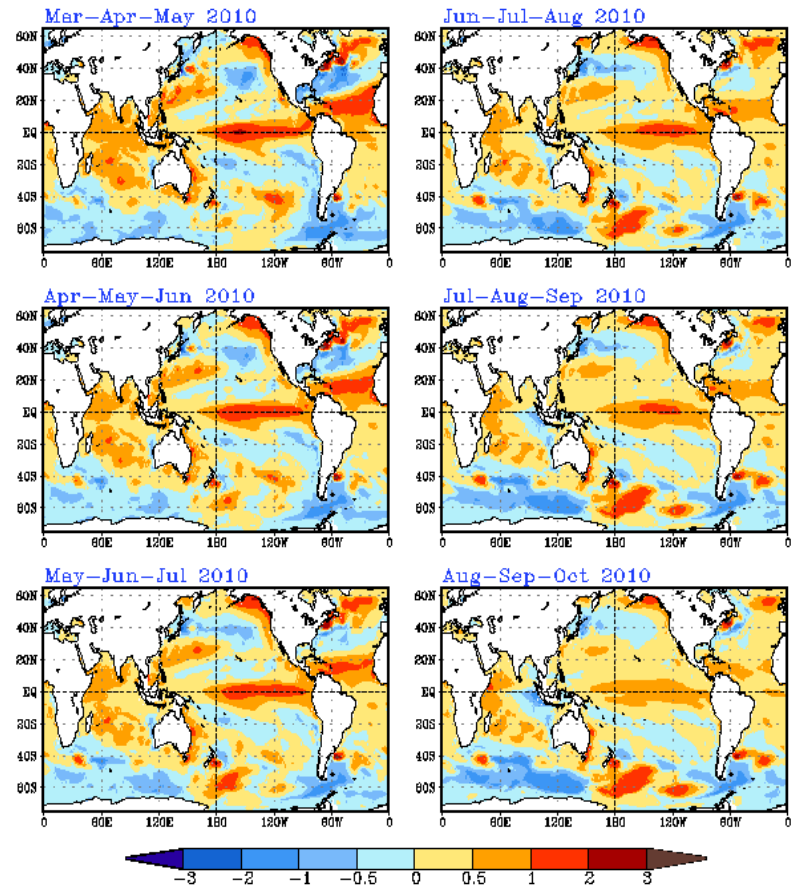
Equatorial Sea Surface Temperature Anomalies



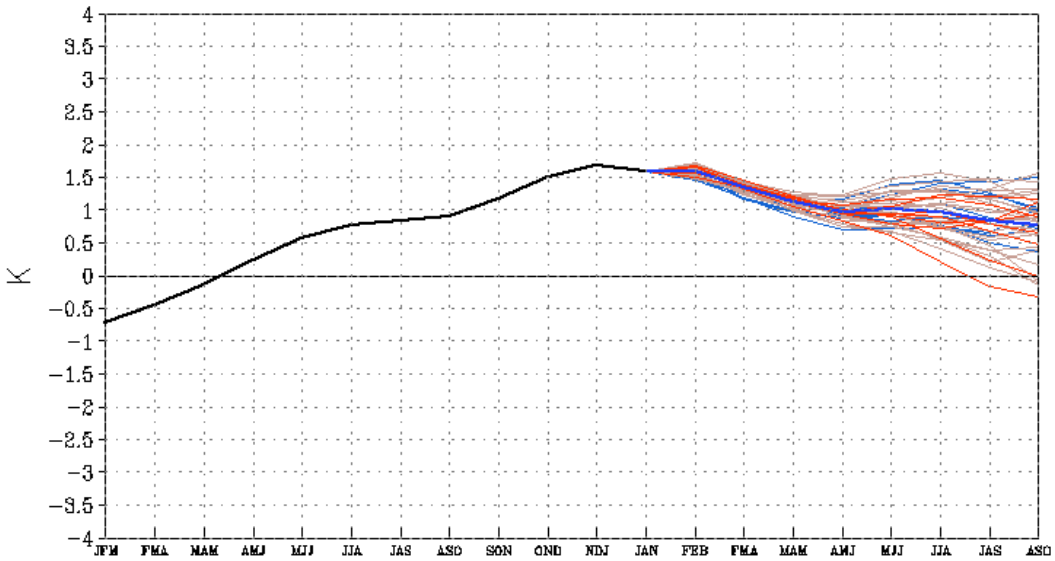
Warm sub-surface anomaly along equator



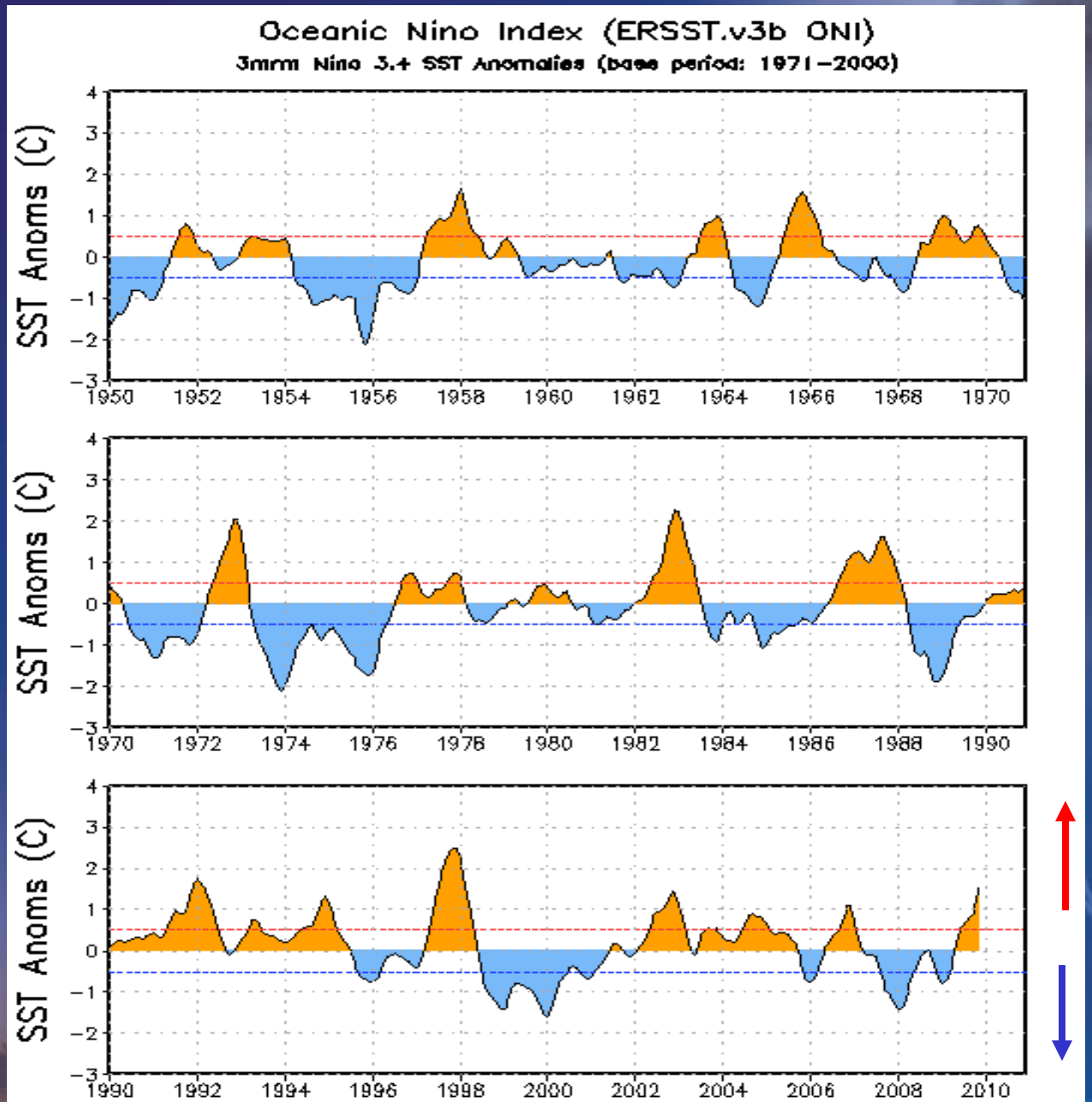
SST Outlook: NCEP CFS Forecast Issued 31 January 2010



The CFS ensemble mean (heavy blue line) predicts El Niño will last through the Northern Hemisphere summer 2010.



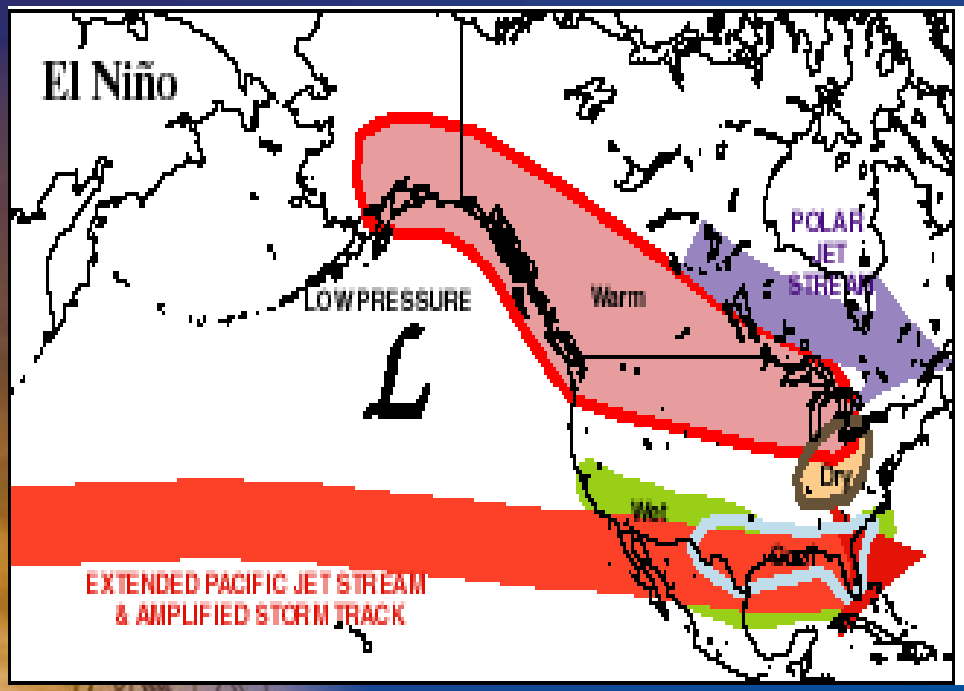
ONI (ºC): Evolution since 1950

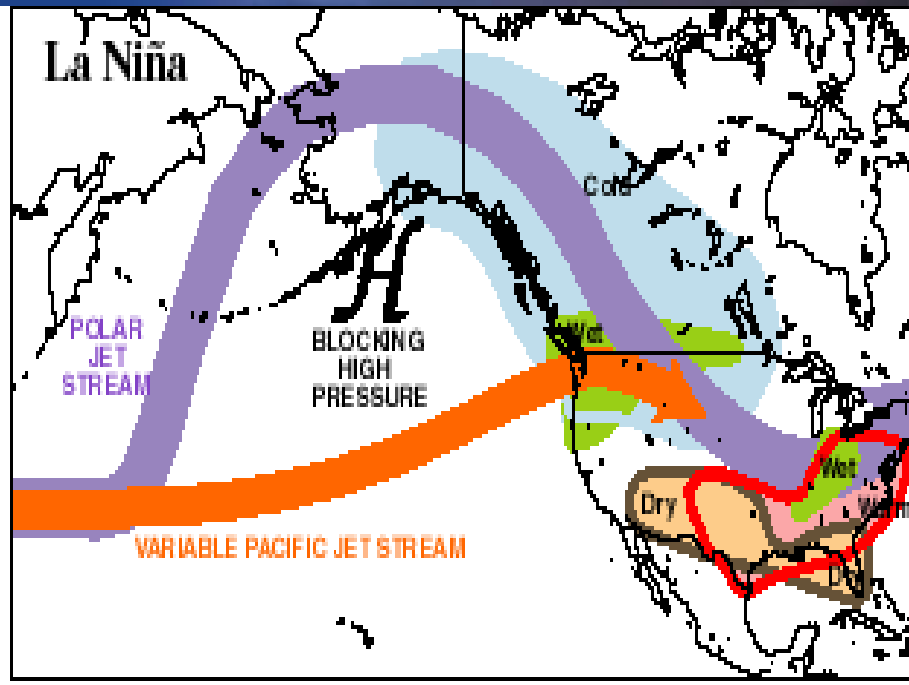


Historical El Niño and La Niña Episodes Based on the ONI

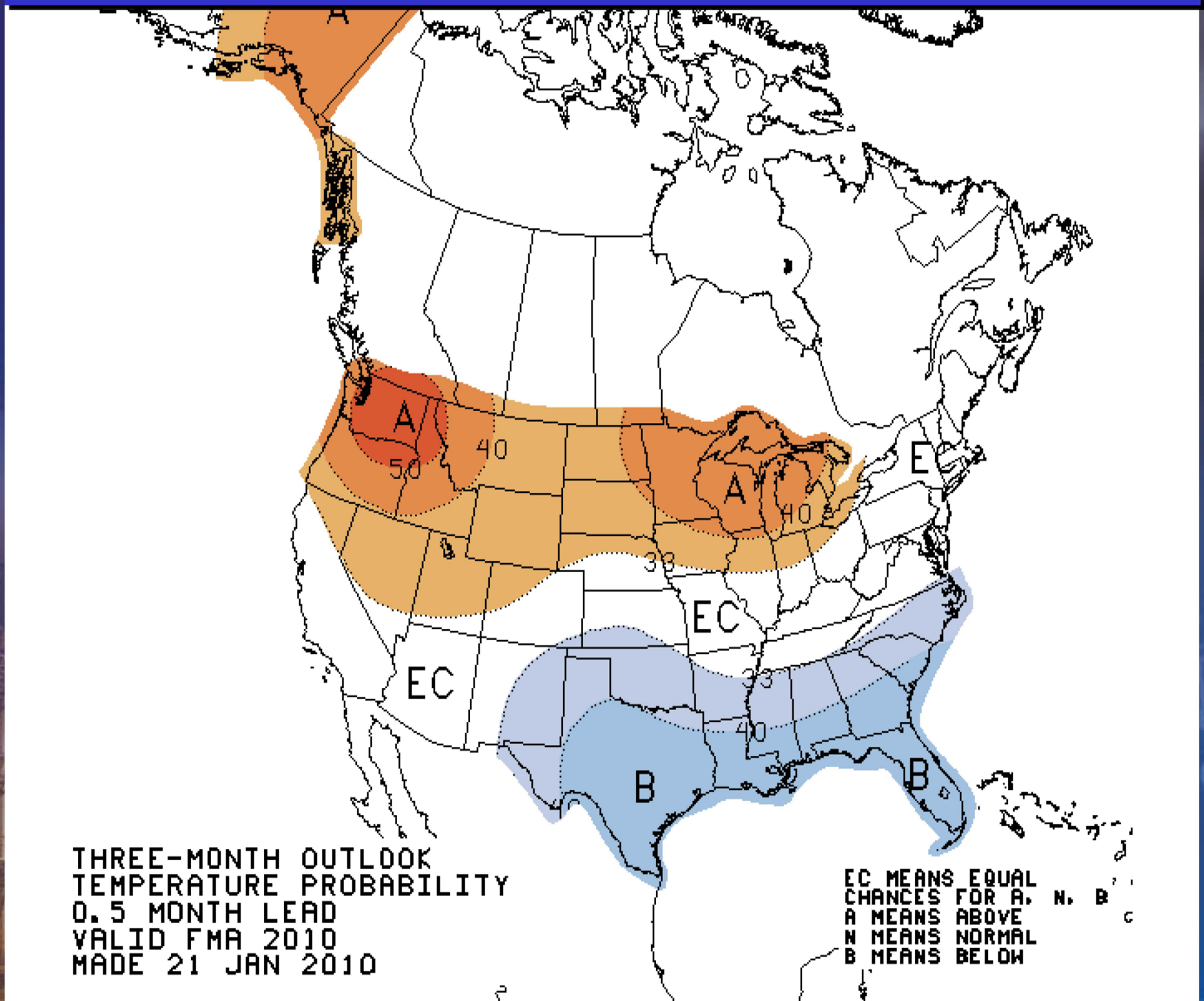
Highest		Lowest	
El Niño	**ONI Value**	**La Nina**	**ONI Value**
JAS 1951 - NDJ 1951/52	0.8	ASO 1949 – FMA 1951	-1.7
MAM 1957 – MJJ 1958	1.7	MAM 1954 – DJF 1956/57	-2.1
JJA 1963 – DJF 1963/64	1.0	ASO 1962 – DJF 1962/63	-0.8
MJJ 1965 – MAM 1966	1.6	MAM 1964 – DJF 1964/65	-1.1
OND 1968 – MJJ 1969	1.0	NDJ 1967/68 – MAM 1968	-0.9
ASO 1969 – DJF 1969/70	0.8	JJA 1970 – DJF 1971/72	-1.3
AMJ 1972 – FMA 1973	2.1	AMJ 1973 – MAM 1976	-2.0
ASO 1976 – JFM 1977	0.8	SON 1984 – ASO 1985	-1.0
ASO 1977 - DJF 1977/78	0.8	AMJ 1988 – AMJ 1989	-1.9
AMJ 1982 – MJJ 1983	2.3	ASO 1995 – FMA 1996	-0.7
JAS 1986 – JFM 1988	1.6	JJA 1998 – MJJ 2000	-1.6
AMJ 1991 – JJA 1992	1.8	SON 2000 – JFM 2001	-0.7
AMJ 1994 – FMA 1995	1.3	ASO 2007 – AMJ 2008	-1.4
AMJ 1997 – AMJ 1998	2.5		
AMJ 2002 – FMA 2003	1.5		
MJJ 2004 – JFM 2005	0.9		
JAS 2006 - DJF 2006/07	1.1		

Typical North American Winter Impacts of El-Nino

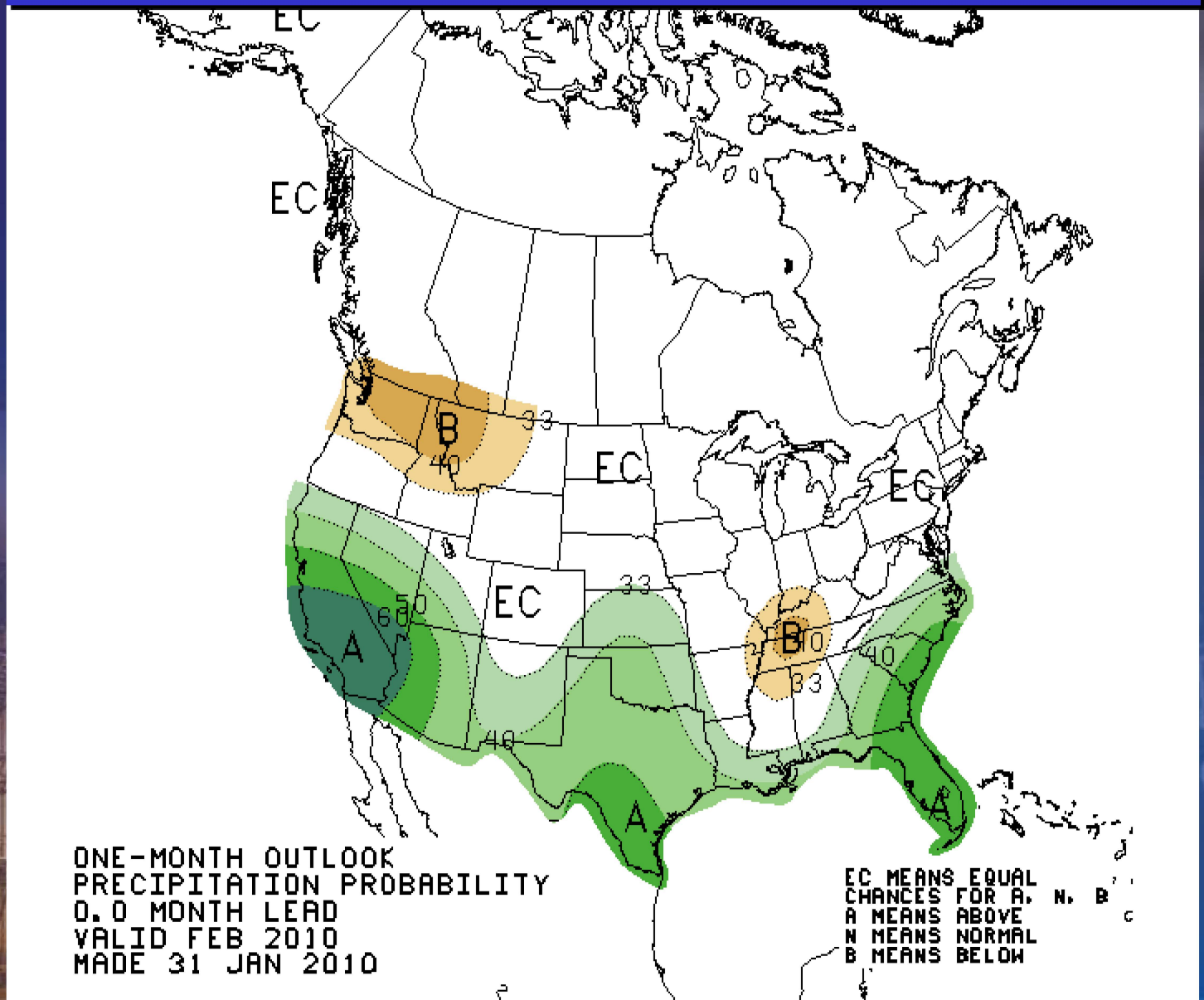




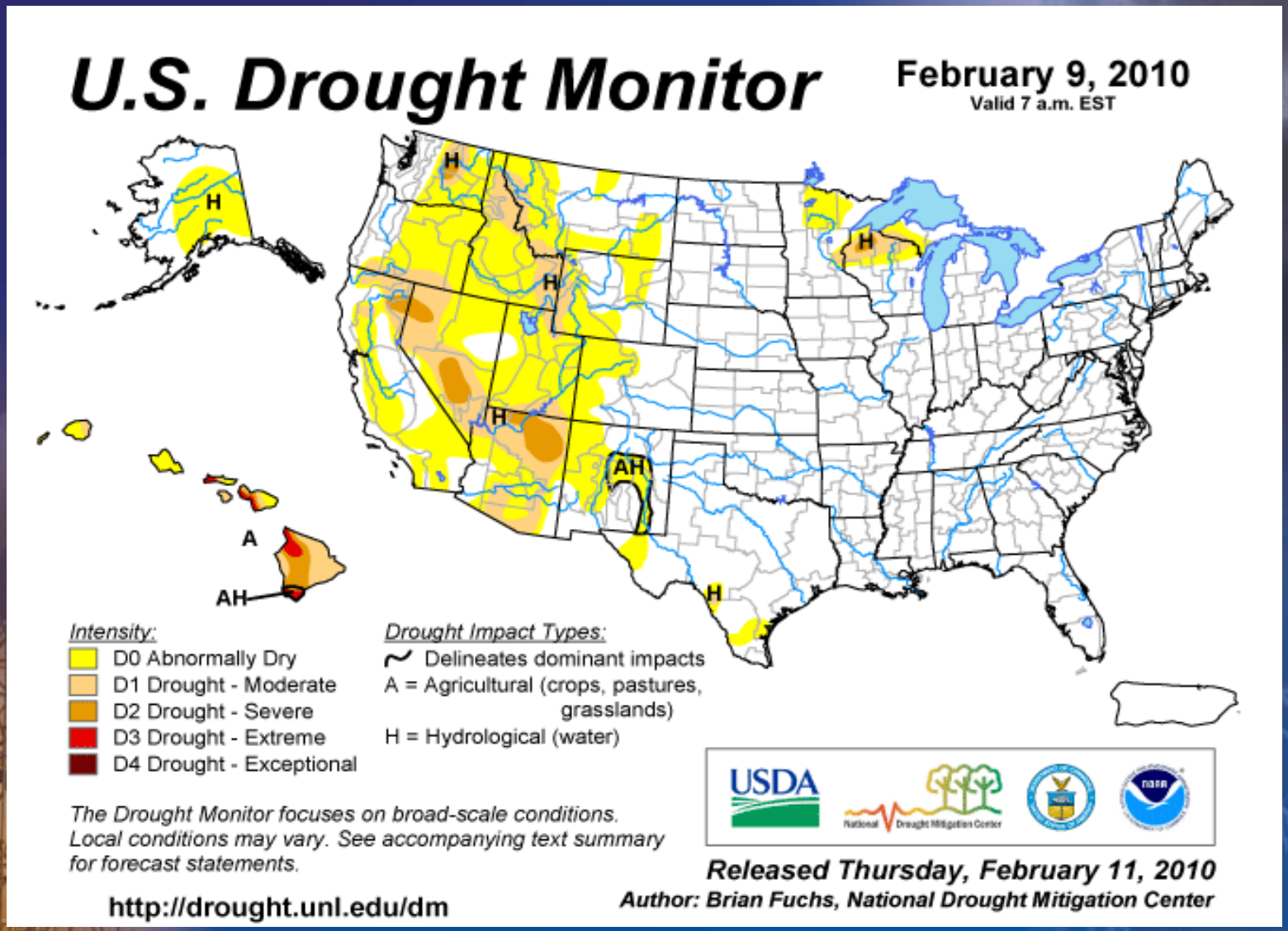
Three Month Outlook (Feb-Apr) Temperatures



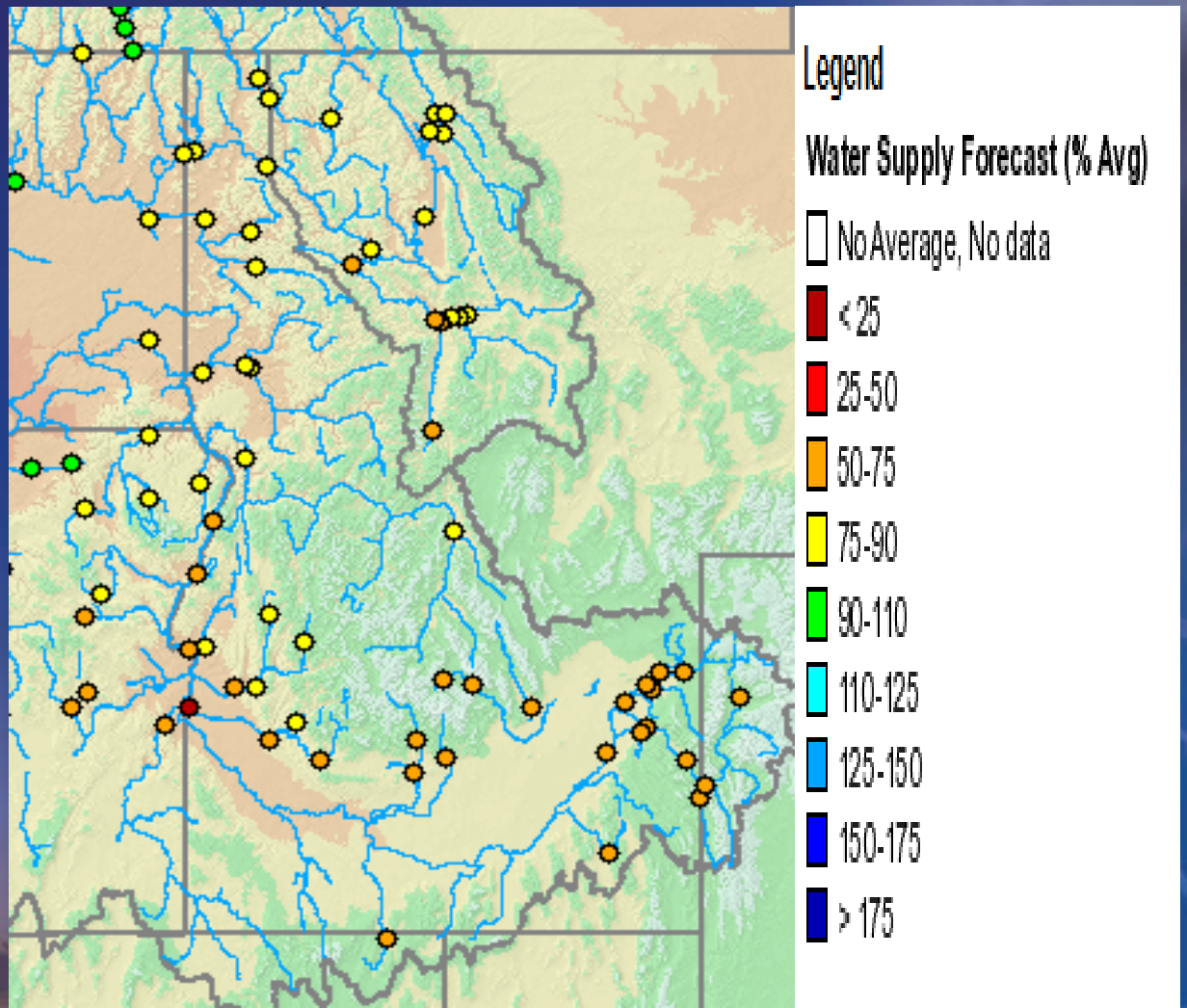
Three Month Outlook (Feb-Apr) Precipitation



Drought Situation



Below Normal Water Supply Expected in 2010



Preliminary Spring Flood Outlook

- The probability of spring flooding related to snowmelt is below average
- Lack of low elevation snow pack also suggest a “well behaved” melt.
- Peak flows significantly reduced and early.
- Lack of River Ice minimizes threat of ice jam flooding
- Frozen soil has thawed in many areas reducing threat of rapid runoff during rain events.

Current Information on Web

www.weather.gov/boise

www.nwrfc.noaa.gov/westernwater