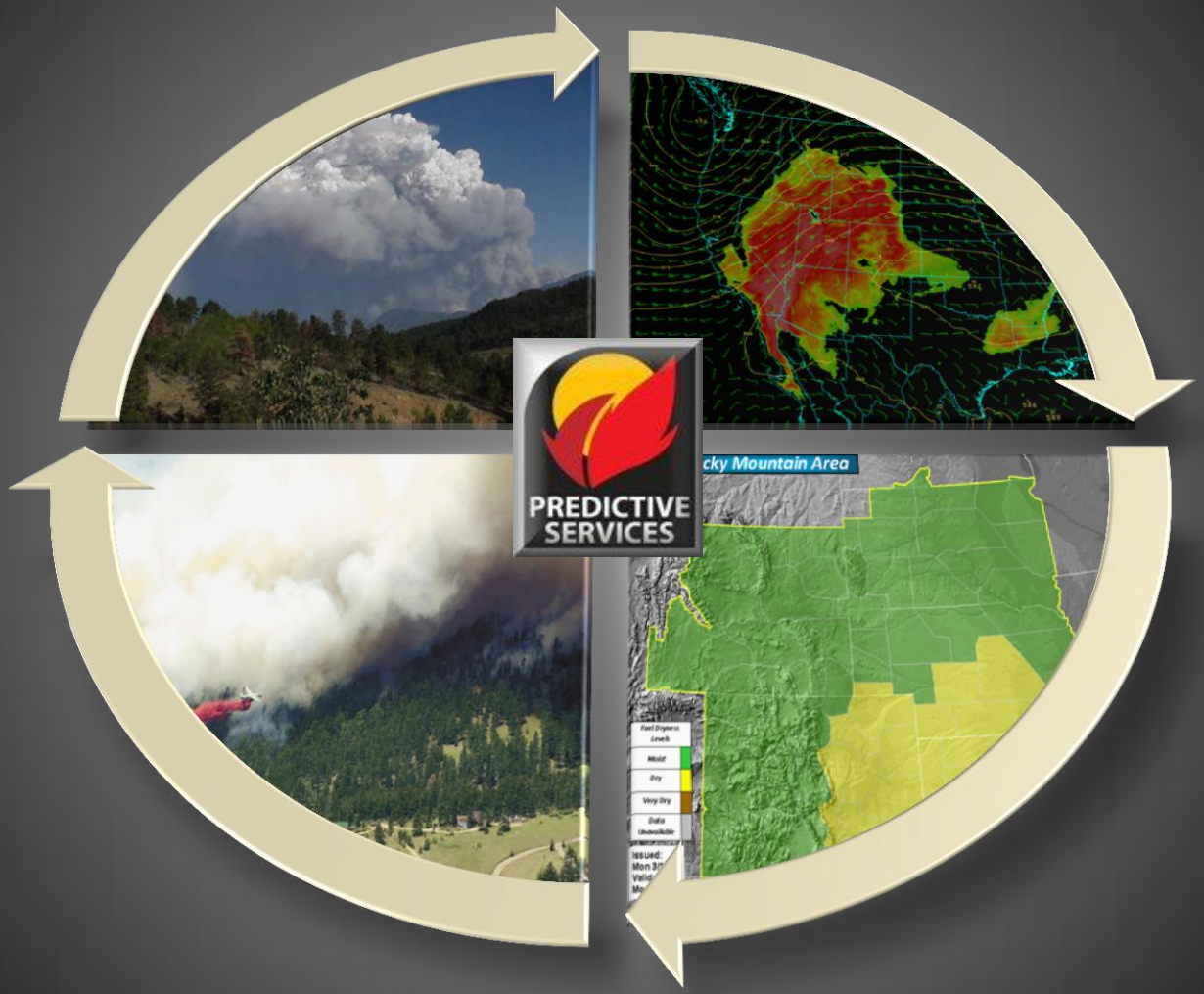
Predictive Services

2012 Rocky Mountain Area Seasonal Outlook – May 5, 2012



Tim Mathewson – Fire Meteorologist- RMACC
Russ Mann- Fire Meteorologist- RMACC
Marco Perea- Intelligence Coordinator- RMACC

Seasonal Outlook

Climate and Forecast Considerations

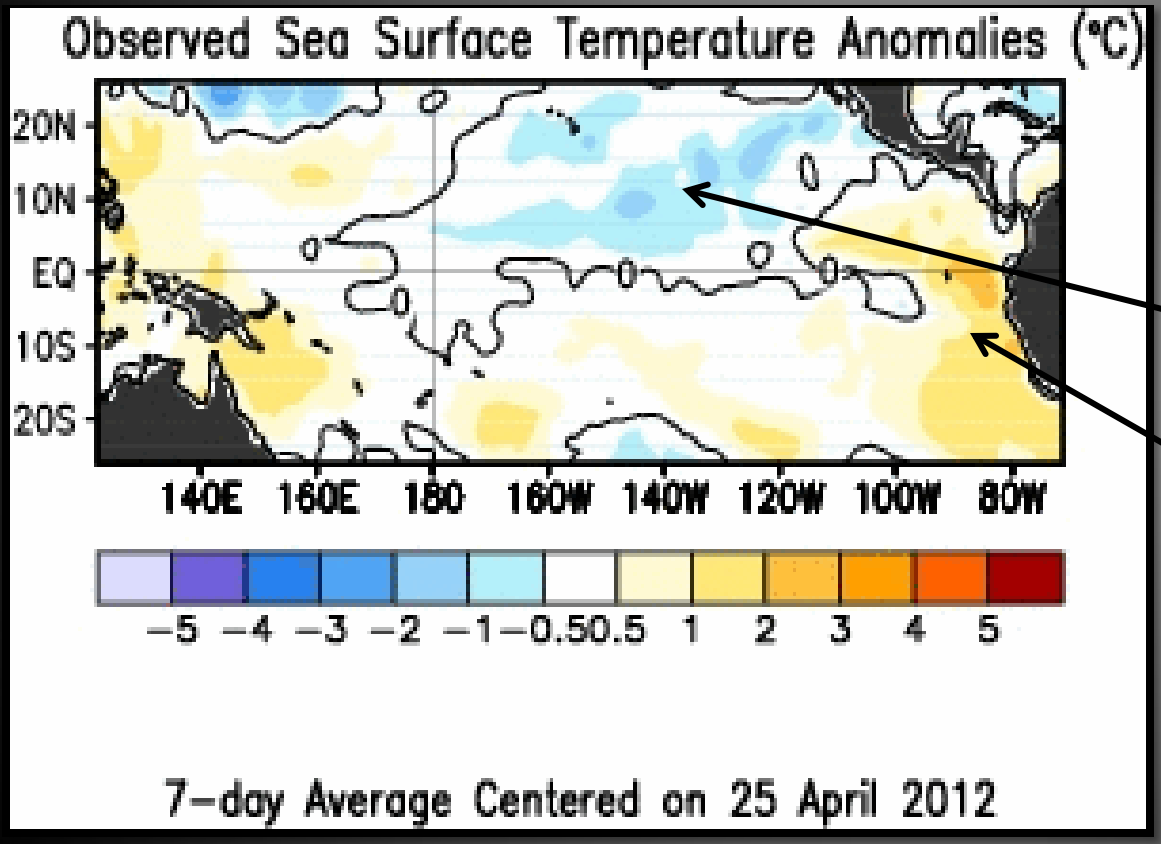
- Current ENSO Conditions
- Current Snowpack
- Precipitation and Temperature Anomalies
- Long Term Drought
- ENSO Forecast
- Medium Range (2 week) Weather Forecasts
- Long Range (1-4 months) Weather Forecasts

Rocky Mountain Area

Current ENSO Conditions

Rocky Mountain Area

El Nino Southern Oscillation (ENSO)



Tropical Pacific SST

SST Anomalies Indicate:

Weakening La Nina Conditions

Negative SSTs- Cooler than average across the central tropical pacific

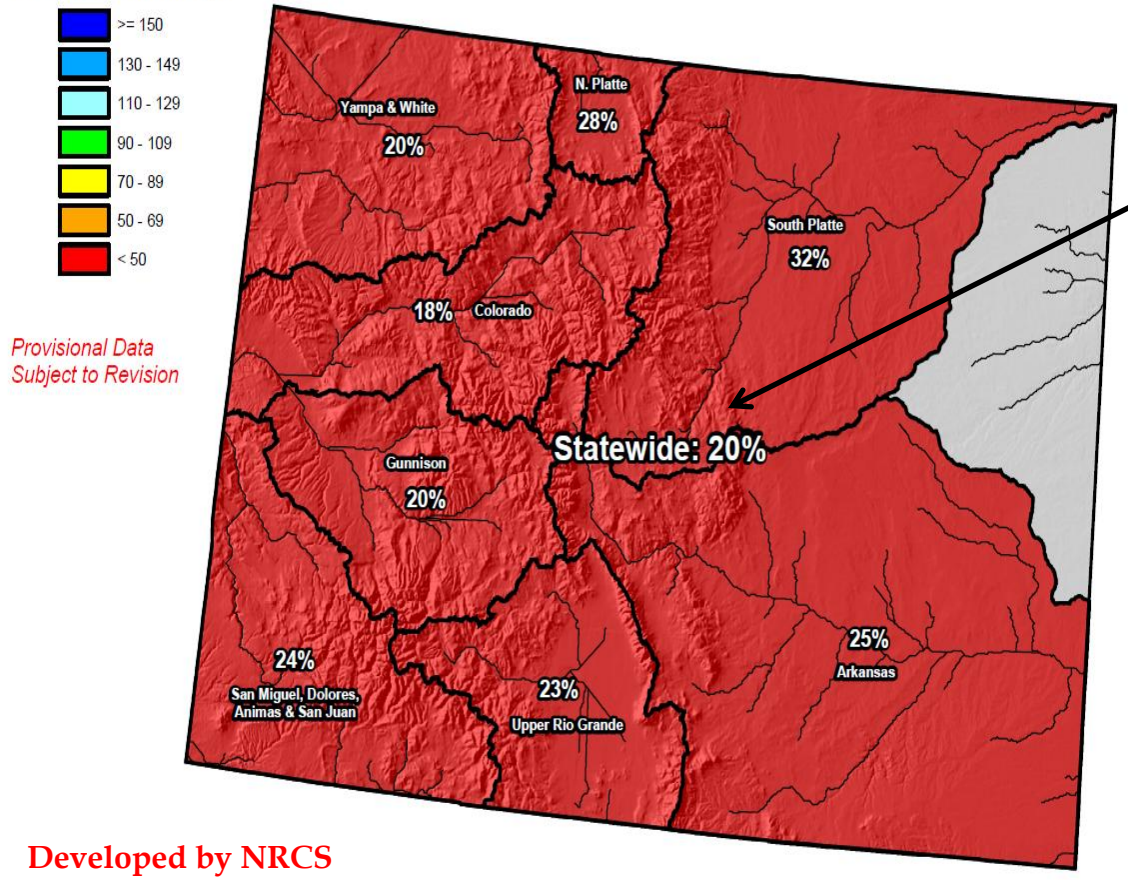
Positive SSTs- Warming along South American coast

Rocky Mountain Area

Current Snowpack

Seasonal Outlook

Colorado Snowpack –May 4, 2012



Colorado Snowpack

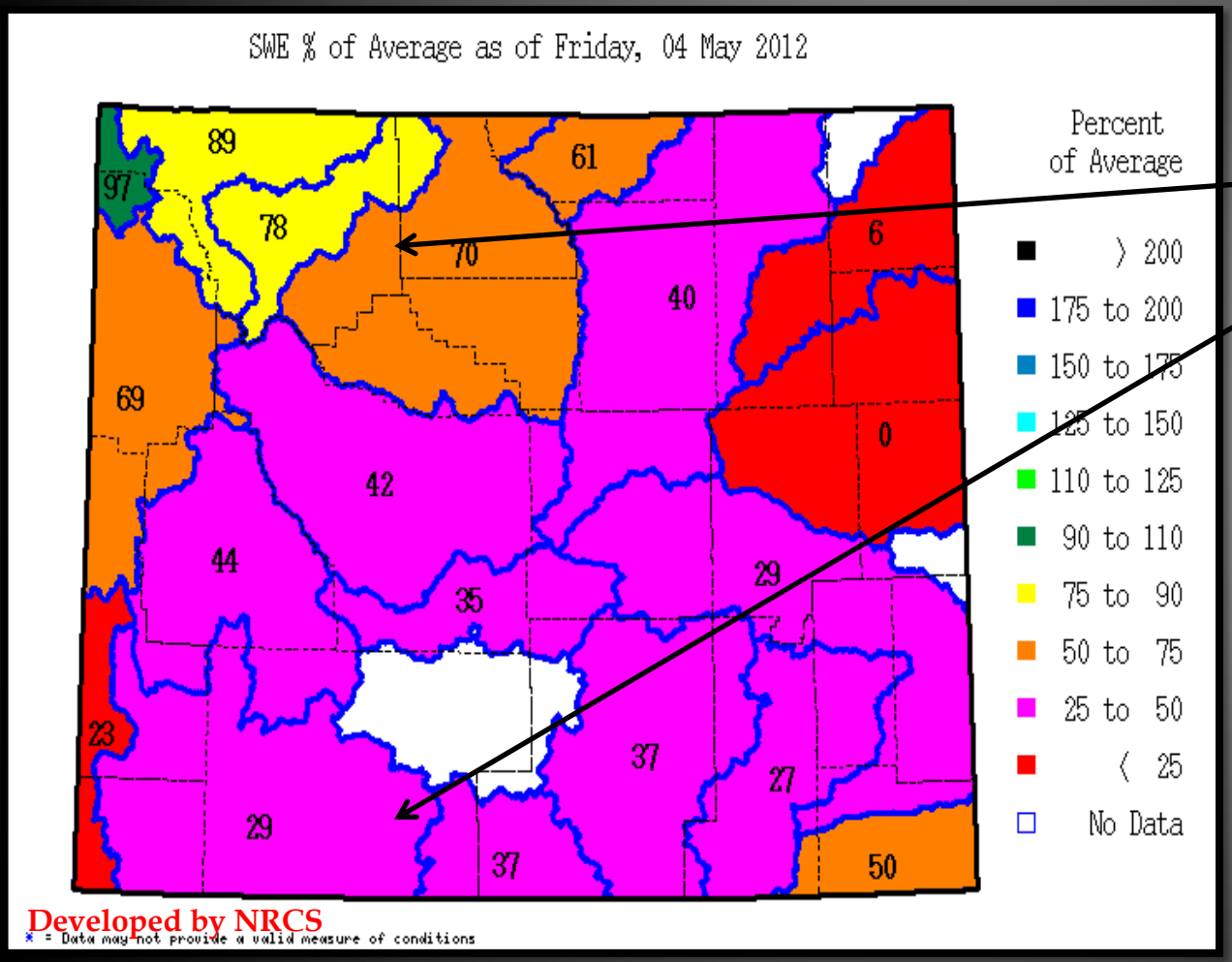
Statewide- 20% of Ave.

Drainages Range From 18% to 32% of Average

Snowpack locked up high (pass level)

Seasonal Outlook

Wyoming Snowpack –May 4, 2012



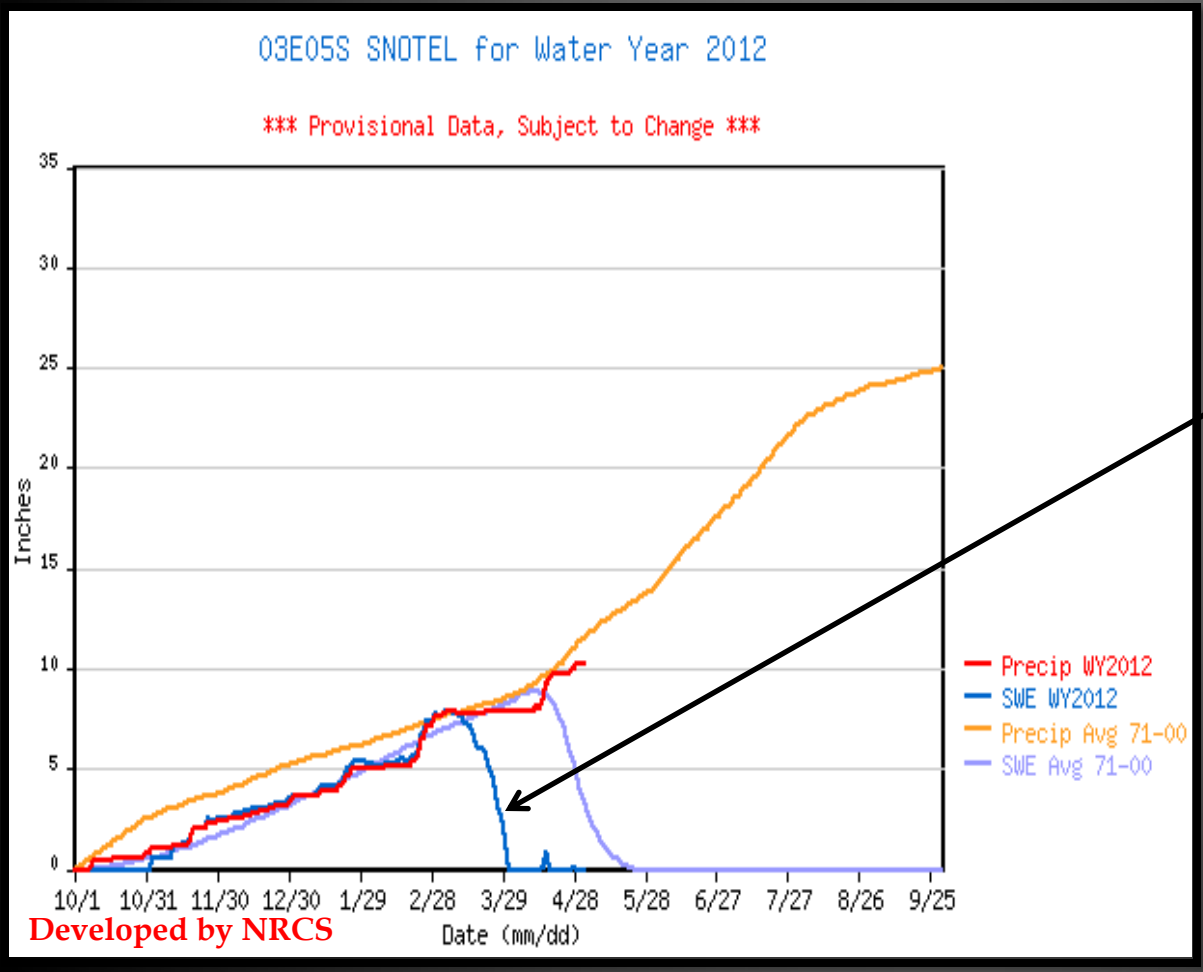
Wyoming Snowpack

61%-89% of Ave northwest and north-central Wyoming

Southern and eastern Wyoming 23%-44%

Seasonal Outlook

Black Hills Snowpack –May 2, 2012



Black Hills Snowpack

Above Average temperatures in March resulted in an early melt and run-off conditions

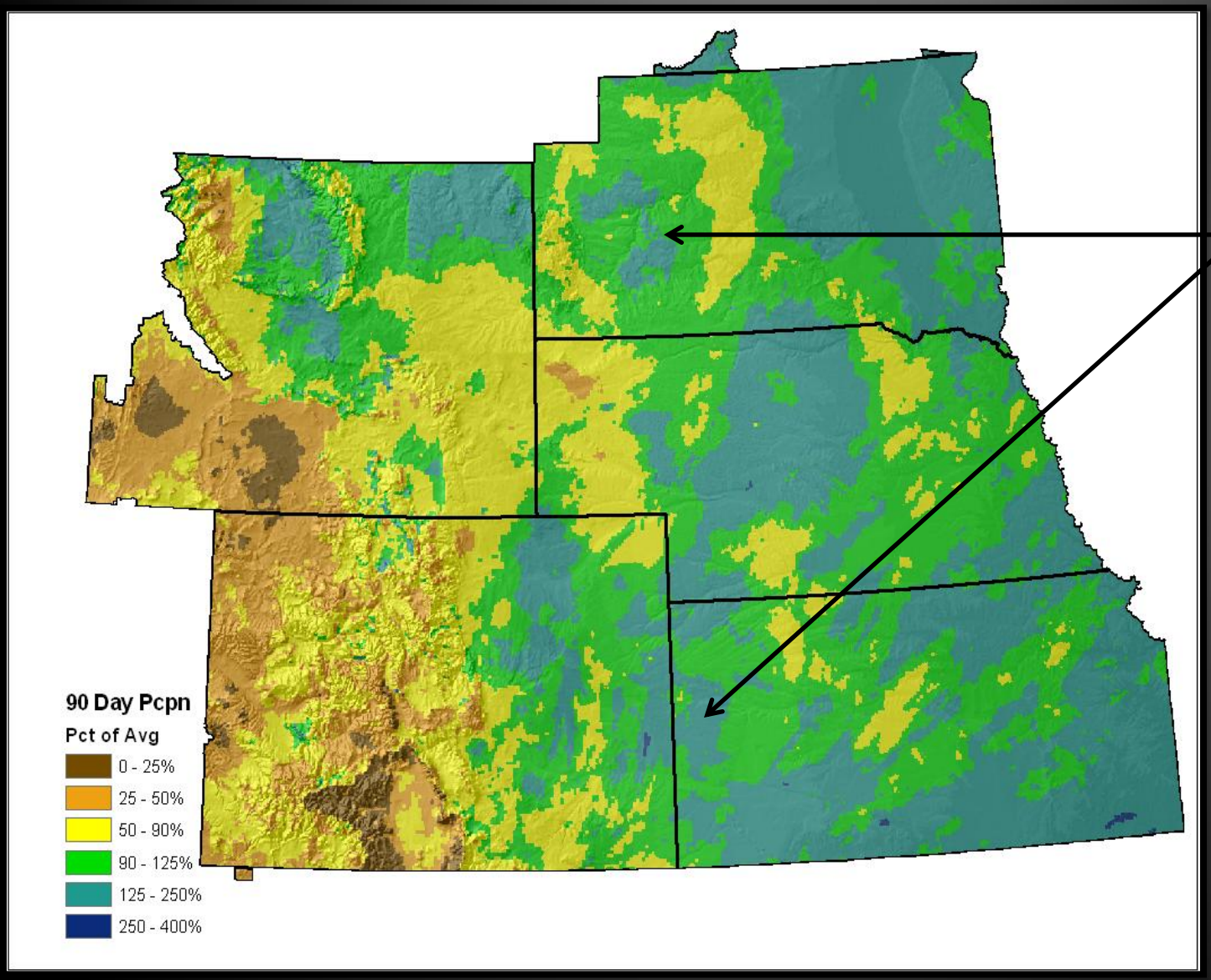
Complete snowpack melt occurred 6 to 8 weeks ahead of schedule

Rocky Mountain Area

RMA Precipitation and Temperature Anomalies

Seasonal Outlook

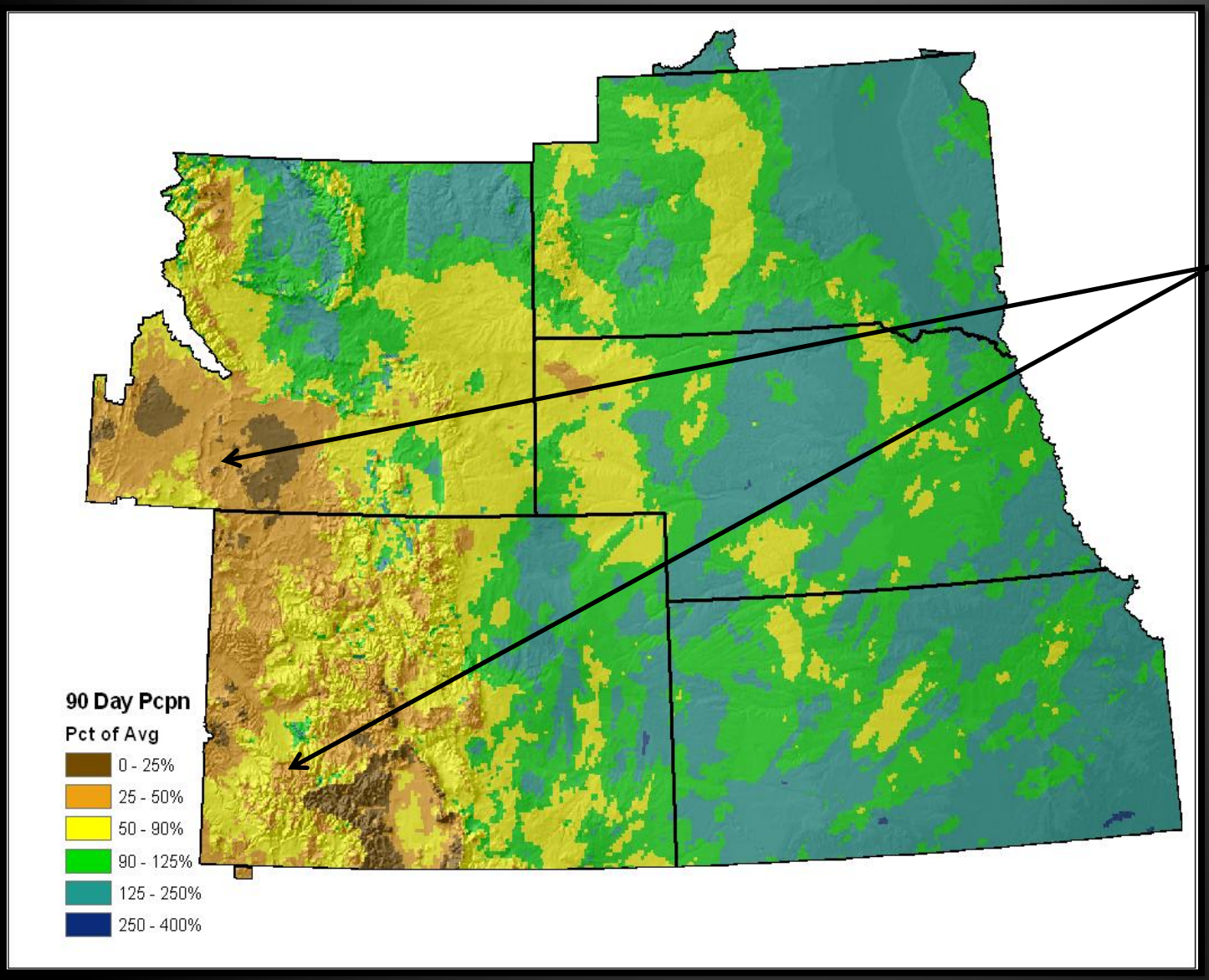
RMA 90-Day (Feb-April) Percent of Average Precipitation Received



Precipitation more abundant east of the Continental Divide with amounts generally above 50% of average, and in most cases greater than 90% of average.

Seasonal Outlook

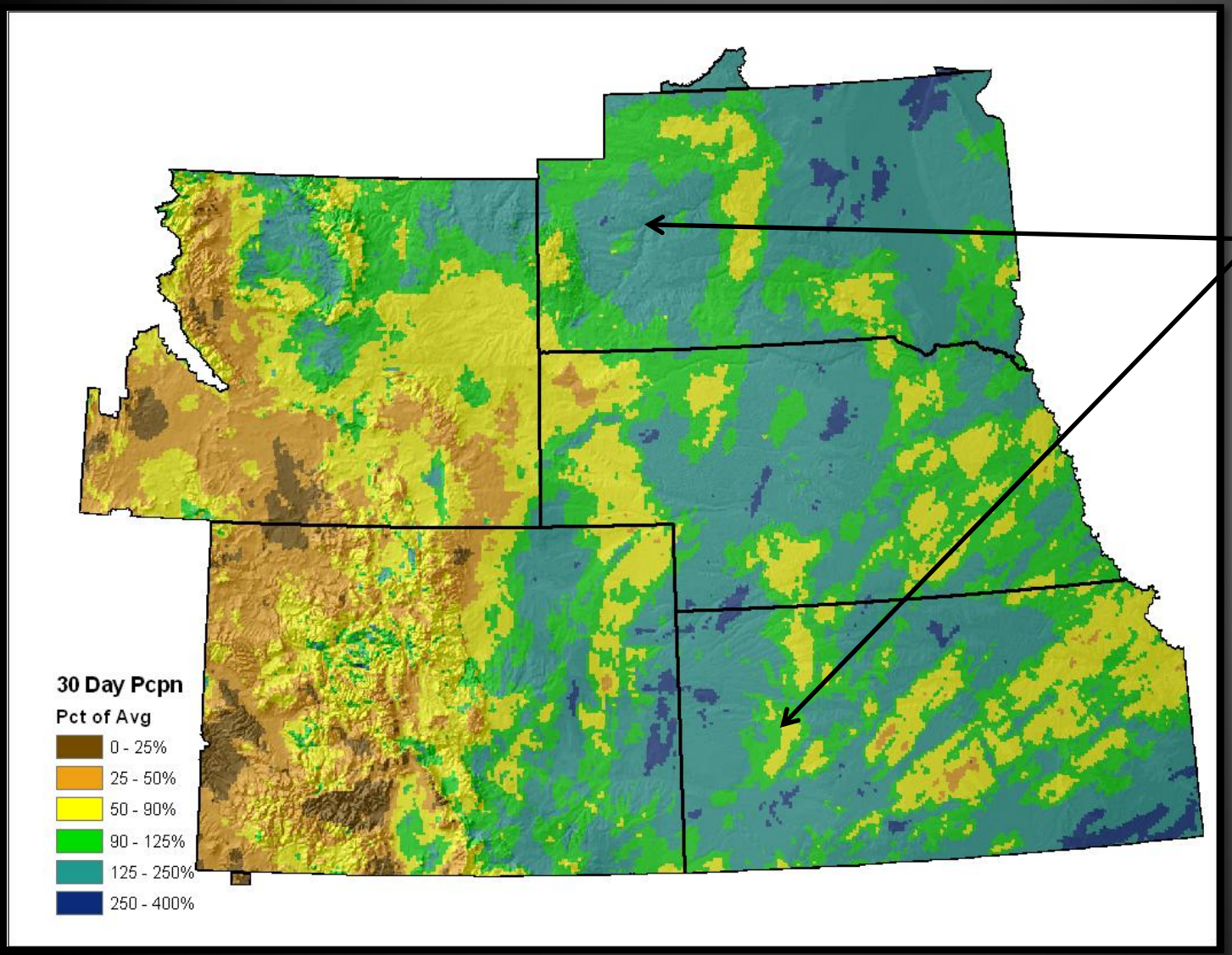
RMA 90-Day (Feb-April) Percent of Average Precipitation Received



Less than 50% of average precipitation widespread west of the Continental Divide.

Seasonal Outlook

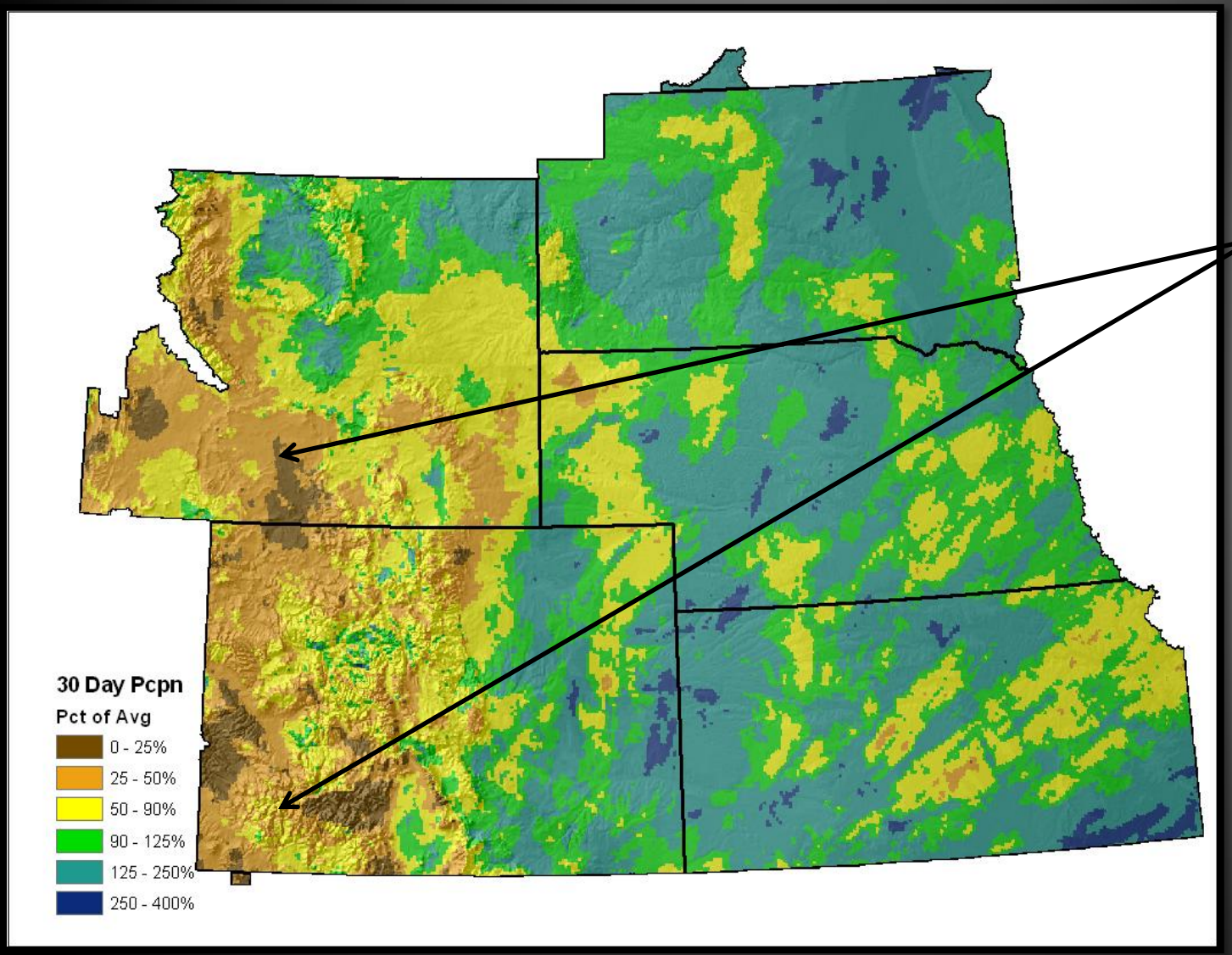
30-Day (April) Percent of Average Precipitation Received



Precipitation more abundant east of the Continental Divide with amounts generally above 50% of average, and in most cases greater than 90% of average.

Seasonal Outlook

30-Day (April) Percent of Average Precipitation Received



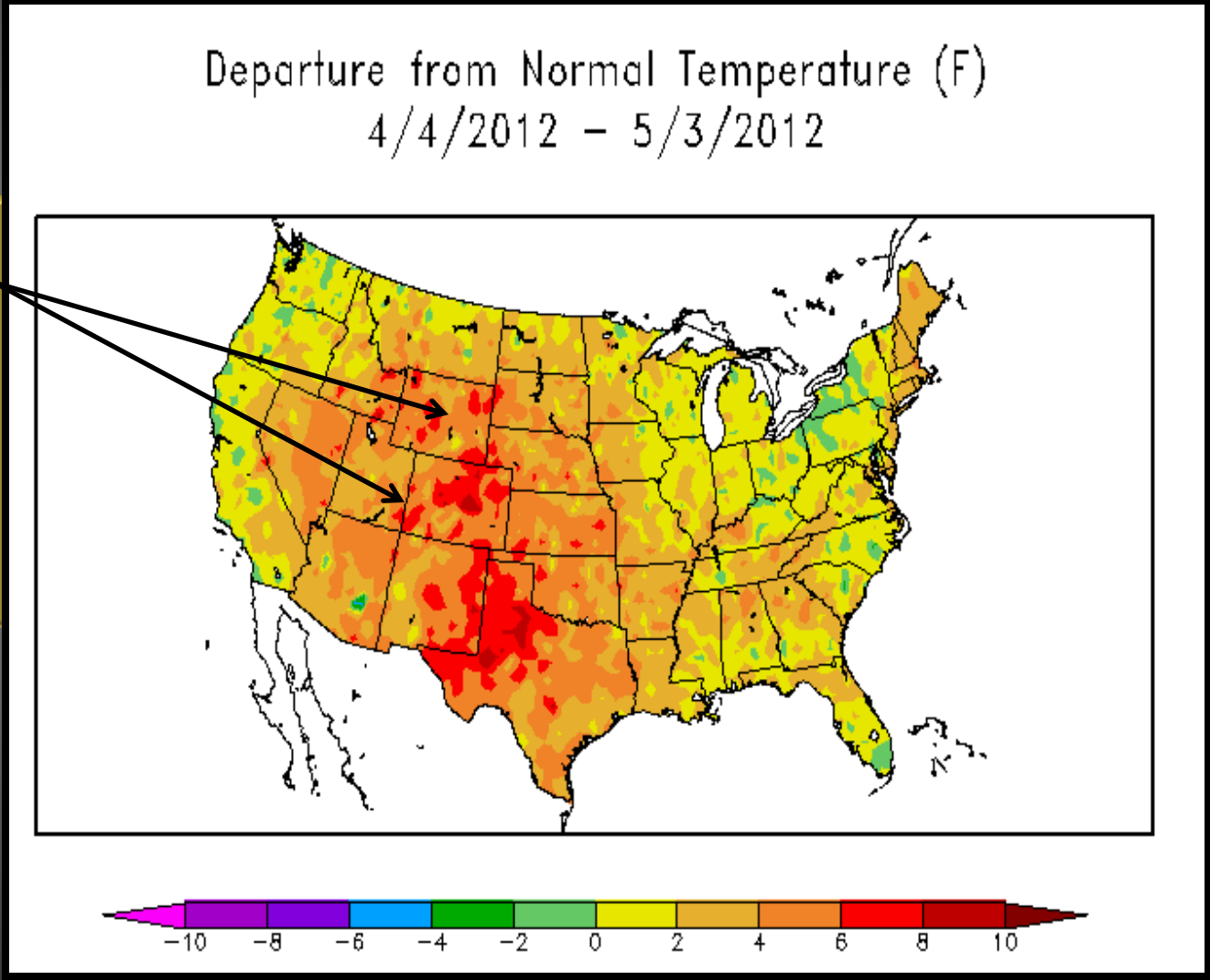
Less than 50% of average precipitation widespread west of the Continental Divide.

Rocky Mountain Area

30-day Temperature Anomalies For April 2012

Warmer than average spring conditions continued through April, contributing to a much earlier than average snow-melt and run-off.

Temperatures were 4 to 8 degrees above the seasonal normals during the last 30 days



Rocky Mountain Area

Regional Drought Conditions

Seasonal Outlook

Regional Drought Monitor

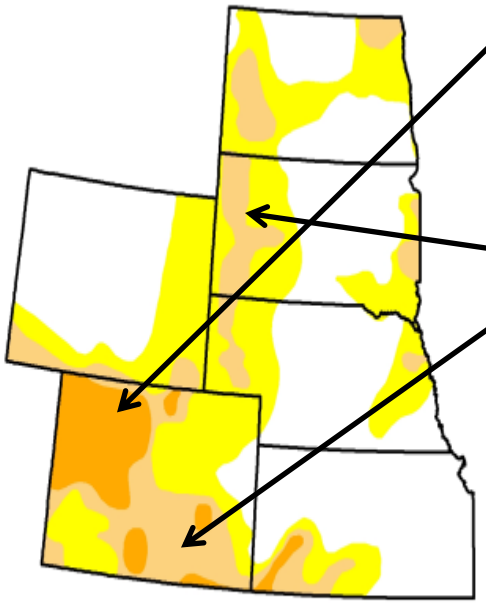
U.S. Drought Monitor

May 1, 2012
Valid 7 a.m. EST

High Plains

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	57.05	42.95	13.27	6.41	0.00	0.00
Last Week (04/24/2012 map)	43.85	56.15	25.85	5.70	0.00	0.00
3 Months Ago (01/31/2012 map)	40.21	59.79	23.28	6.33	2.22	0.04
Start of Calendar Year (12/27/2011 map)	61.66	38.34	18.12	7.22	2.07	0.04
Start of Water Year (09/27/2011 map)	70.09	29.91	17.44	11.97	6.22	2.96
One Year Ago (04/26/2011 map)	68.87	31.13	18.12	11.20	0.85	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

Released Thursday, May 3, 2012
Matthew Rosencrans, Climate Prediction Center/NCEP/NWS/NOAA

Long-term most drought most evident and expected to persist or intensify across western Colorado into southern Wyoming.

Drought also noted east of the Continental Divide, but with less intensity along with some improvement expected.

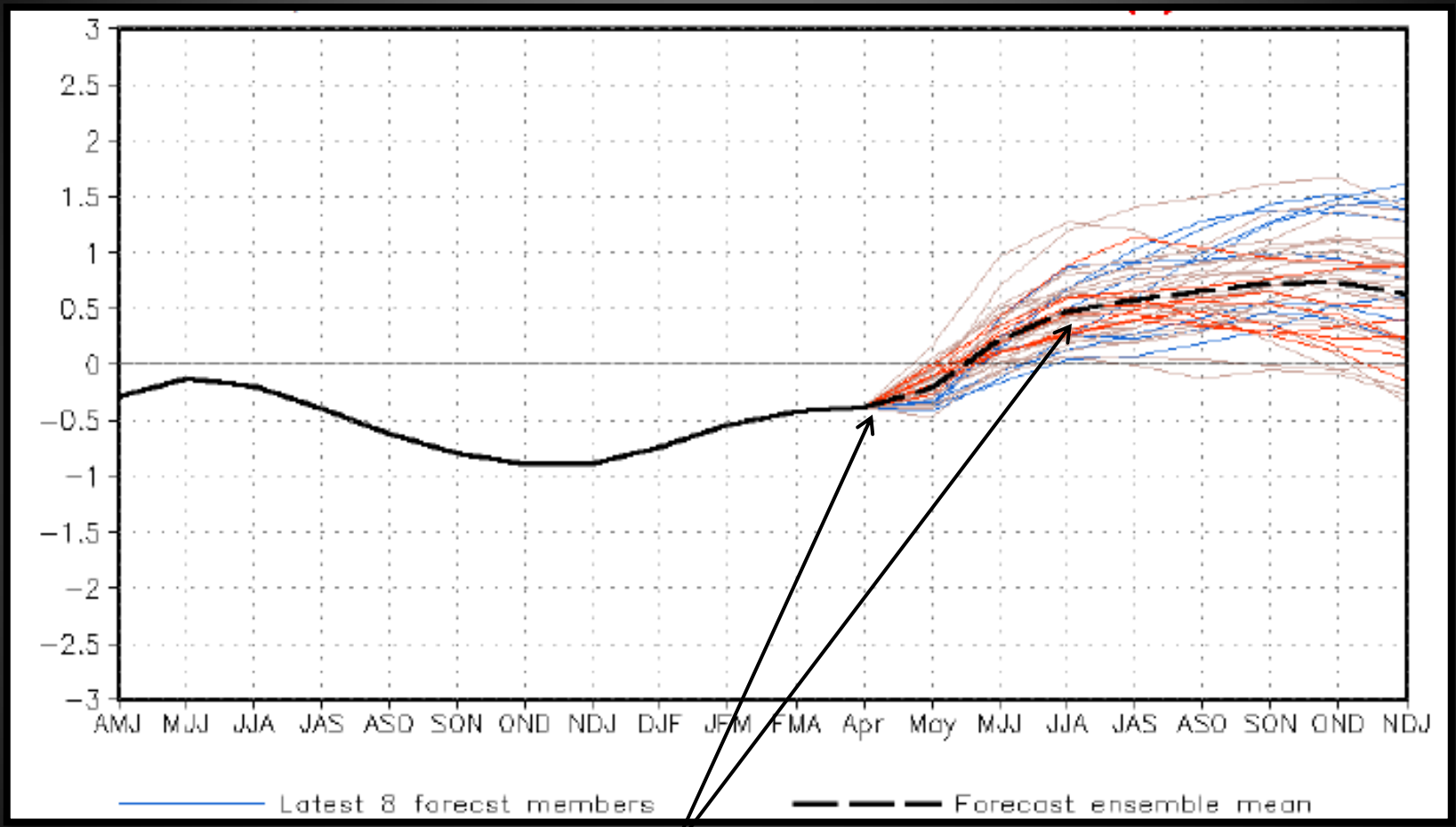
- **Abnormally Dry**
- **Moderate**
- **Severe**
- **Extreme**
- **Exceptional**

Rocky Mountain Area

ENSO Forecast

Rocky Mountain Area

El Nino Southern Oscillation (ENSO) Forecast



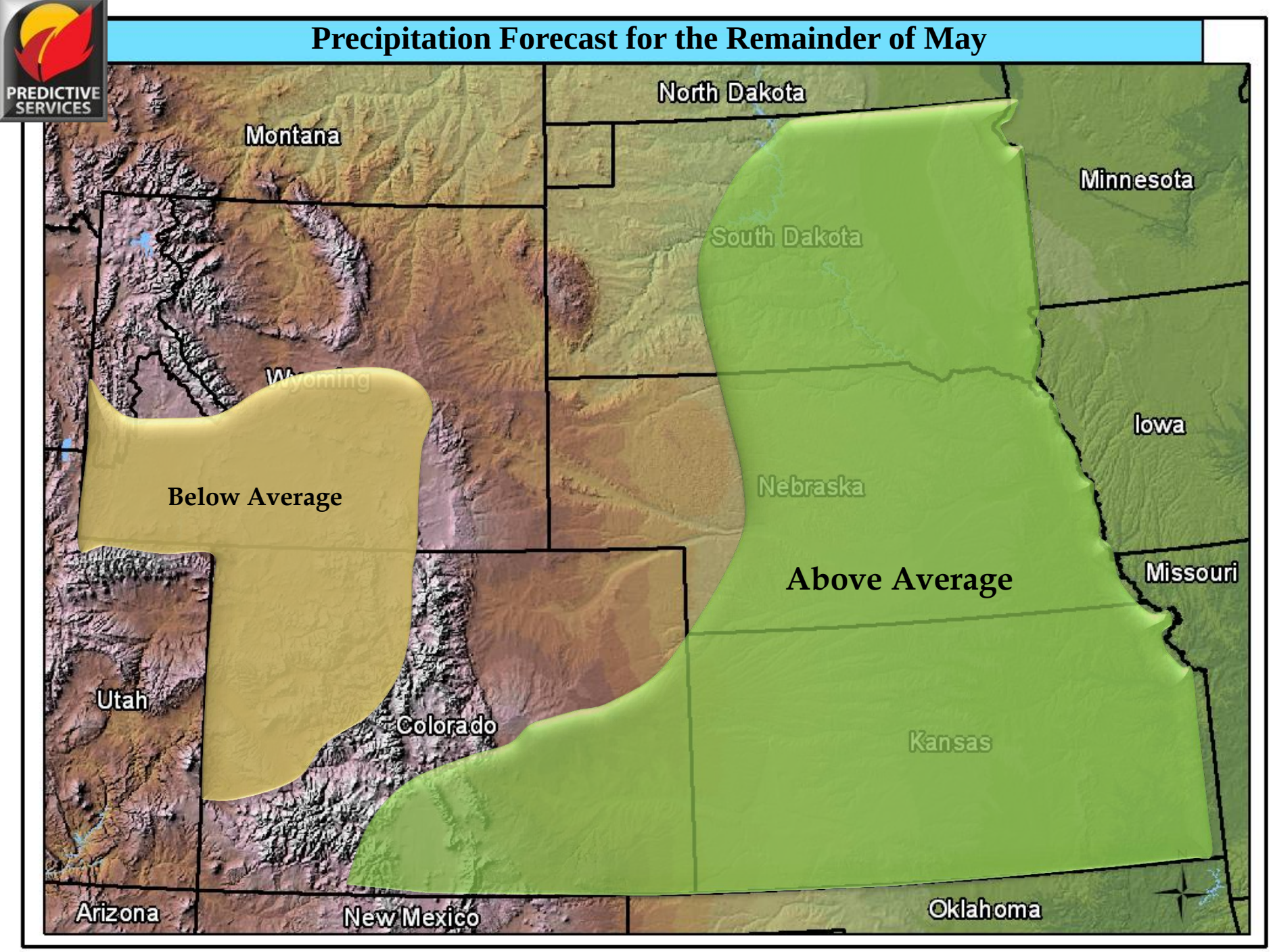
Equatorial Pacific SST Forecast

Neutral to weak El-Nino conditions are forecast for the 2012 fire season

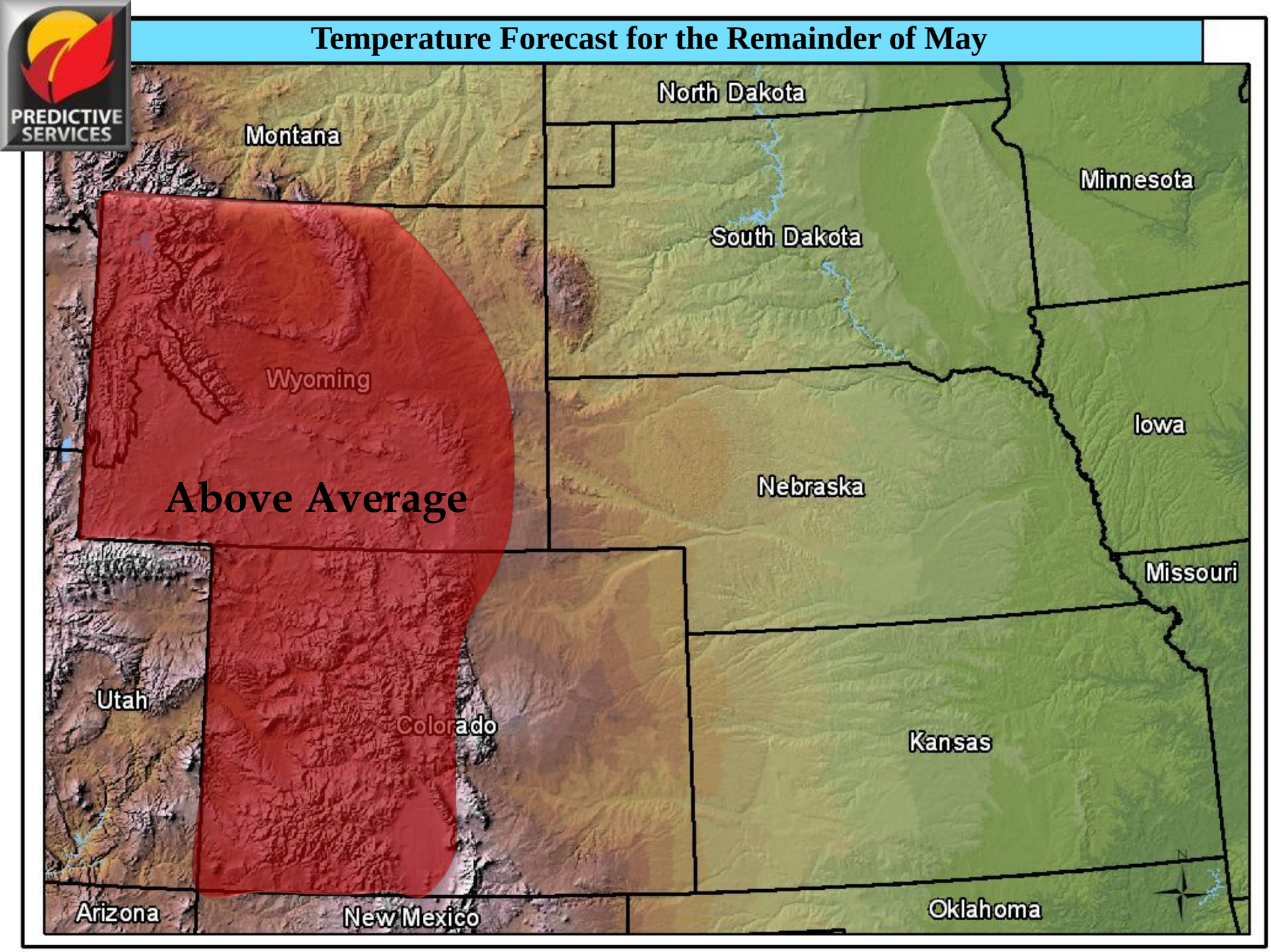
Rocky Mountain Area

Medium and Long-range Precipitation and Temperature Outlooks

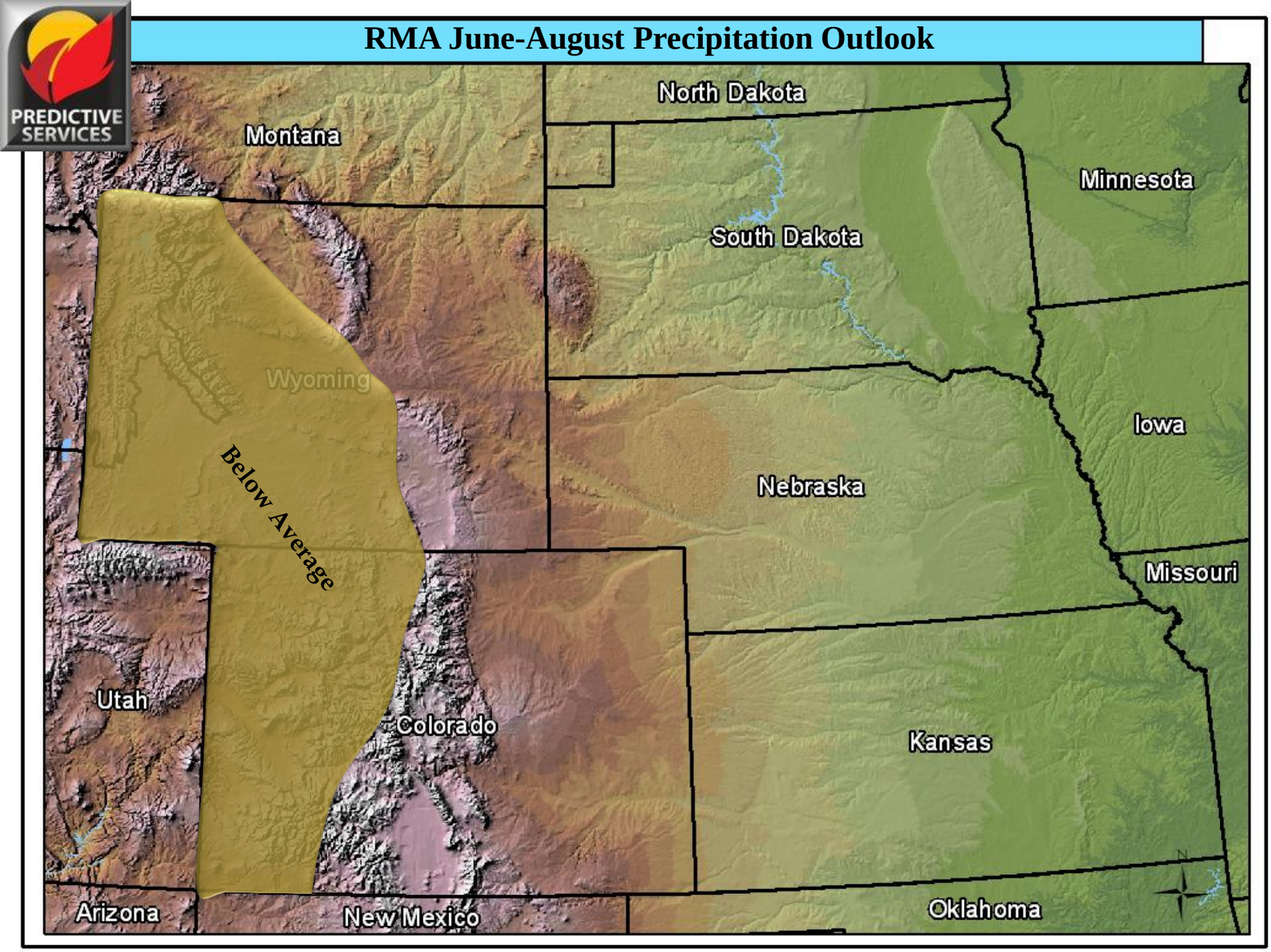
Precipitation Forecast for the Remainder of May



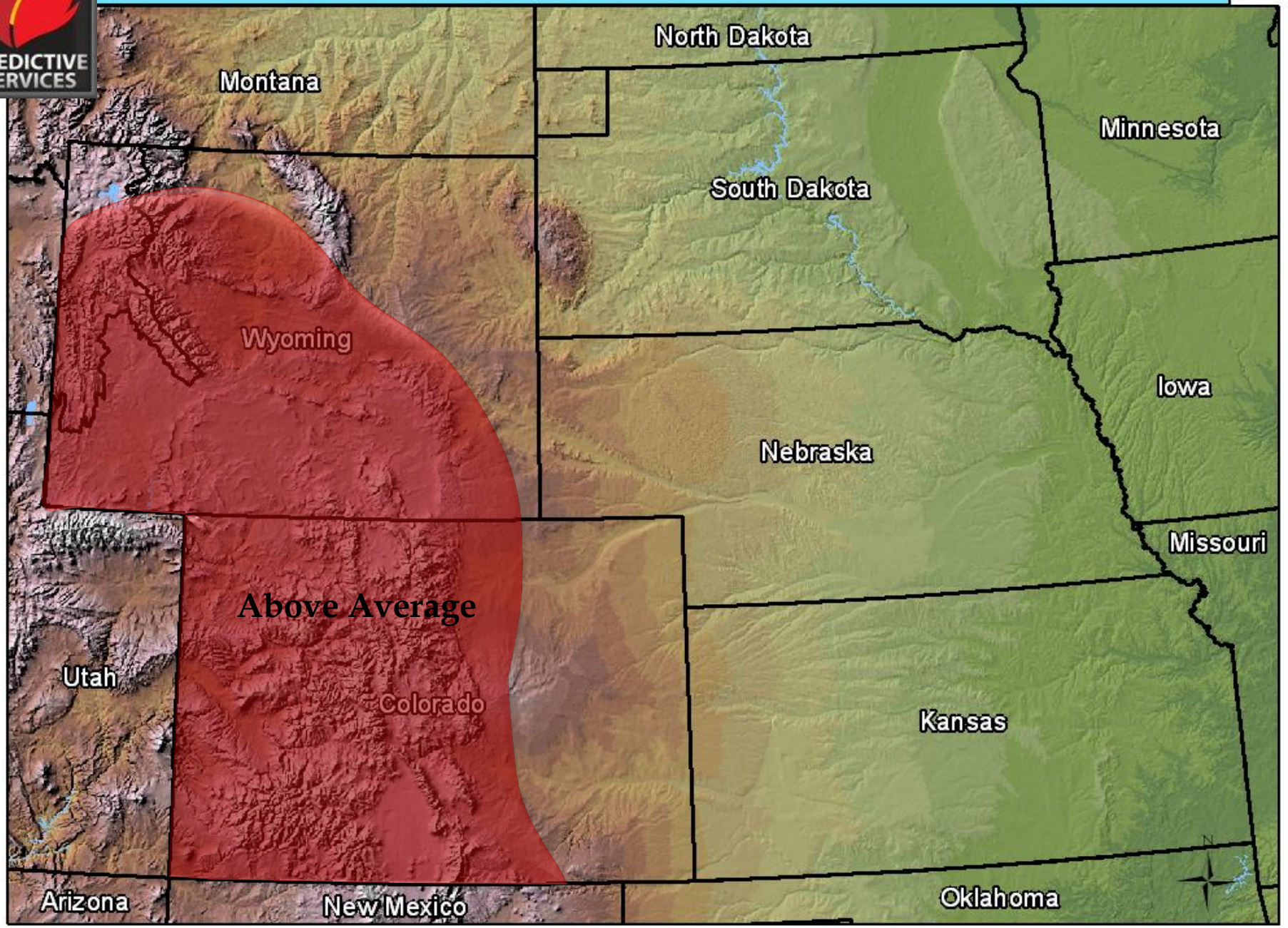
Temperature Forecast for the Remainder of May



RMA June-August Precipitation Outlook



RMA June-August Temperature Outlook

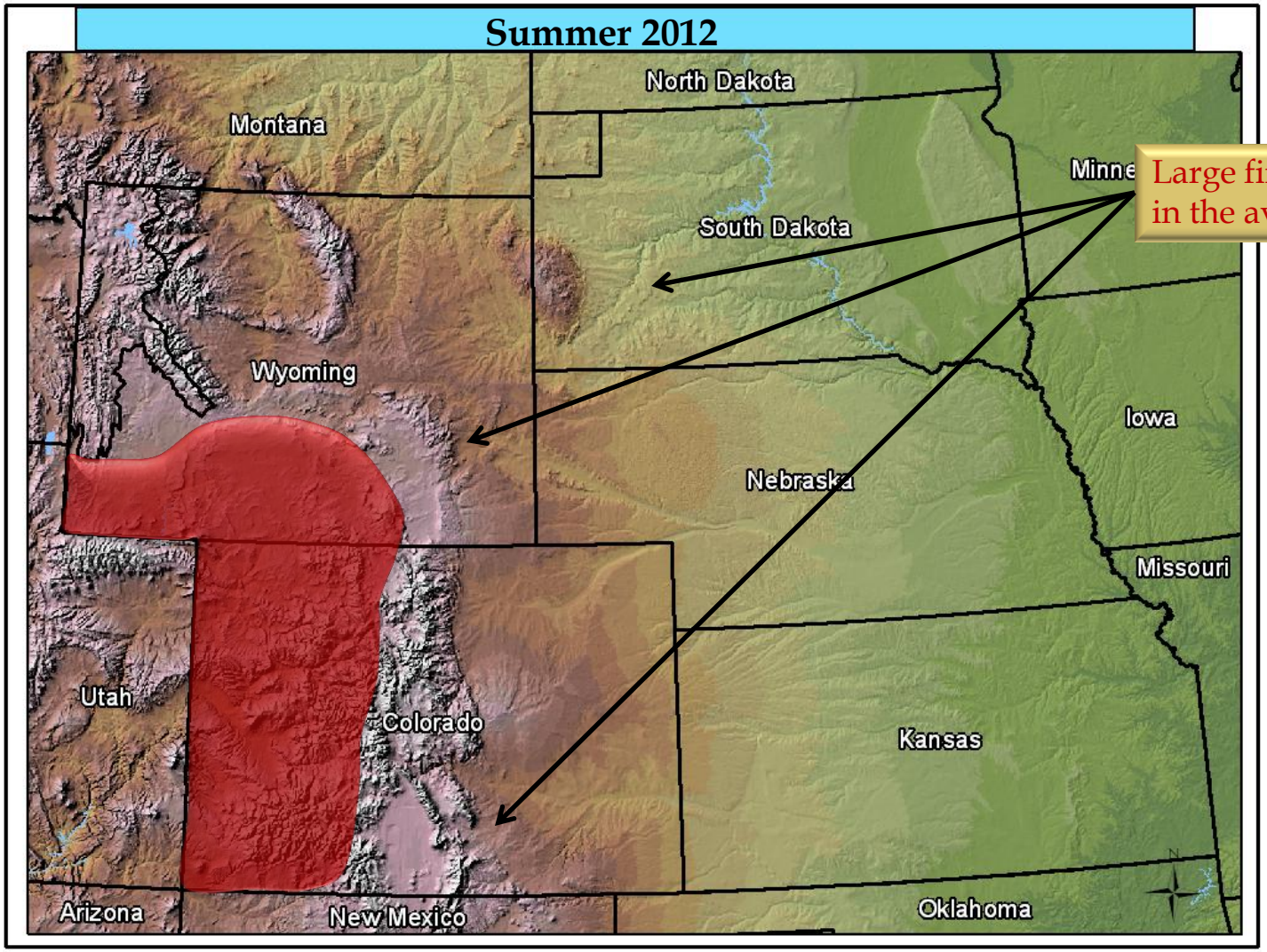


Rocky Mountain Area

2012 Fire Season Outlook

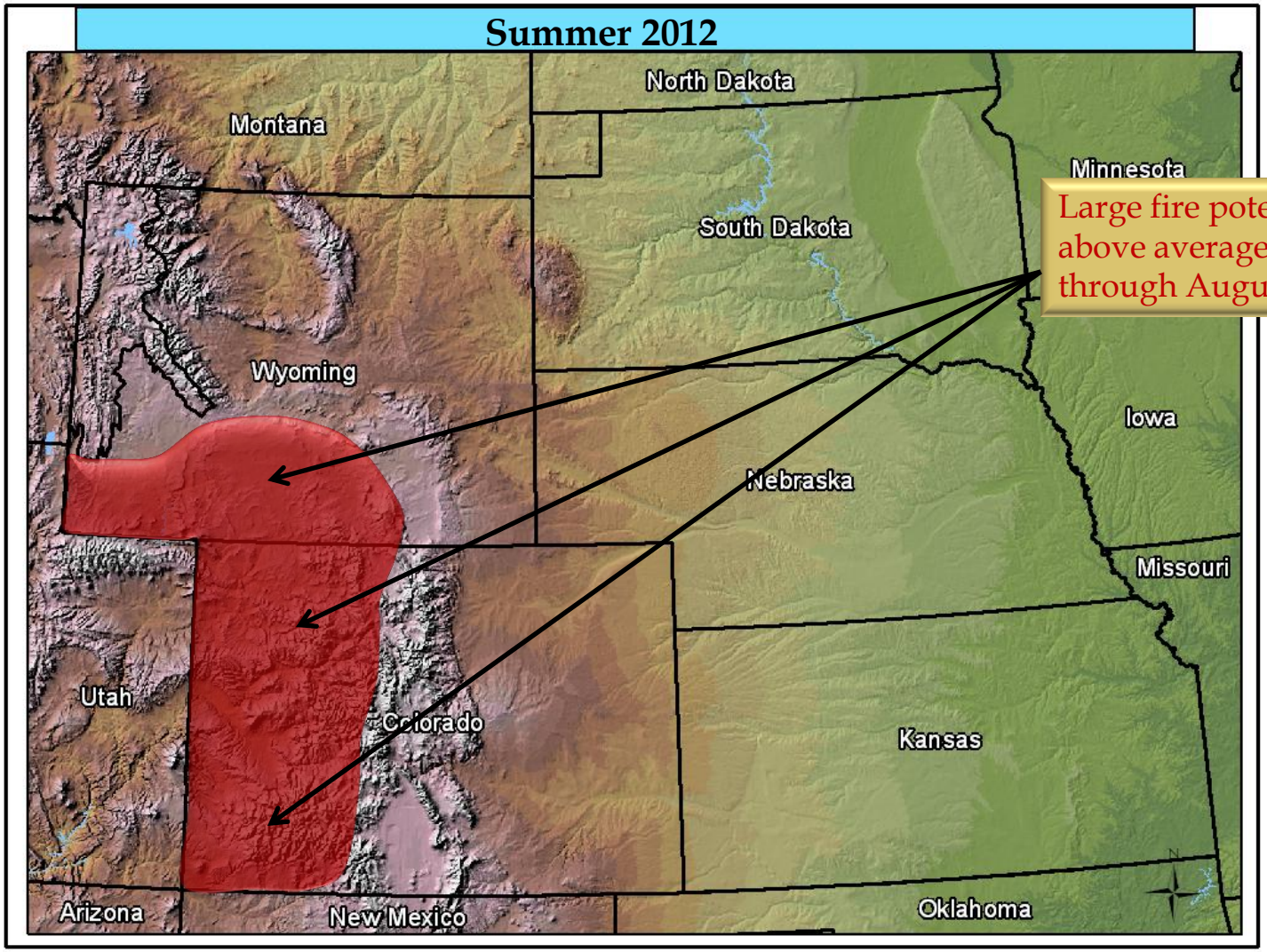
Seasonal Outlook

Outlook Map



Seasonal Outlook

Outlook Map



Large fire potential becoming above average by late May through August.

Seasonal Outlook

2012 Fire Potential Summary and Final Thoughts:

Fire potential over the Rocky Mountain Area is predicted to be near average for much of the region for the 2012 fire season; however, above average potential is anticipated for western Colorado and portions of southern Wyoming. It is unlikely that acres burned will exceed the 2011 value (670,000), however longer duration fires in the heavier fuel regimes over western Colorado and southern Wyoming could have a much greater impact on resources.

Primary Factors and Indicators for Western Colorado and Southern Wyoming:

Significant Snowpack Deficits and Early Snowmelt
Above Average Temperatures
Below Average Spring Precipitation
Abundant Carry-over 1-hr fuels
Drier than Average Heavy Dead Fuel
Meager or Stunted Greenup Conditions

Other Areas of Concern

Though not as severe as western Colorado, western Wyoming and the Black Hills of South Dakota have also experienced significant snowmelt during the early spring due to above average temperatures and early spring dryness. However, precipitation in late April and expected moisture for the remainder of spring should keep conditions near seasonal averages heading into the northern RMA fire season.

These locations may have to be included in "above average" potential in subsequent outlook updates to be posted in June or July.

Next Update- ENSO will be closely monitored over the next 30 days as it may have a significant impact on the outlook updated in early June.