Fire Weather Outlook for North Texas 9/6/2011

National Weather Service

Fort Worth TX

Presenter: Dennis Cavanaugh, Meteorologist

9/6/2011 9:11 AM

Ingredients

Critical Fire Weather Conditions

- Low relative humidity values
- Above normal temperatures
- Strong winds
- Abnormally dry vegetation (fuels)

Common Causes in North Texas

- Severe drought
- Strong low pressure systems

Drought in Perspective

U.S. Drought Monitor

August 30, 2011
Valid 7 a.m. EST

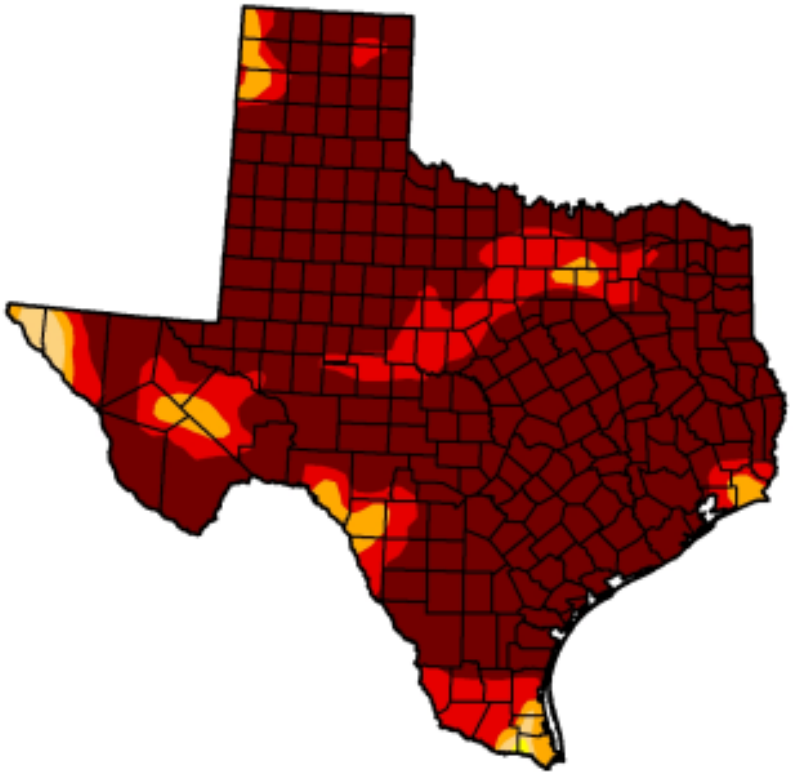
Texas

Drought Conditions (Percent Area)

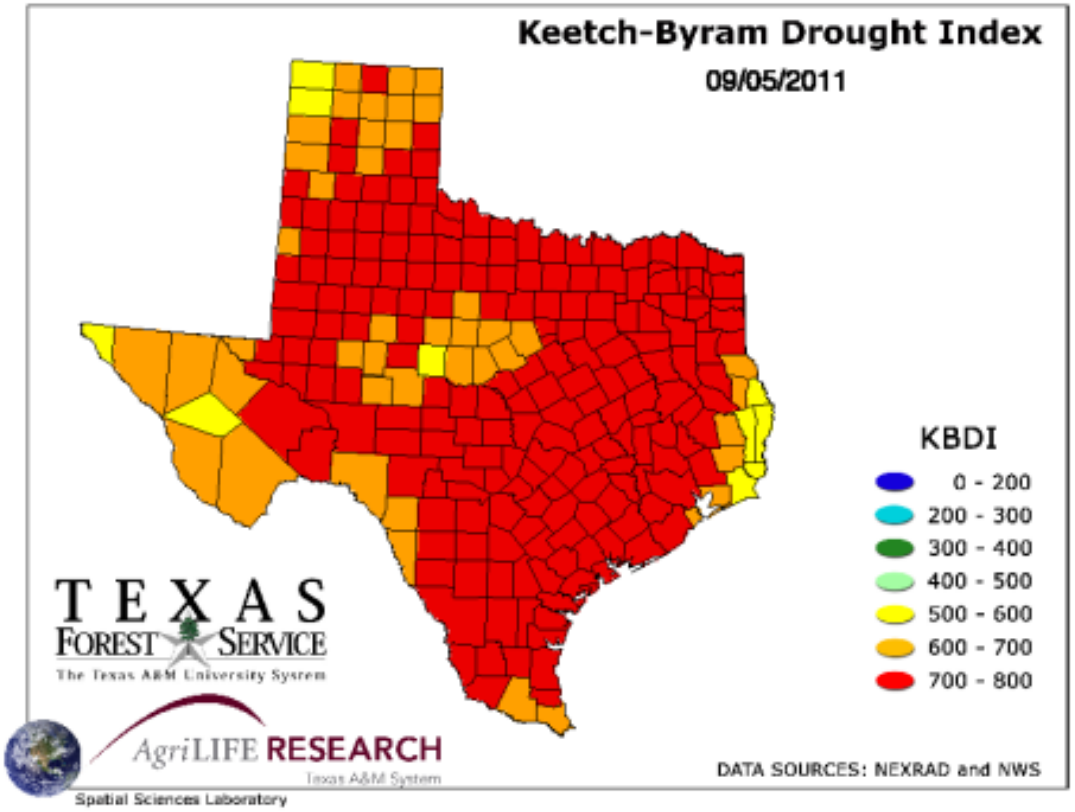
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.92	99.01	95.04	81.08
Last Week (08/23/2011 map)	0.00	100.00	99.93	99.01	94.42	77.80
3 Months Ago (05/31/2011 map)	2.25	97.75	96.07	91.89	81.09	50.65
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/28/2010 map)	75.57	24.43	2.43	0.99	0.00	0.00
One Year Ago (08/24/2010 map)	75.51	24.49	5.52	0.68	0.00	0.00

Intensity:

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



Drought in Perspective



Palmer Drought Severity Index

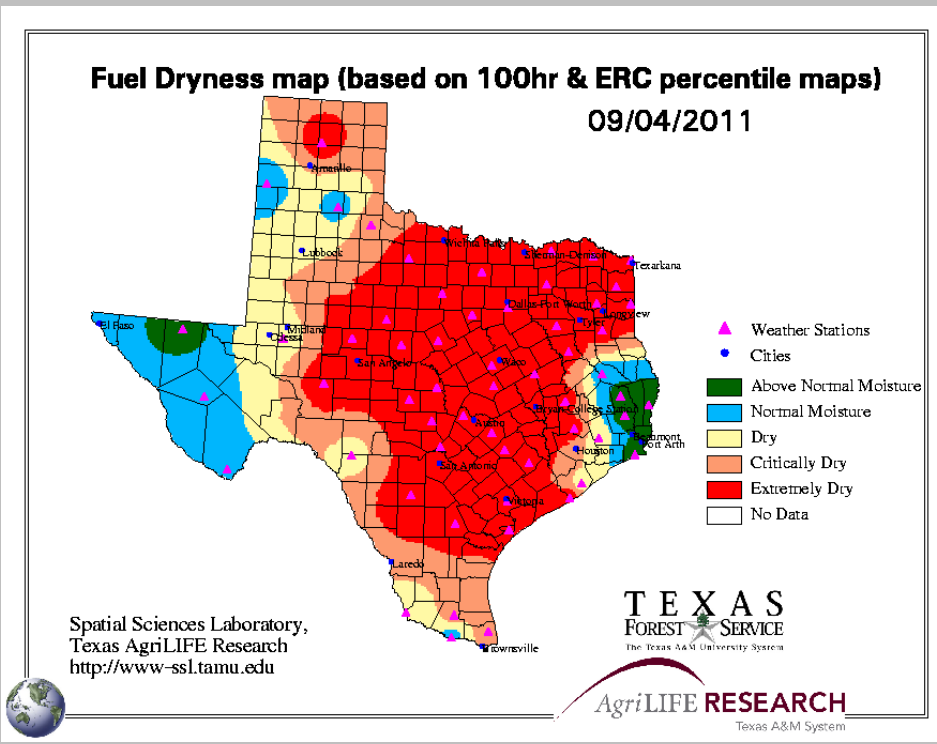
Historical PDSI Values

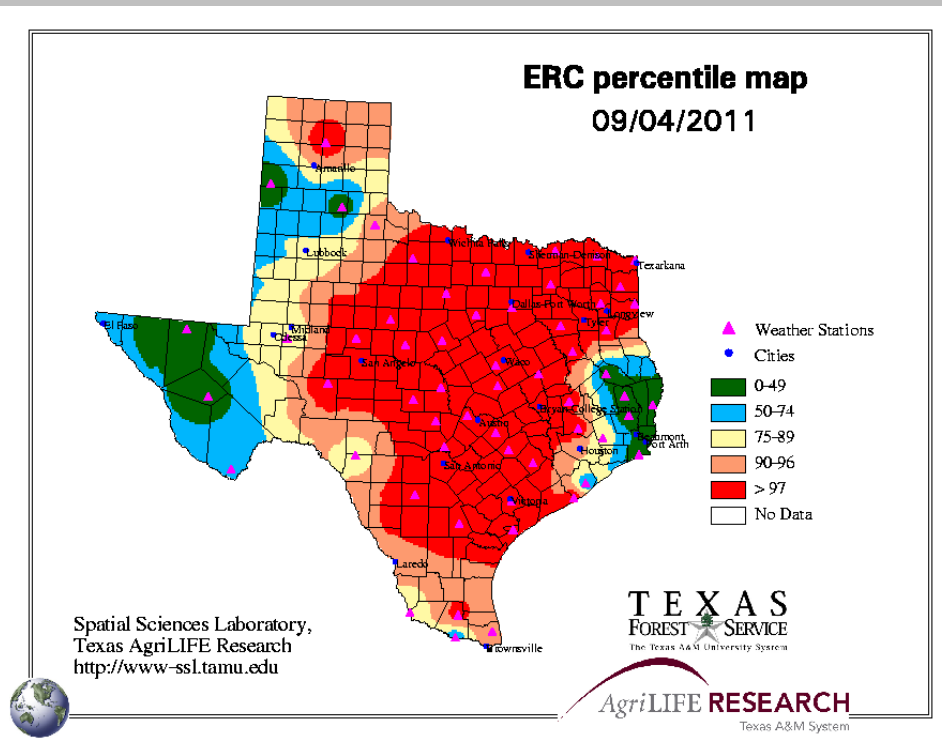
(lowest calculated month during each drought is compared)

DROUGHT	LOWEST PDSI
1951-1957	-7.80 SEP 1956
Current	-7.12 JUL 2011
1916-1918	-7.09 AUG 1918
2010-2011	-6.37 JUN 2011
1924-1925	-6.10 JUL 1925

PDSI is an index that accounts for temperature and precipitation, is state averaged and the lower the values, the more severe the drought. The KBDI is an index that was developed to relate drought to wildfire potential. Values >600 support the most dangerous wildfire behavior.

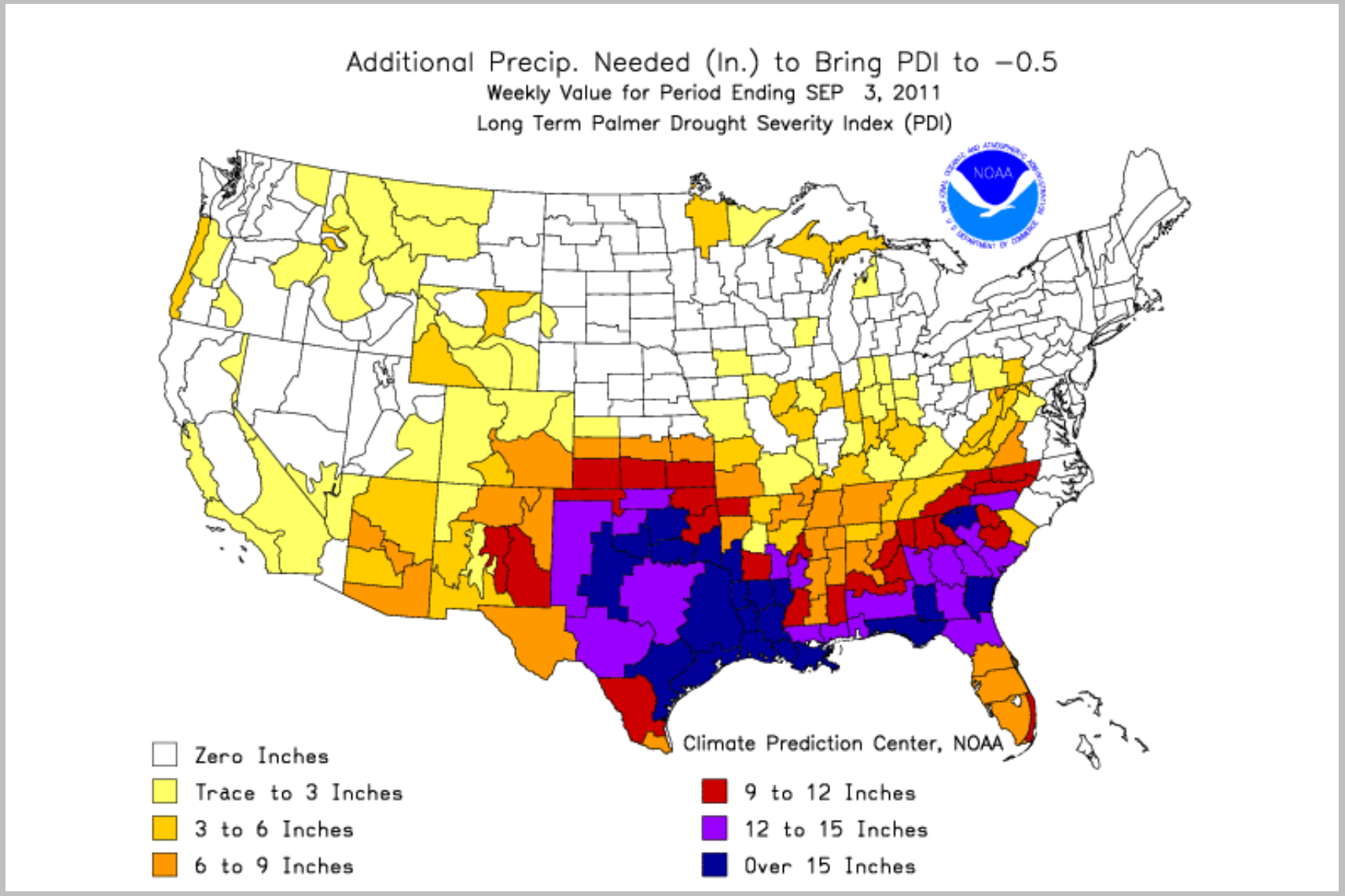
Drought Impacts - Fuels



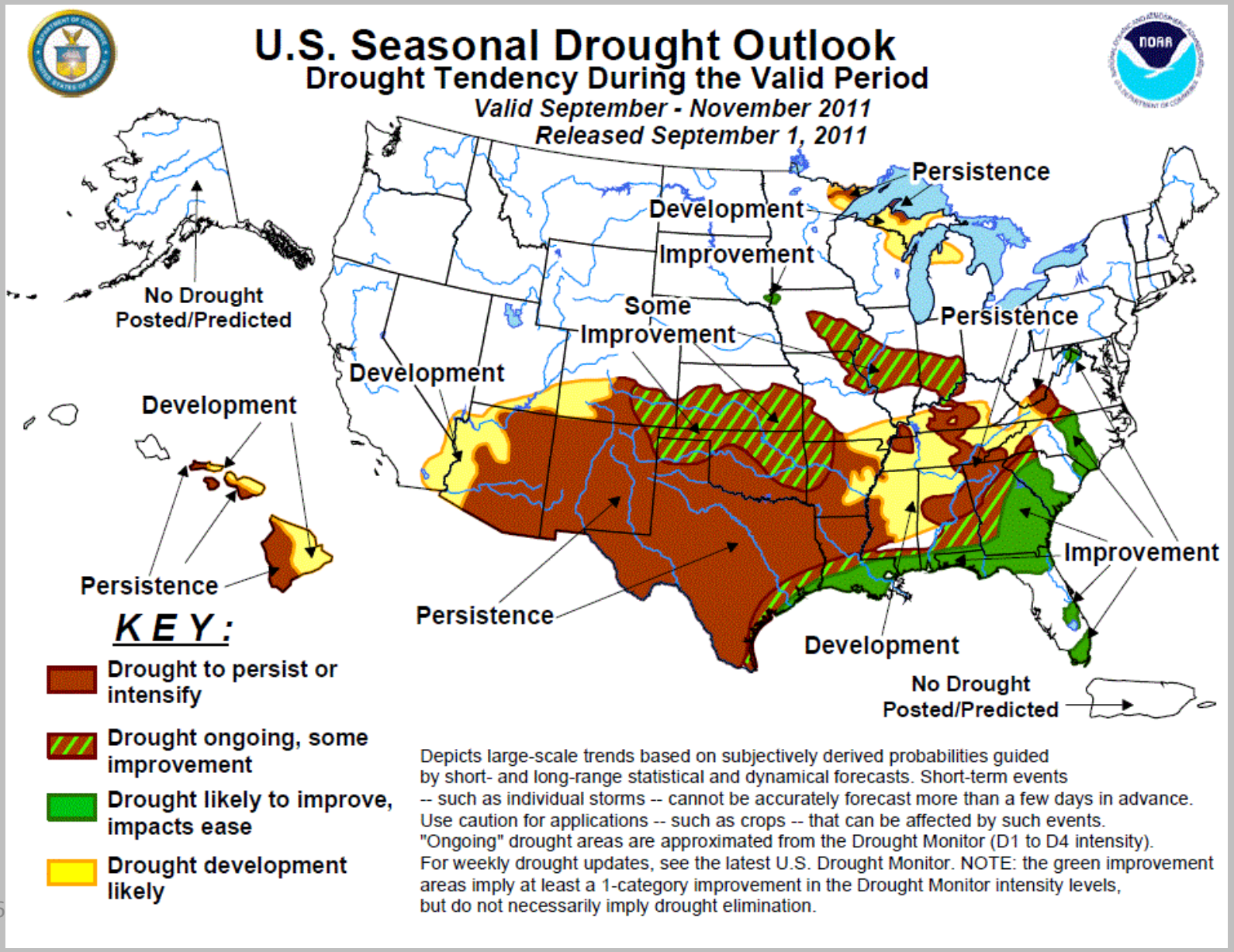


The severe to exceptional drought across North Texas has left area vegetation in a state that supports rapid wildfire growth. In fact, area fuels are so plentiful and dry that Energy Release Component calculations register at historic levels, above the 97th percentile for ALL of North Texas.

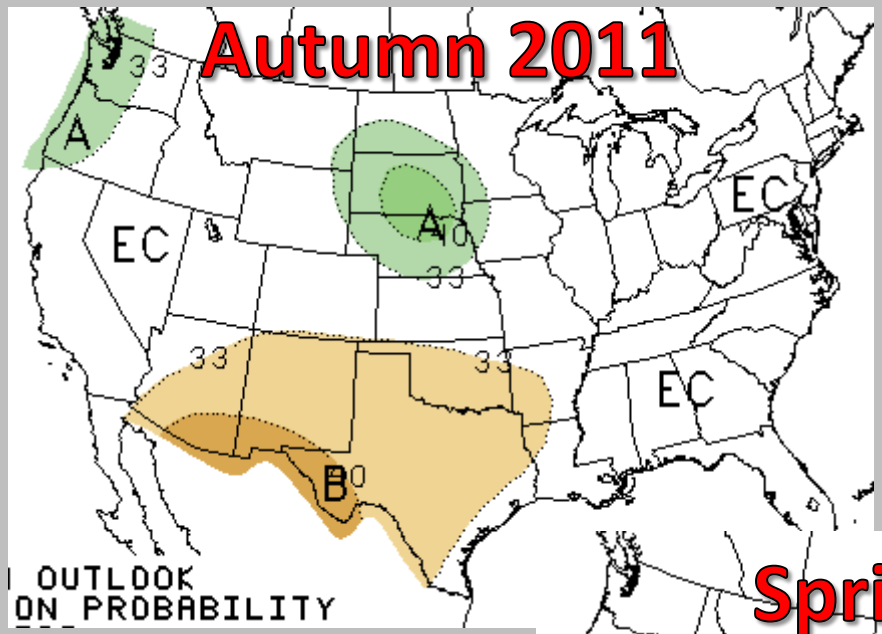
When Will it End?

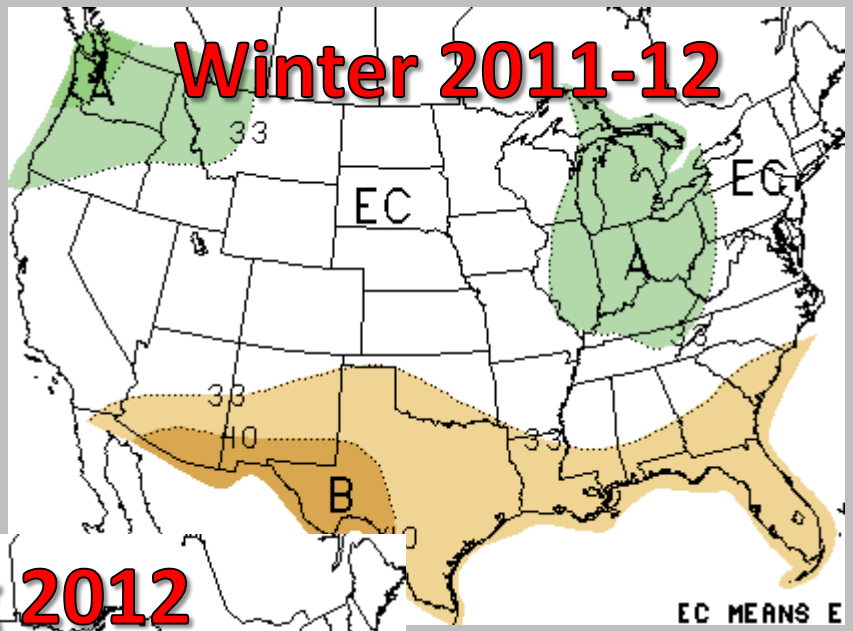


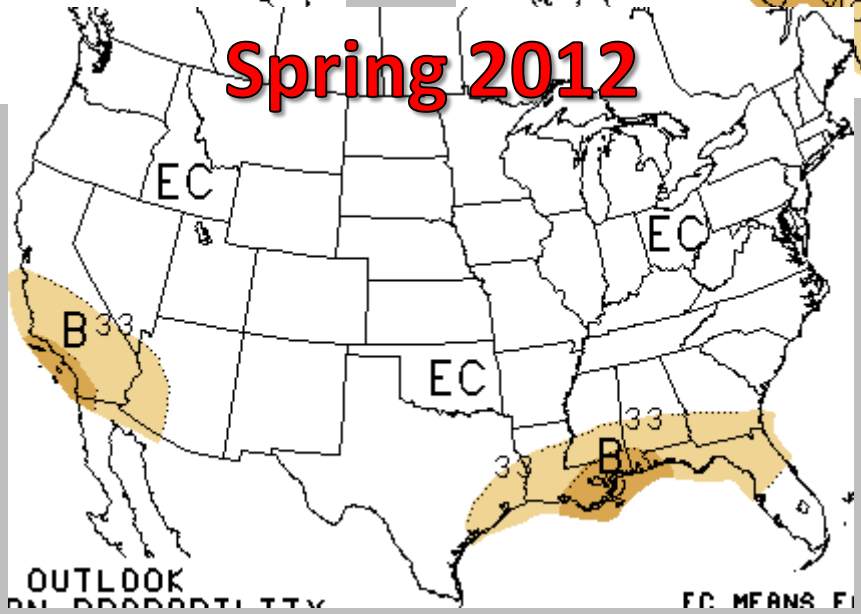
Drought Outlook (Sept. – Nov.)



Precipitation Outlook

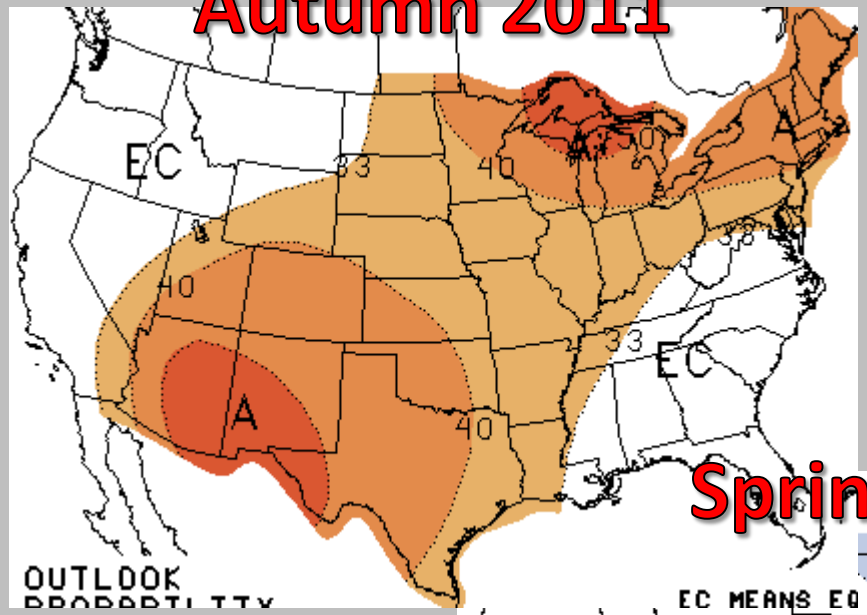




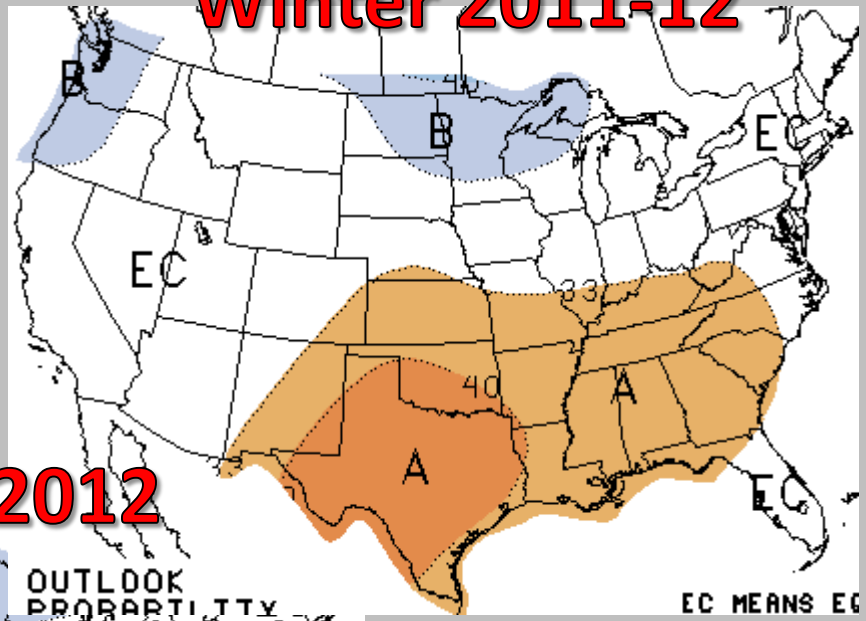


Temperature Outlook

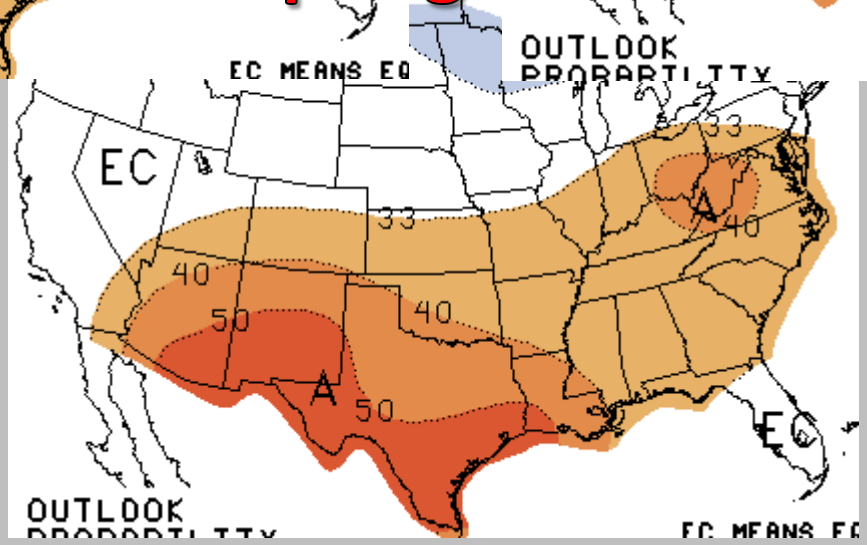
Autumn 2011



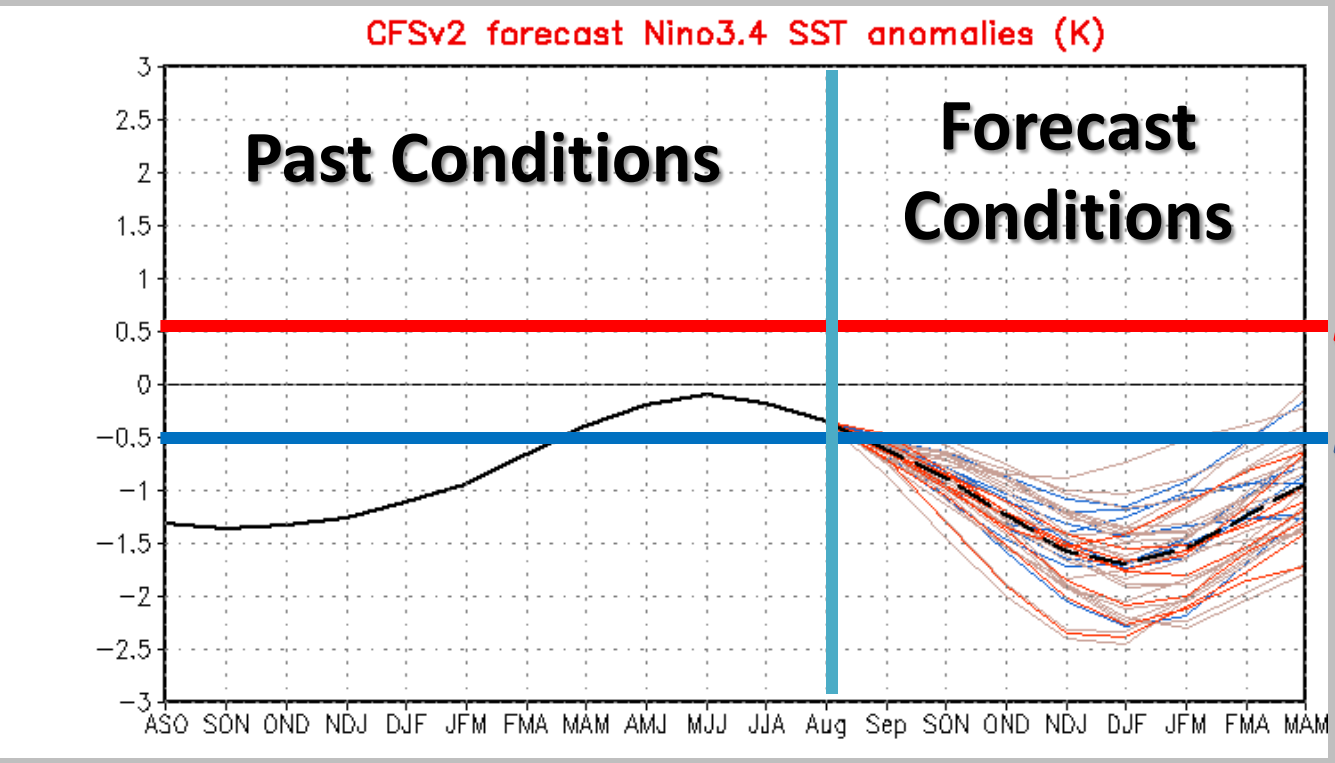
Winter 2011-12



Spring 2012



Why Warm & Dry?



Unfortunately, a similar ENSO cycle is forecast to affect the Pacific waters as last year. While this doesn't guarantee a continuation of severe drought conditions, it doesn't help our chances to break out of an abnormally dry pattern until Spring of 2012.

Fire Weather Outlook

- **Drought conditions are likely to persist (or worsen) across much of North Texas this fall and probably through the winter as well.**
- **Winds are typically much stronger in the fall and winter as the jet stream sinks south across the United States.**
- **Every strong low pressure system in the Plains will have to potential to cause an outbreak of wildfires this autumn.**
- **Over 3 million acres have burned across Texas over the past 12 months.**
- **The frequency of extreme or critical fire weather days is likely to increase during the autumn months across North Texas.**

Fire Weather Outlook

Primary factors we'll be watching closely to anticipate extreme fire weather days:

1. **Sustained winds of 20-25 mph (or greater) combined with…**

2. **Relative humidity values of 30% or below combined with…**

3. **Temperatures well above normal, especially when 80° or above**

Critical fuels will remain in place until significant precipitation moves through North Texas.

How We Can Help

- We will issue Red Flag Warnings when an Extreme Fire Weather day is expected.

- For any incident, a point-specific forecast can be requested (Spot Forecast) that will provide wind speed, wind direction, temperature, relative humidity, sky condition and precipitation chances every 2 to 3 hours.
  - If interested in how to do this, I'll provide a demonstration after this presentation.

- If you wish to have evacuation instructions broadcast and tone alerted on weather radios, you can contact us directly; we disseminate these orders as a FIRE WARNING.
  - Can be requested by county EM, judge or incident commander.
  - Provide explicit evacuation instructions; make sure we read them back to you for accuracy
  - Provide suggested route of evacuation as well as those areas you wish to evacuate

Questions?

If you have any questions about our Fire Weather Program, you can contact our Warning Coordination Meteorologist, Mark Fox at:

Mark.Fox@noaa.gov

or our FWP manager, Joe Harris:

Joe.Harris@noaa.gov