An aerial photograph of a small, vibrant green tree standing in the center of a vast, cracked, and parched landscape. The ground is a mosaic of dark, irregular polygons, indicating severe drought conditions. The tree is the only source of green in the scene, casting a dark shadow to its left.

Fire Weather Outlook for North Texas 9/6/2011

**National Weather Service
Fort Worth TX**

Presenter: Dennis Cavanaugh, Meteorologist

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

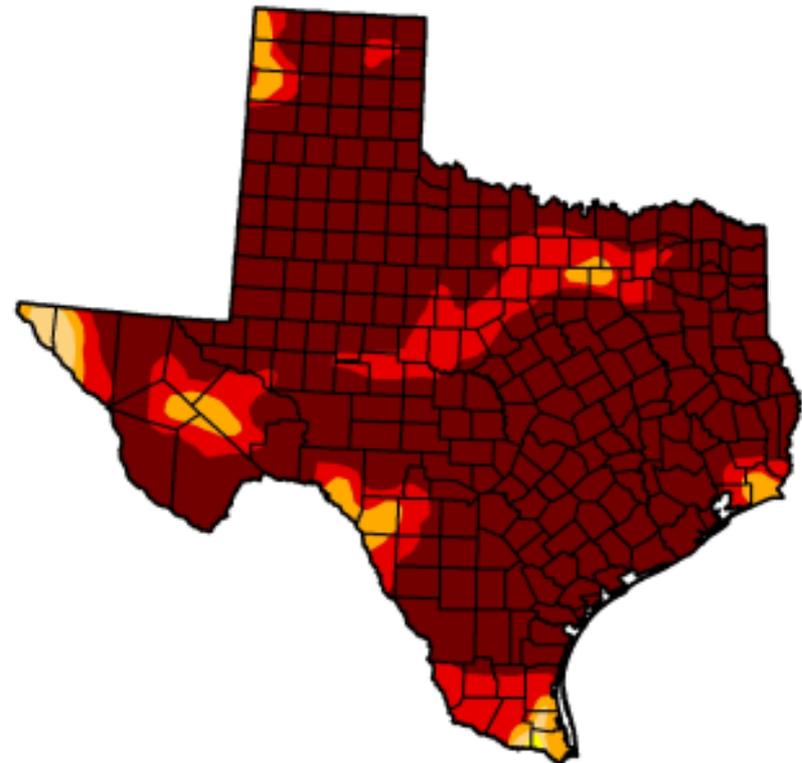
U.S. Drought Monitor Texas

August 30, 2011
Valid 7 a.m. EST

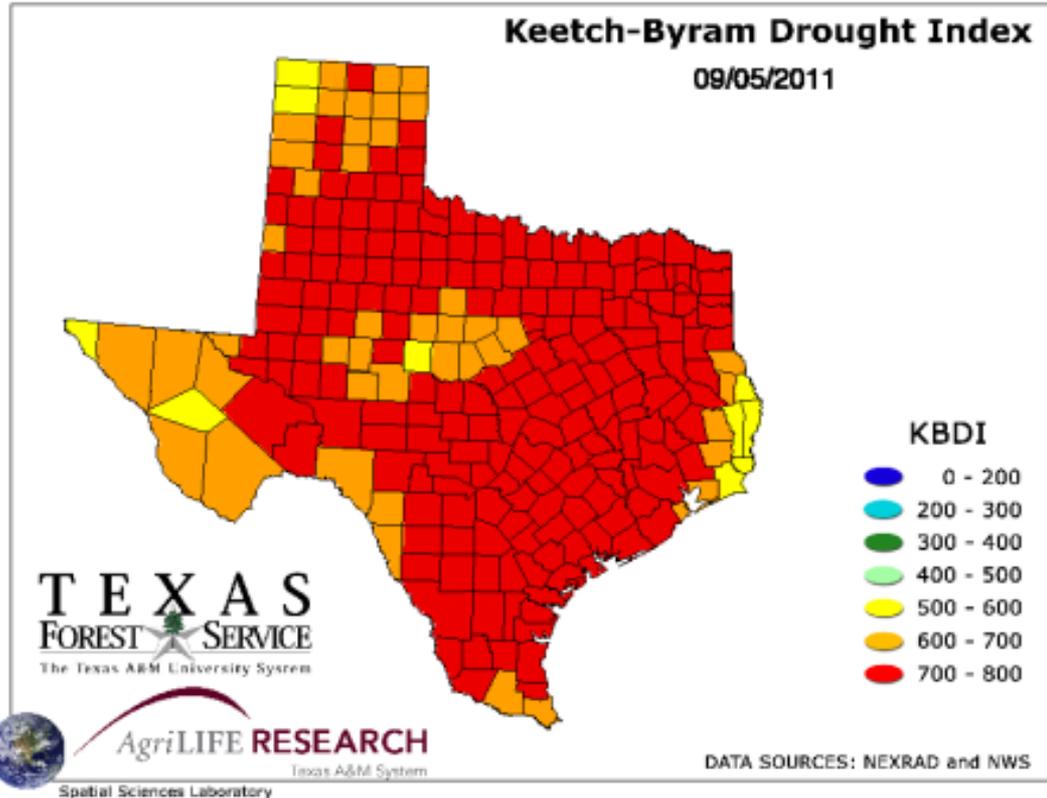
Drought Conditions (Percent Area)

	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:



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

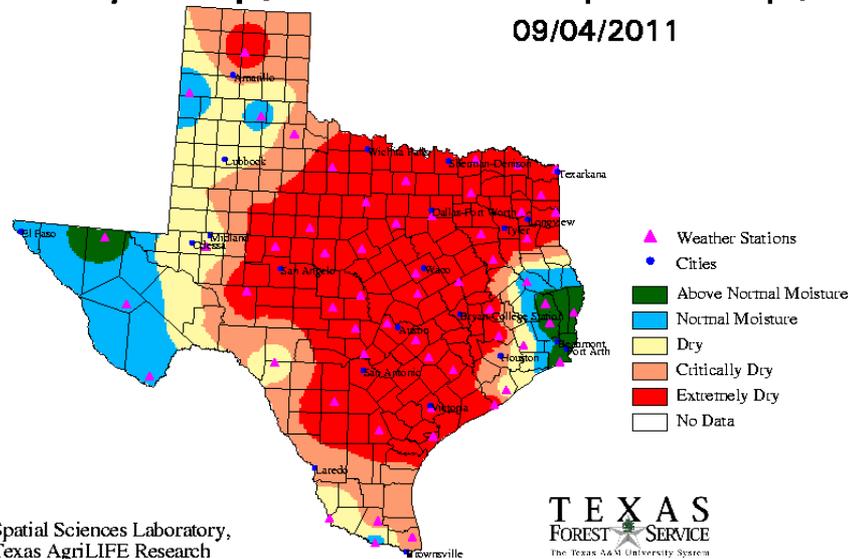
1924-1925

-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

Fuel Dryness map (based on 100hr & ERC percentile maps)
09/04/2011

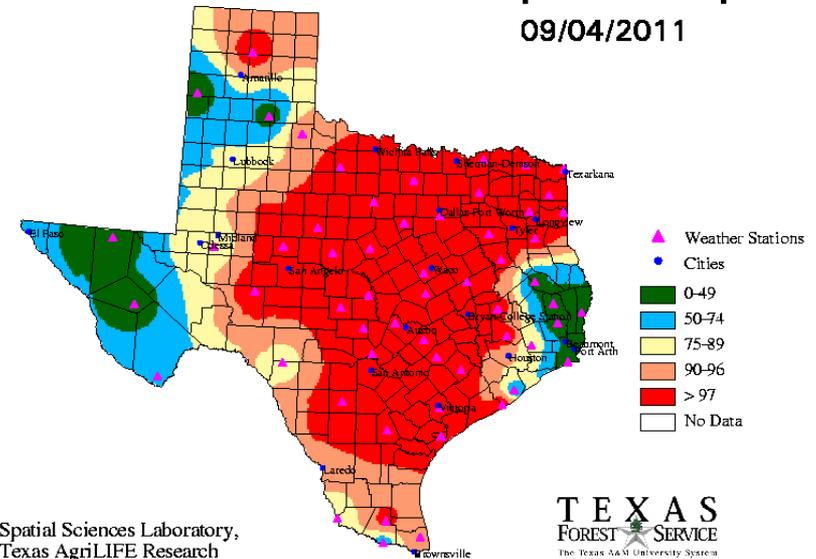


Spatial Sciences Laboratory,
Texas AgriLIFE Research
<http://www-ssl.tamu.edu>

TEXAS
FOREST SERVICE
The Texas A&M University System

AgriLIFE RESEARCH
Texas A&M System

ERC percentile map
09/04/2011



Spatial Sciences Laboratory,
Texas AgriLIFE Research
<http://www-ssl.tamu.edu>

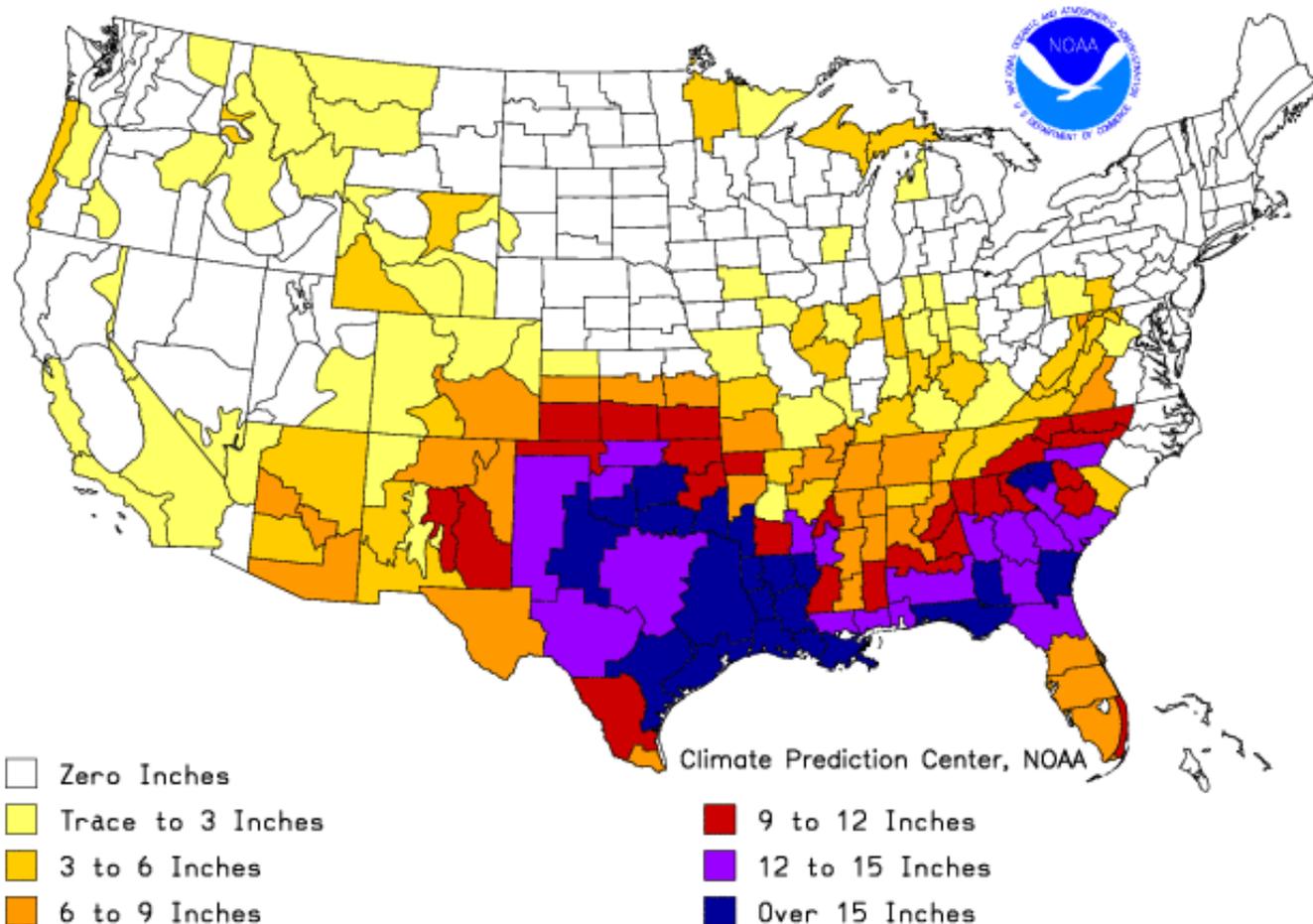
TEXAS
FOREST SERVICE
The Texas A&M University System

AgriLIFE RESEARCH
Texas A&M System

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?

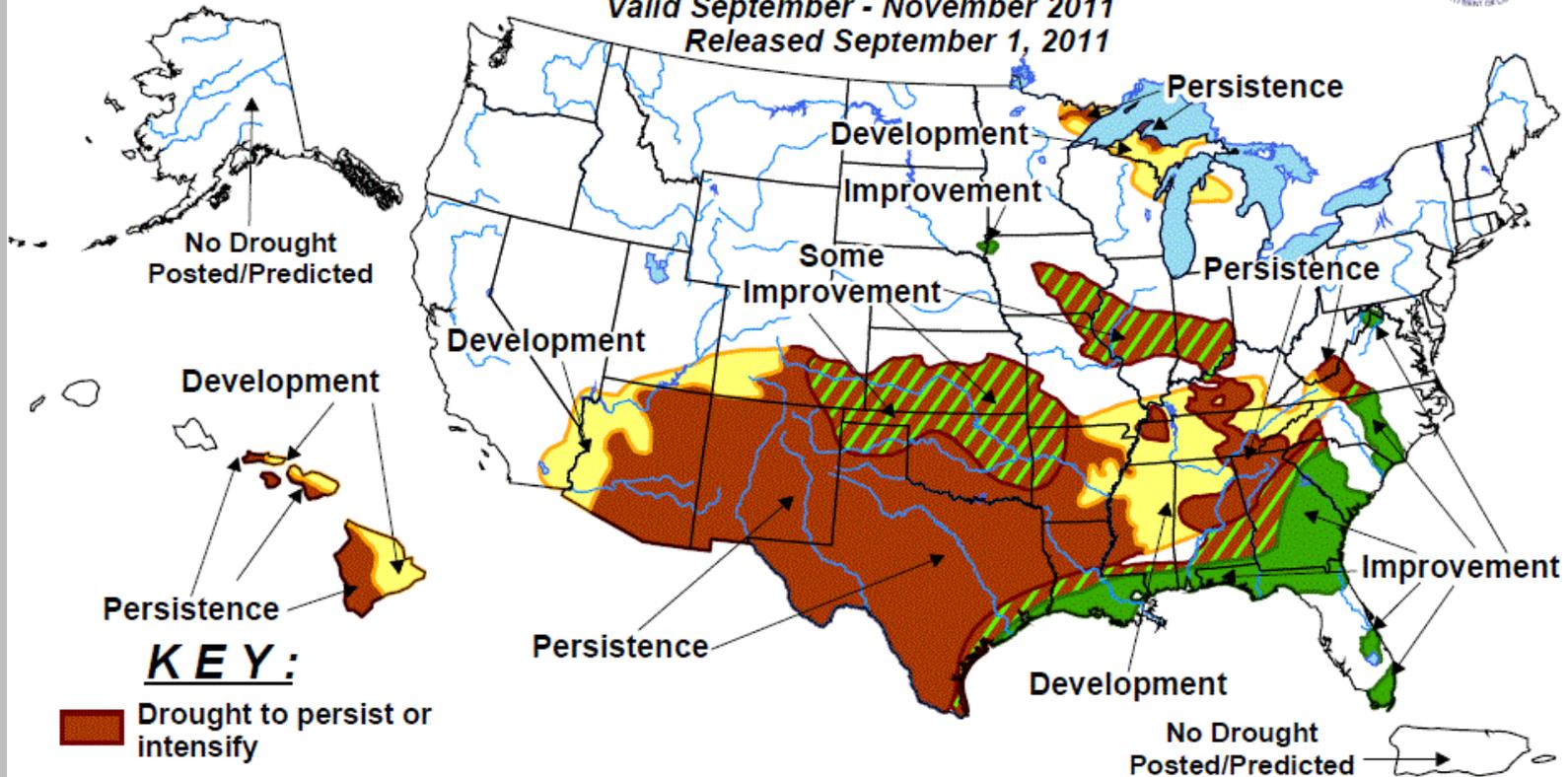
Additional Precip. Needed (In.) to Bring PDI to -0.5
Weekly Value for Period Ending SEP 3, 2011
Long Term Palmer Drought Severity Index (PDI)



Drought Outlook (Sept. – Nov.)



U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid September - November 2011 Released September 1, 2011



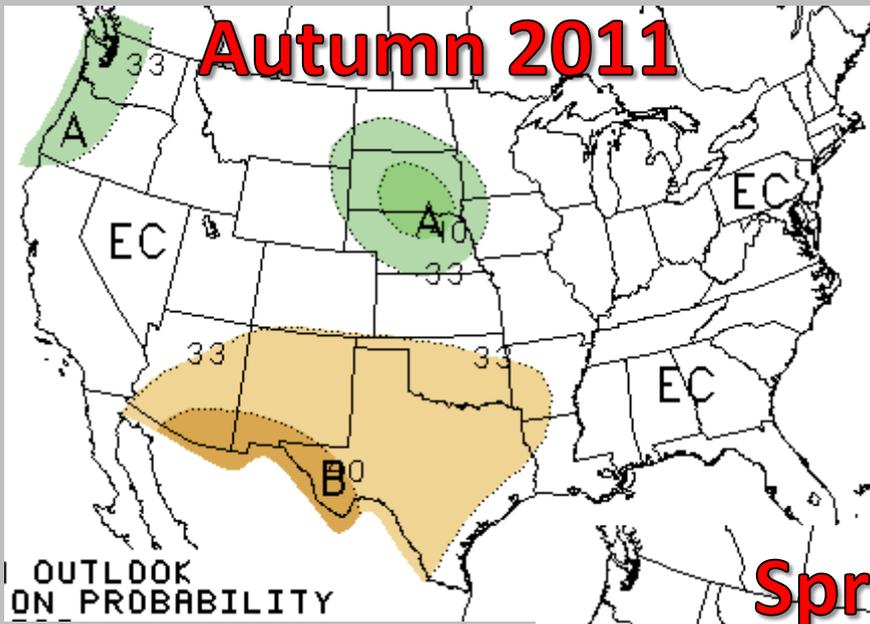
KEY:

-  Drought to persist or intensify
-  Drought ongoing, some improvement
-  Drought likely to improve, impacts ease
-  Drought development likely

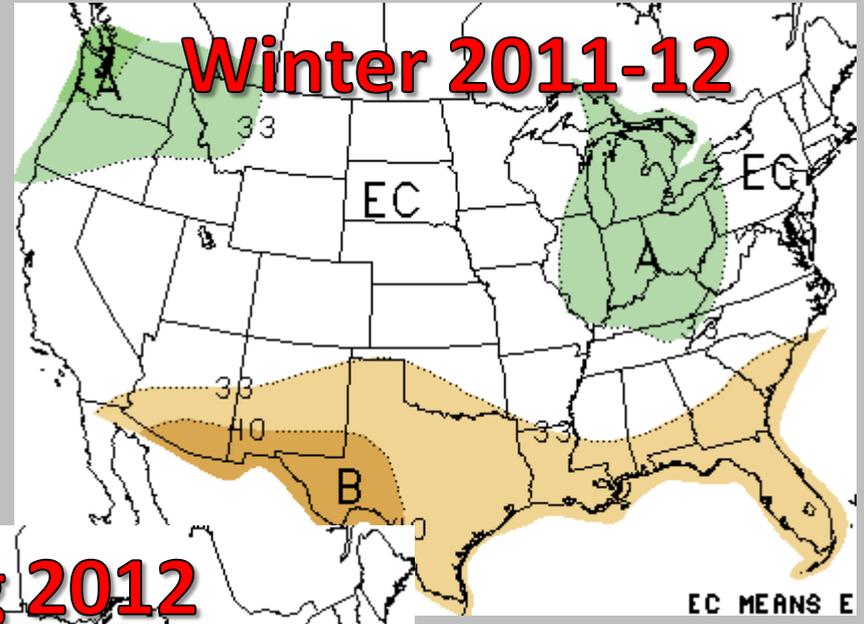
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Precipitation Outlook

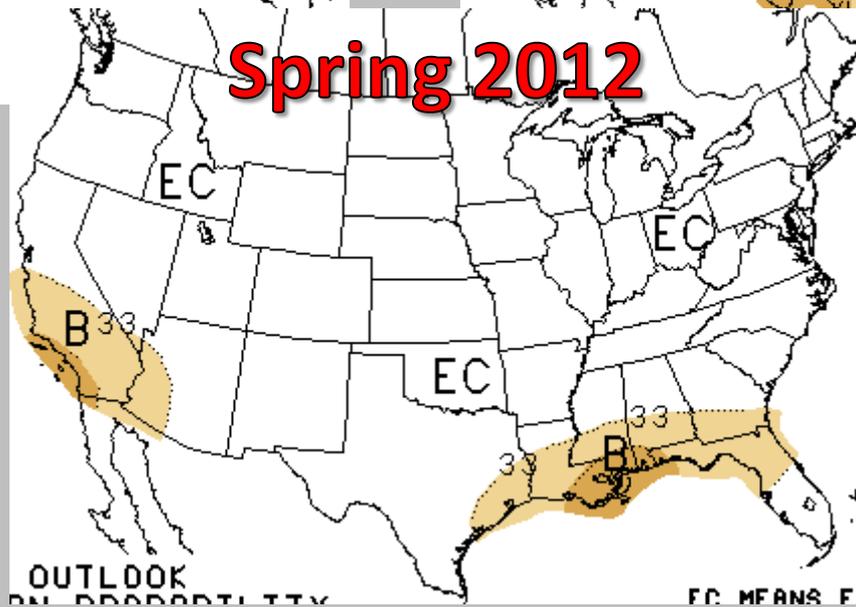
Autumn 2011



Winter 2011-12

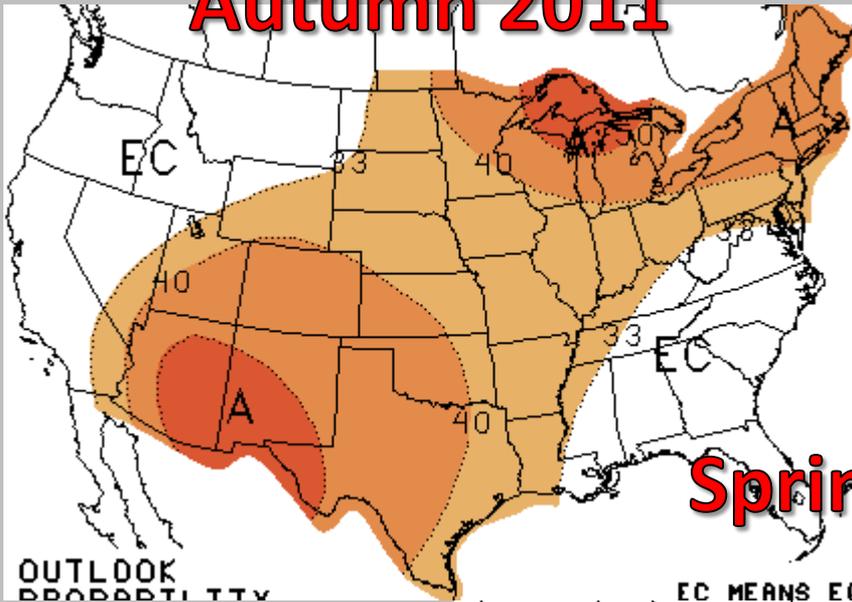


Spring 2012

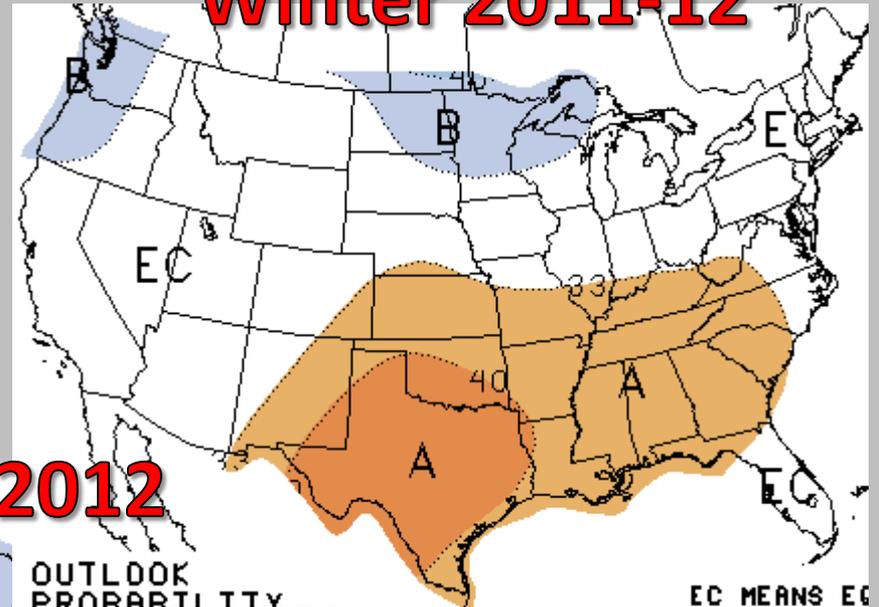


Temperature Outlook

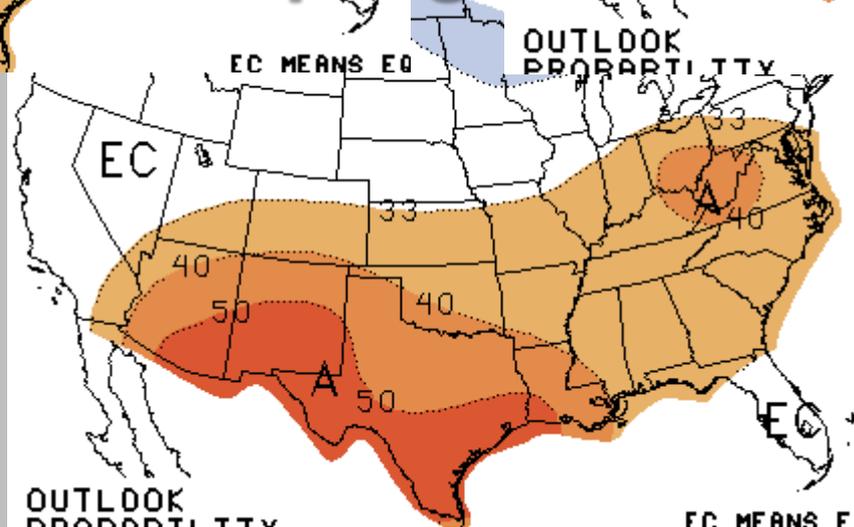
Autumn 2011



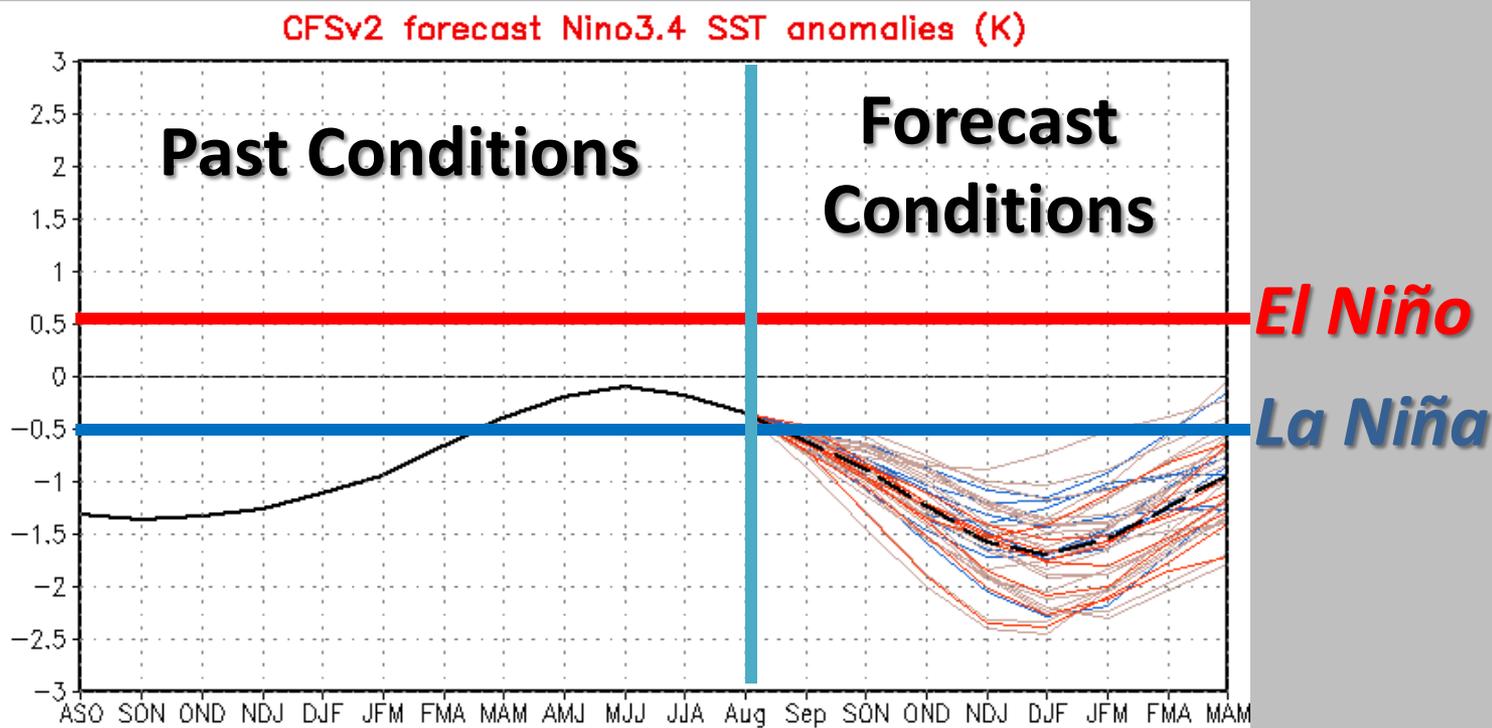
Winter 2011-12



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