The Oklahoma Drought of 2005-2006: A Status Report

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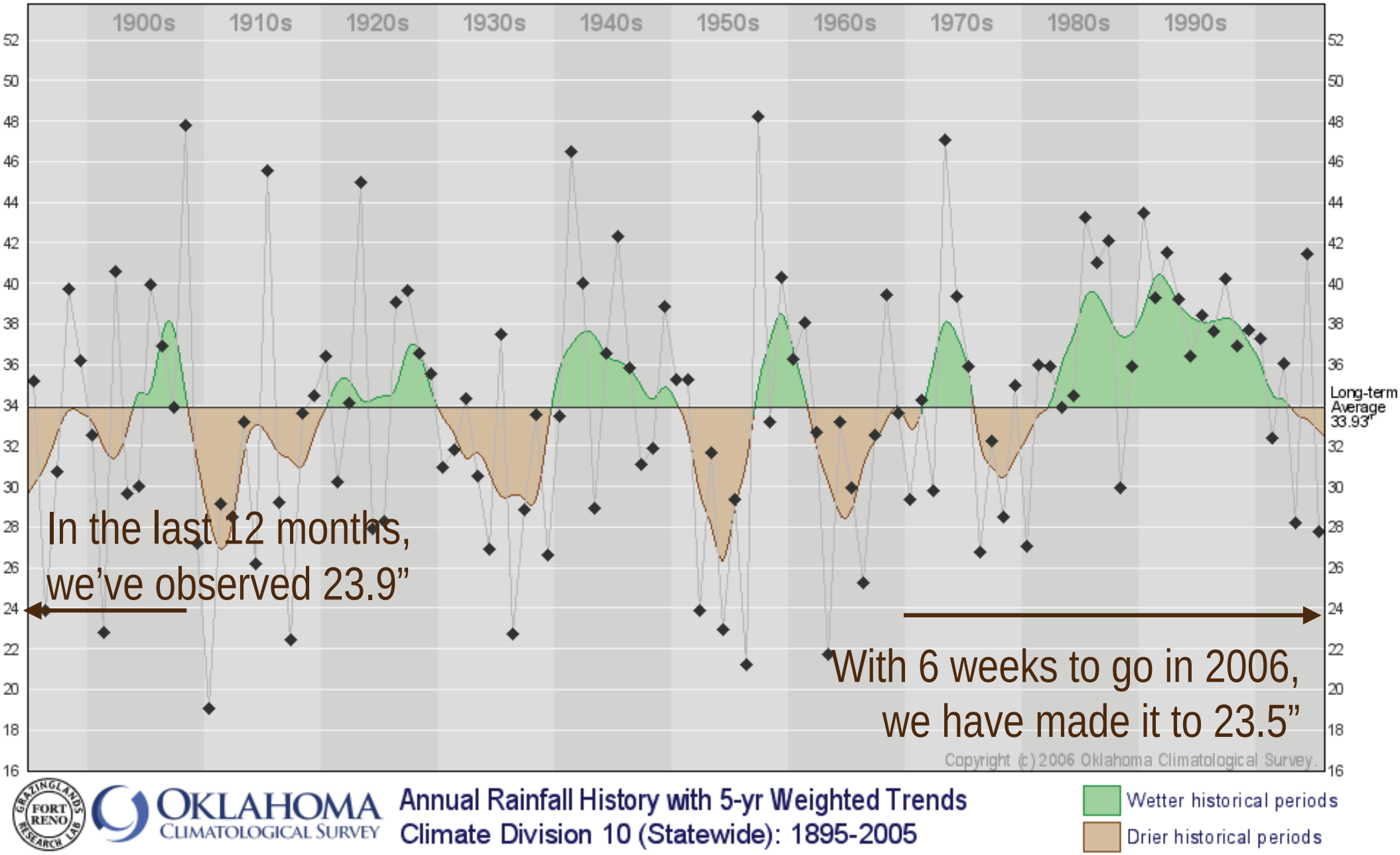
Oklahoma Climatological Survey
The University of Oklahoma

November 14, 2006

OKLAHOMA
CLIMATOLOGICAL SURVEY

Annual Trends in Statewide Averaged Rainfall (1895 Through 2005)



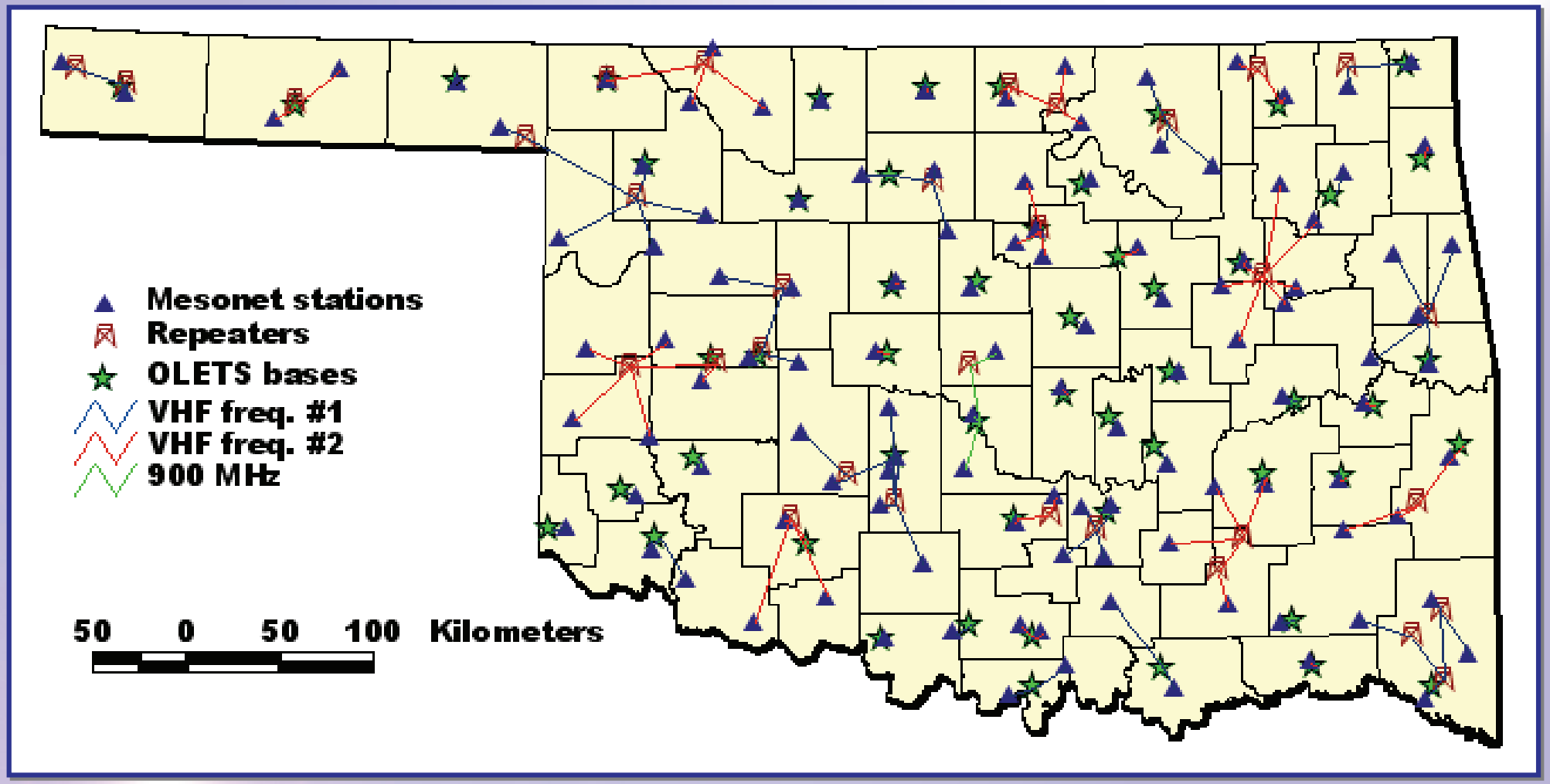
OKLAHOMA CLIMATOLOGICAL SURVEY

Annual Rainfall History with 5-yr Weighted Trends
Climate Division 10 (Statewide): 1895-2005

The Latest Drought…

- Early 2005 — Drought began in southeast Oklahoma
- Summer 2005 — Drought spread into central Oklahoma
- Fall 2005 — Spread further west across the wheat belt
- 2006 — Drought intensified statewide, but the last 30 days have brought some relief to southern Oklahoma
- Today — Drought is extreme across 6 counties of north central Oklahoma with statewide precipitation for the calendar year likely to rank in the *Top 10 driest on record*.
- Near my home in east Norman, Lake Thunderbird is at it's lowest level since construction began in the early 1960s.

The Oklahoma Mesonet:
One of Oklahoma's Primary Drought Monitoring Tools
(A Partnership of OSU & OU)



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Oklahoma Governor's
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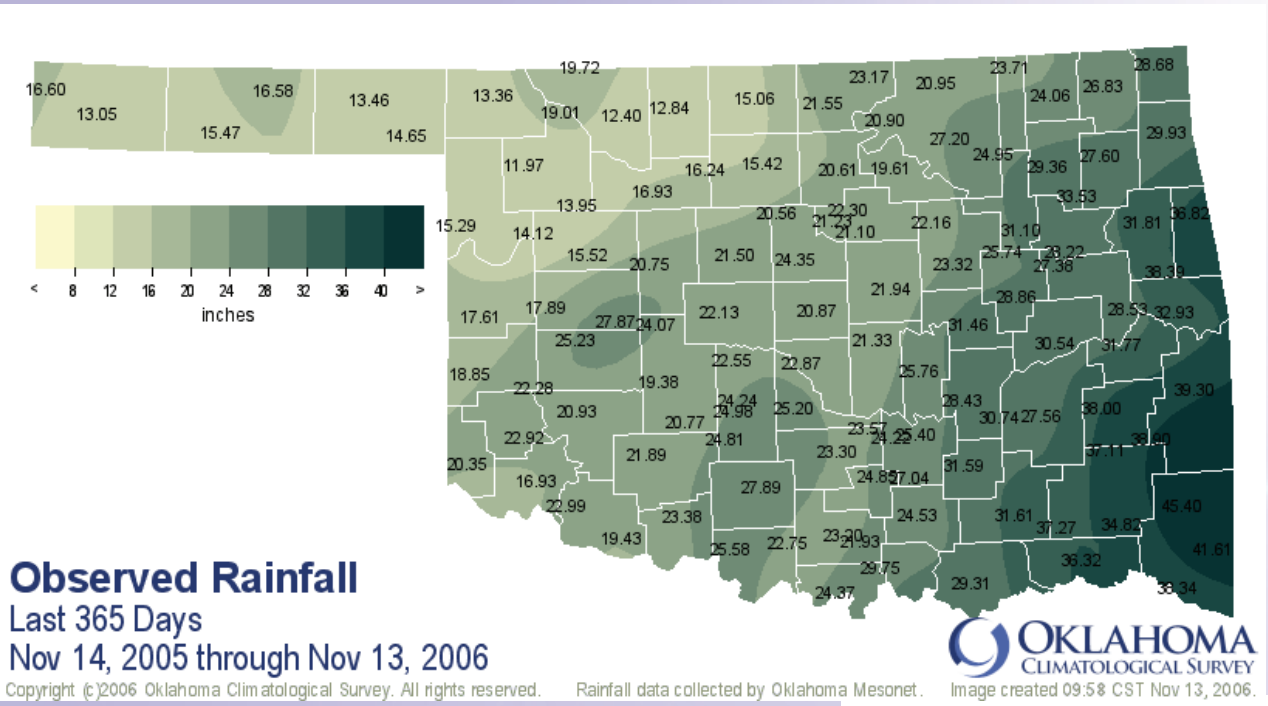
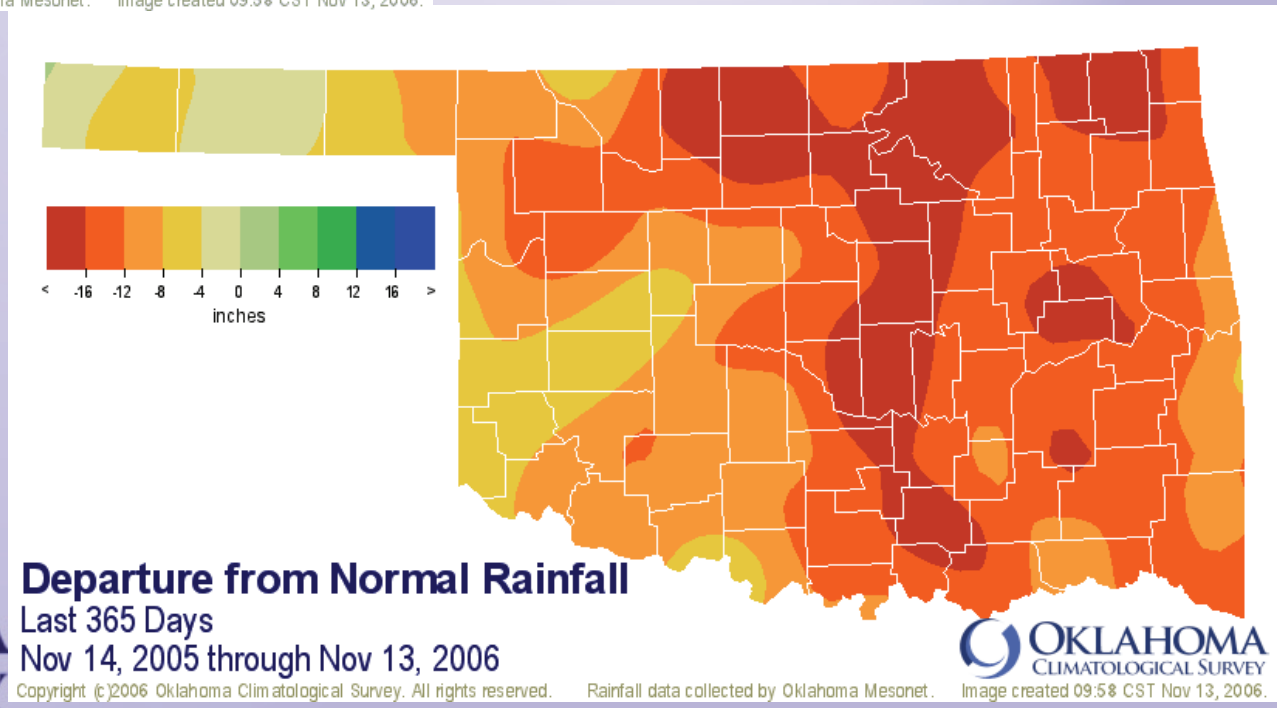
Rainfall During The Last 365 Days





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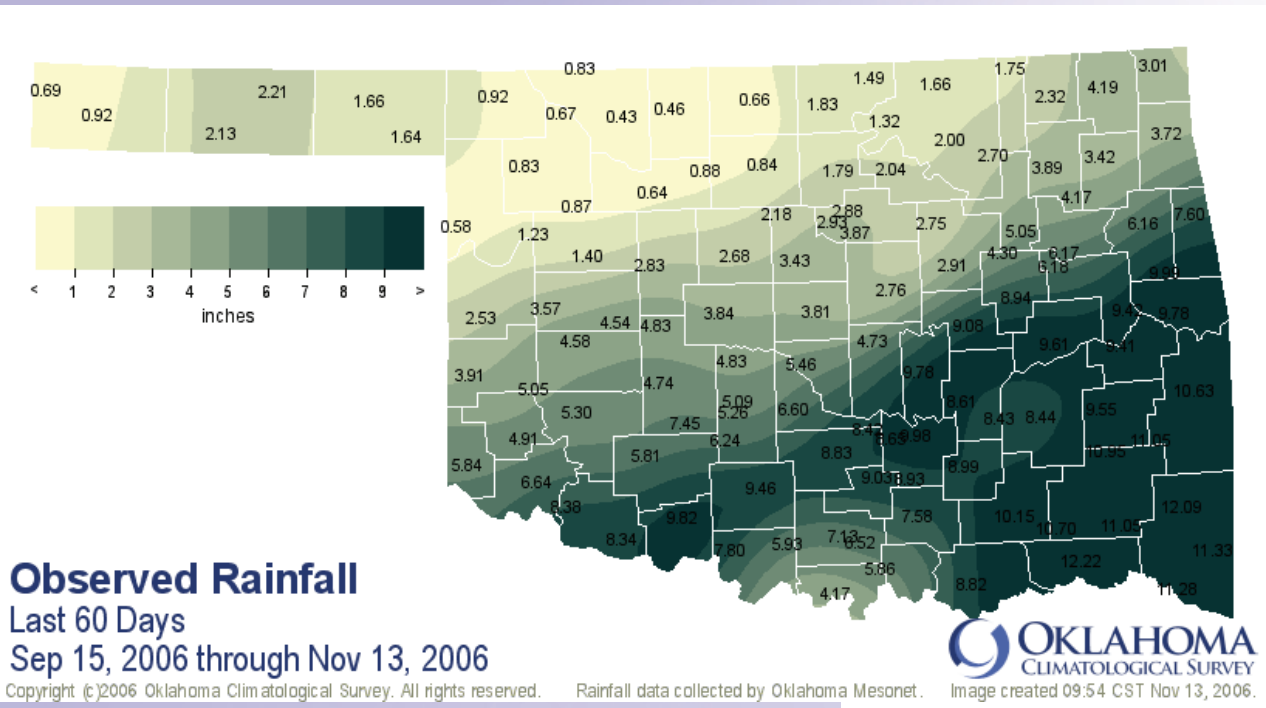
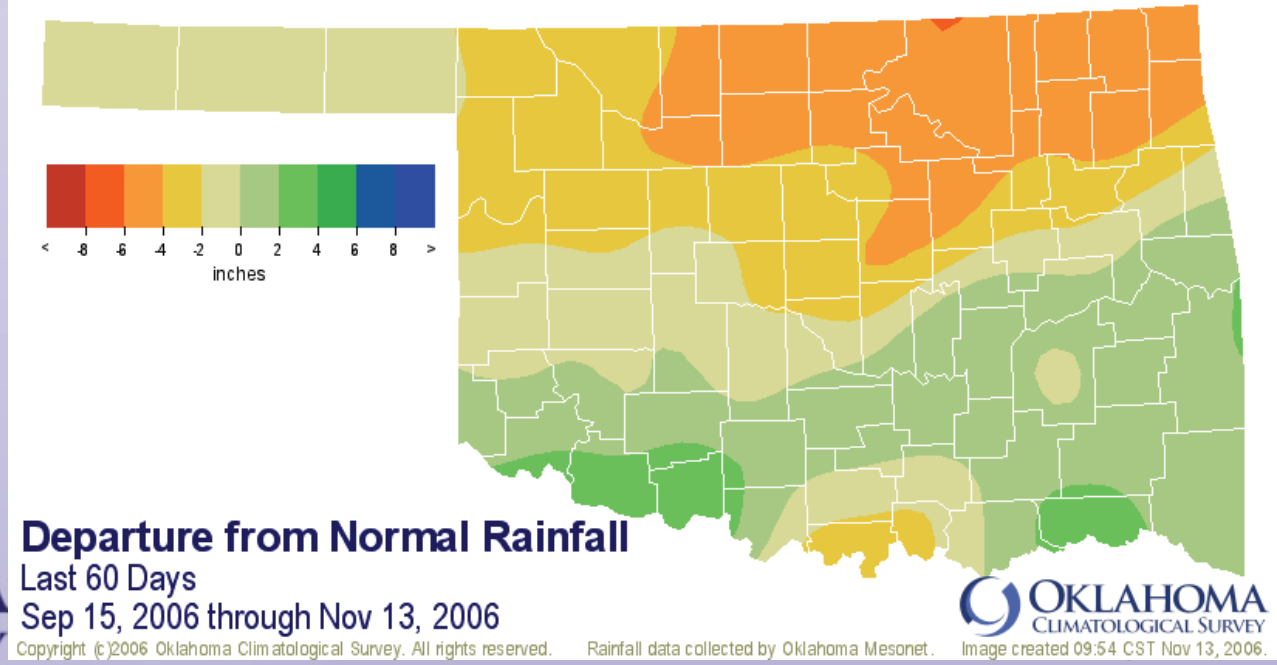
Rainfall During The Last 60 days





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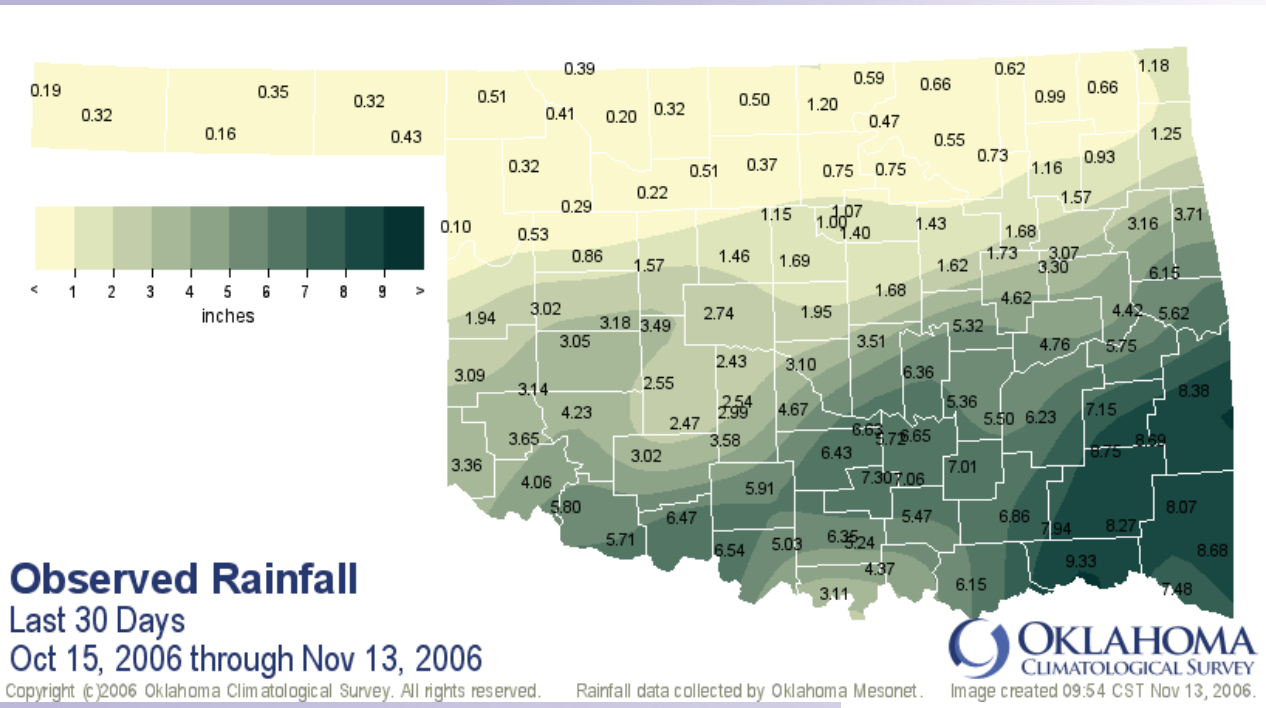
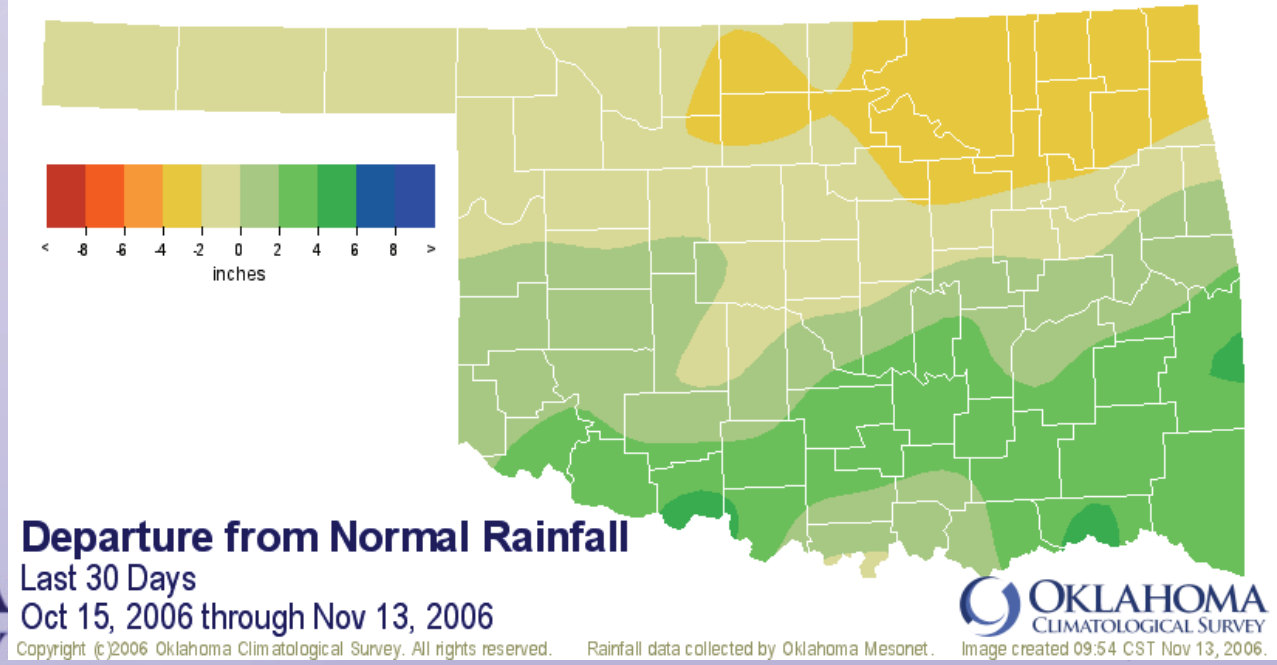
Rainfall During The Last 30 Days





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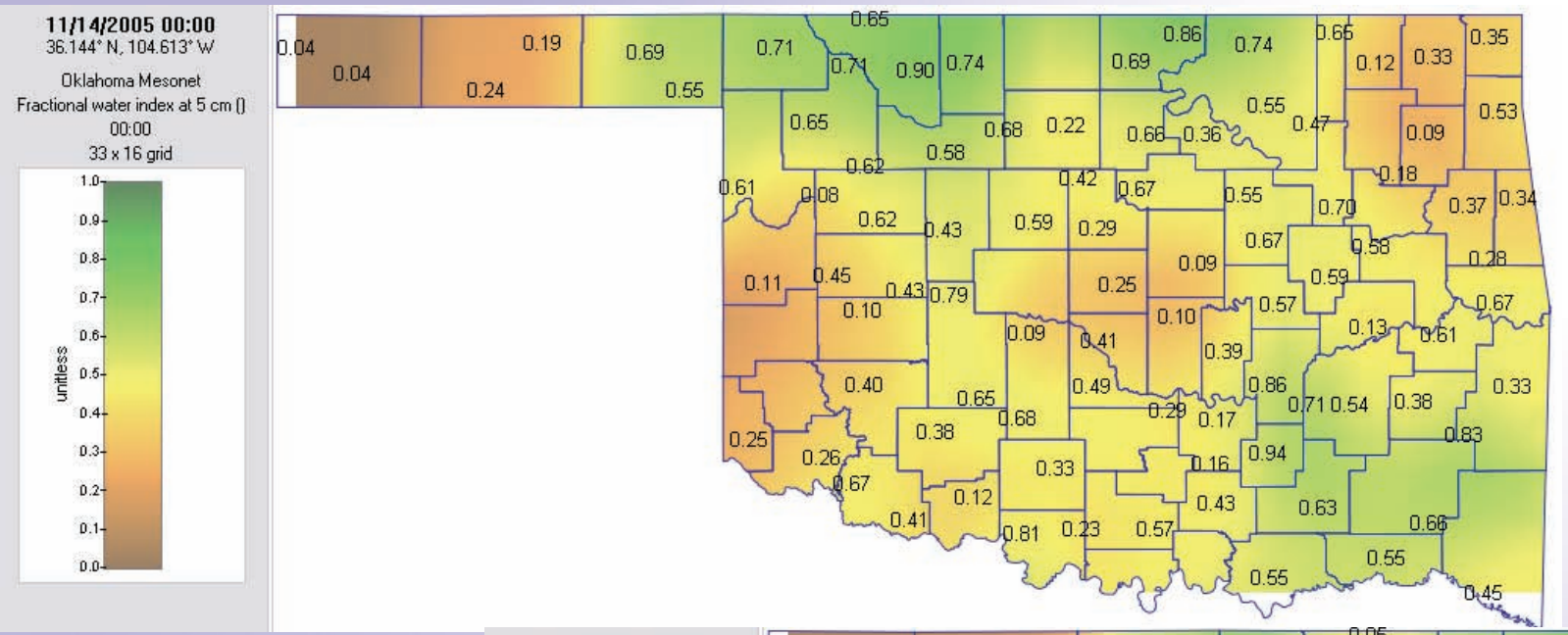
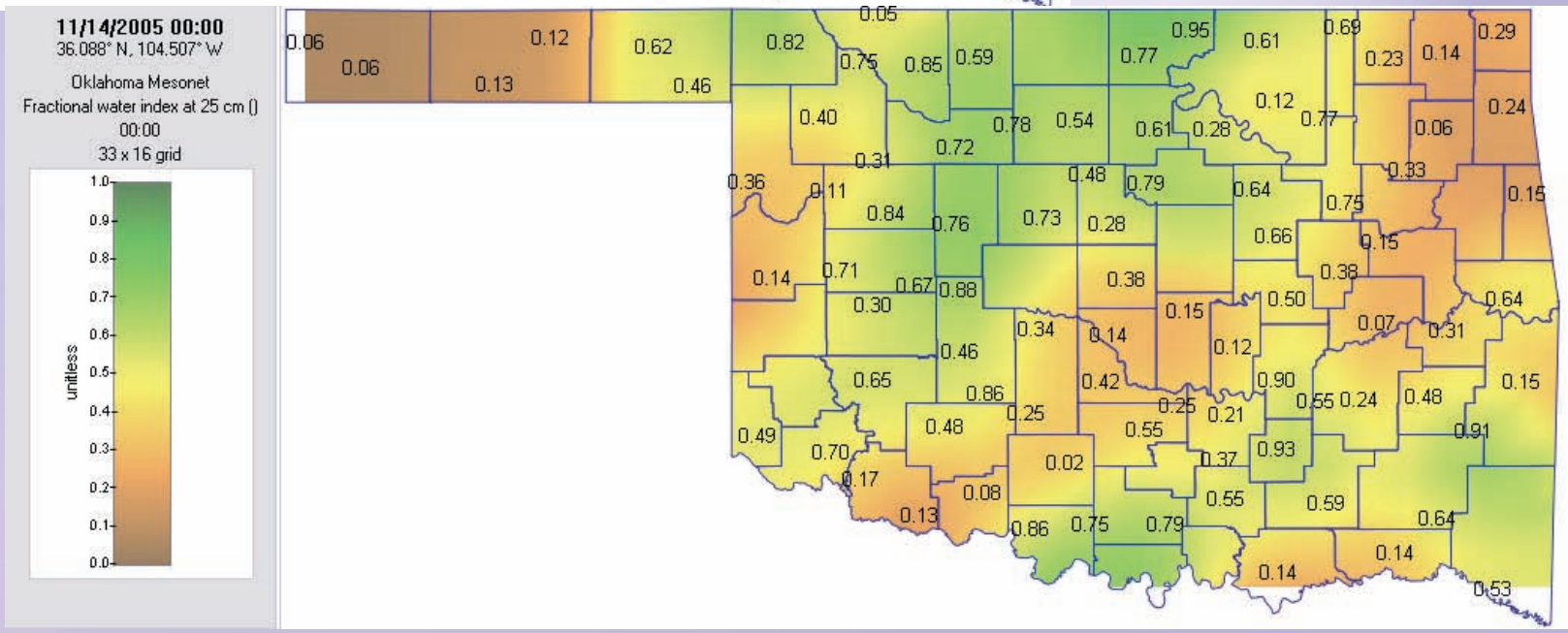
Soil Moisture on November 14, 2005



2” Depth



10” Depth

OKLAHOMA CLIMATOLOGICAL SURVEY

Index Close to One - Saturated Soils.
Index Near Zero - Powder-dry Soils

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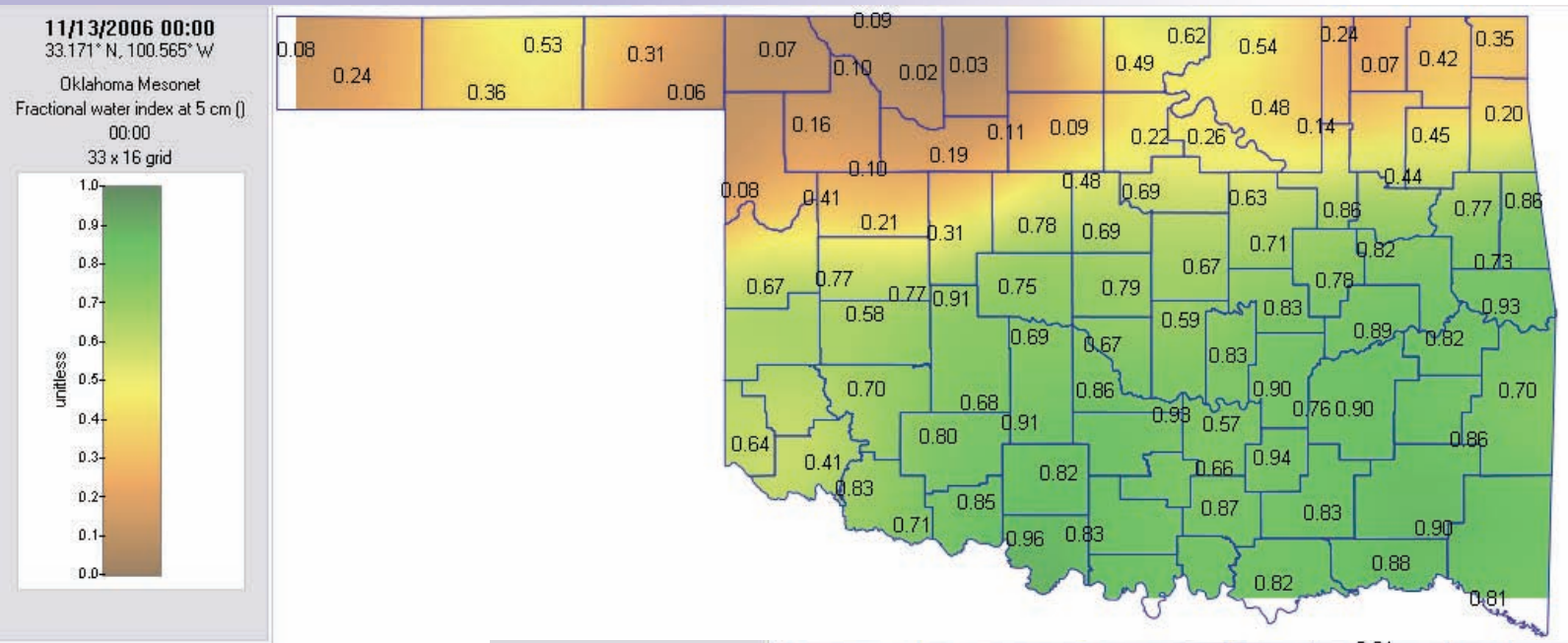
Soil Moisture on November 13, 2006



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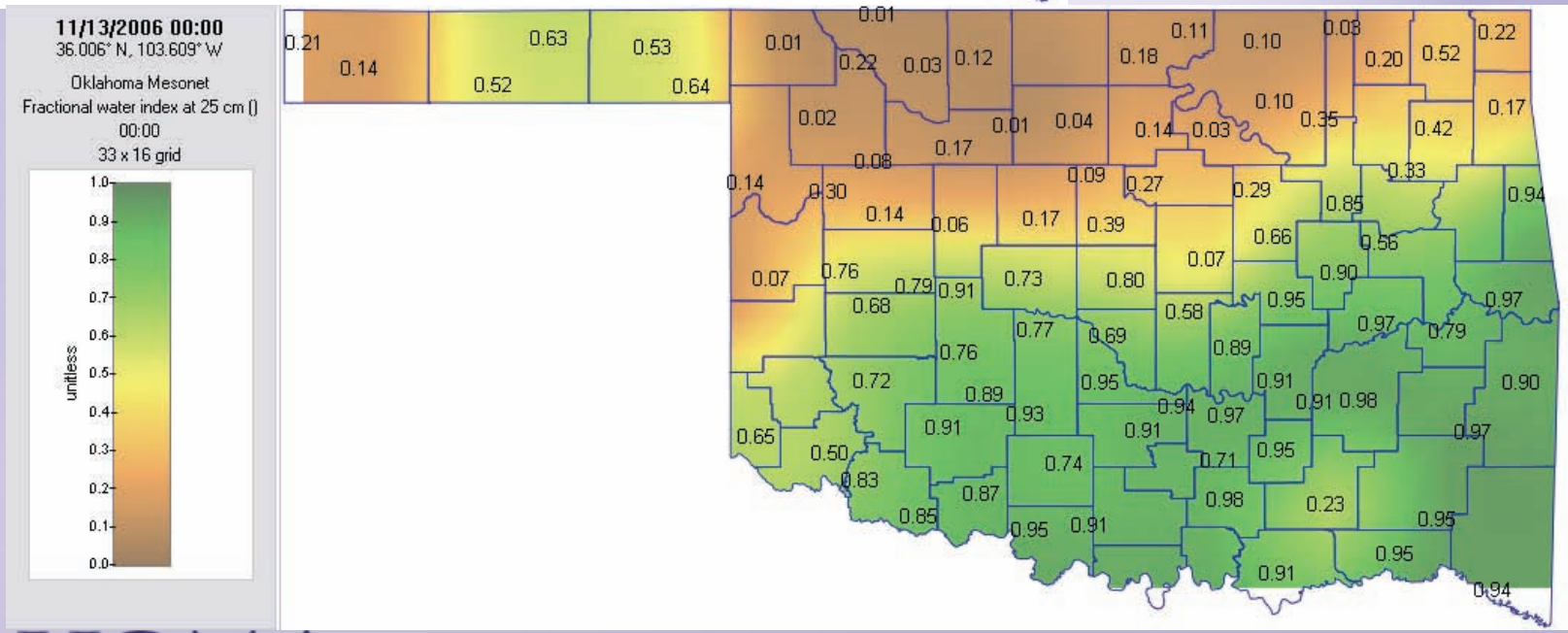

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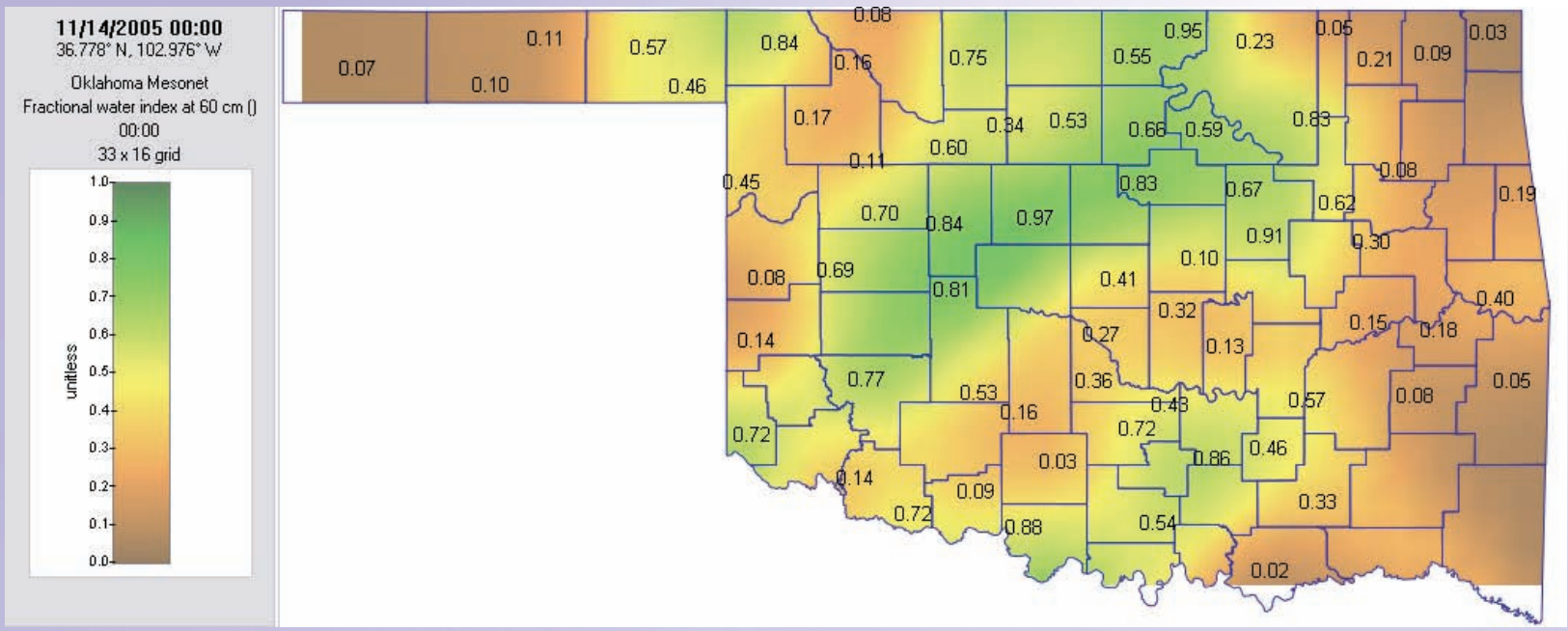

24” Depth

Index Close to One - Saturated Soils.
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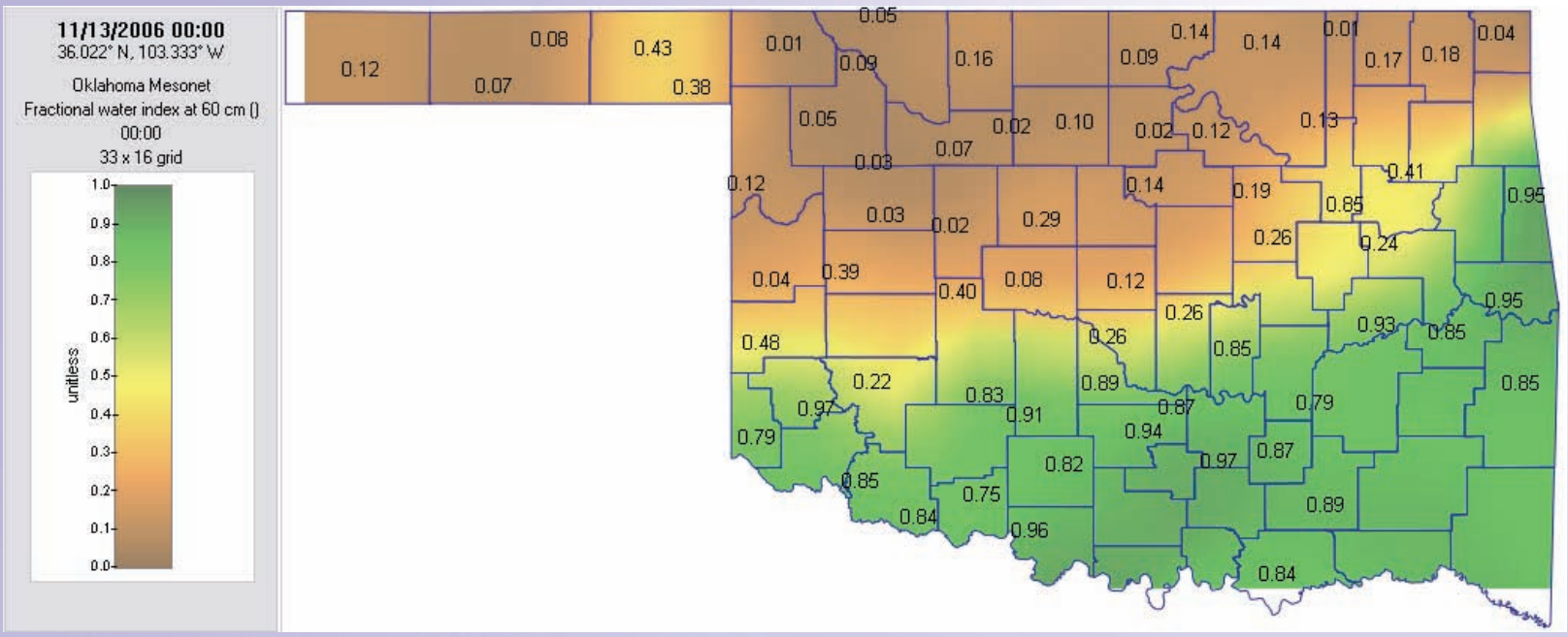

24” Depth

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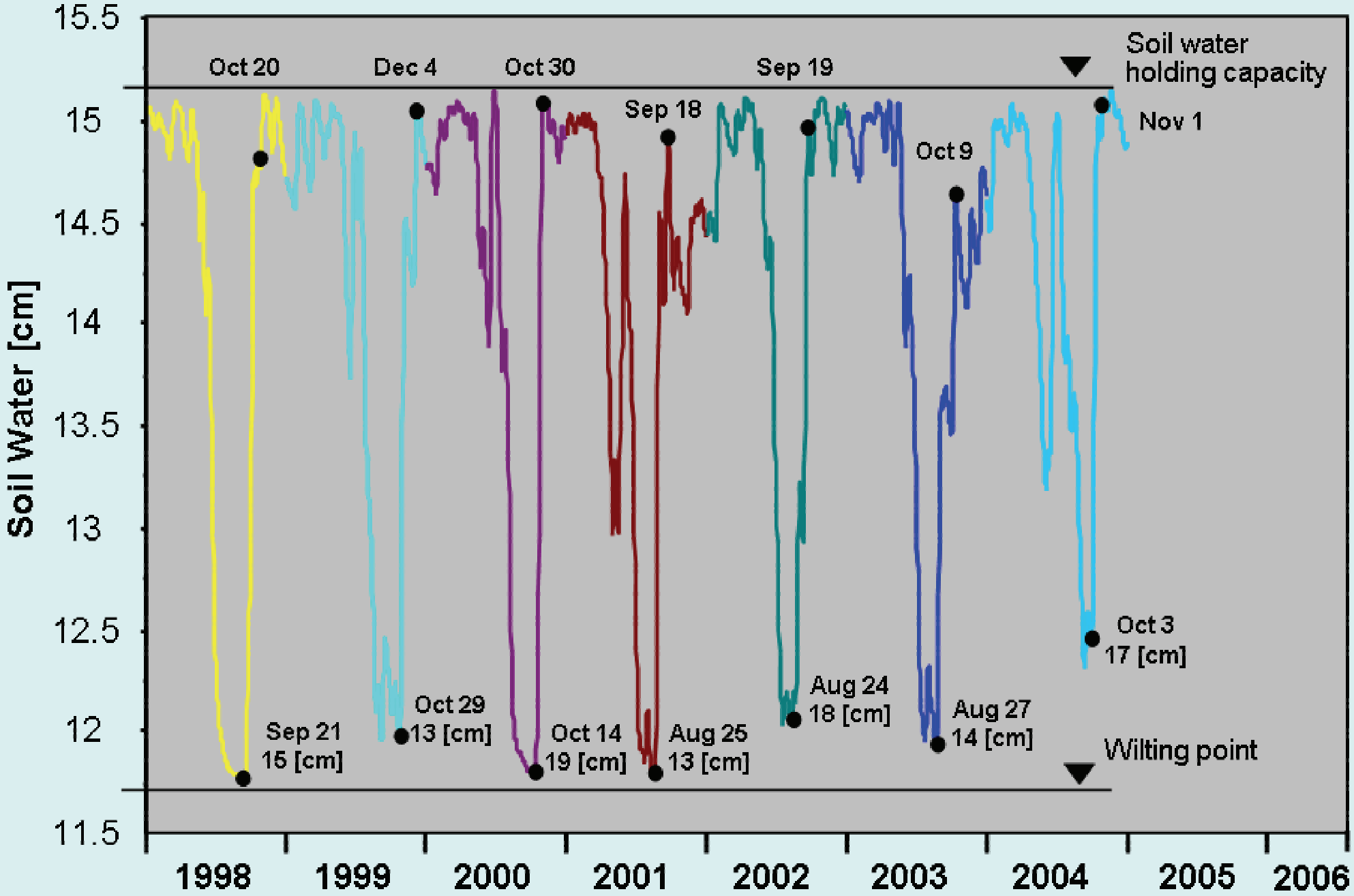
Soil Water in the Top Layer (0 to 50 cm)

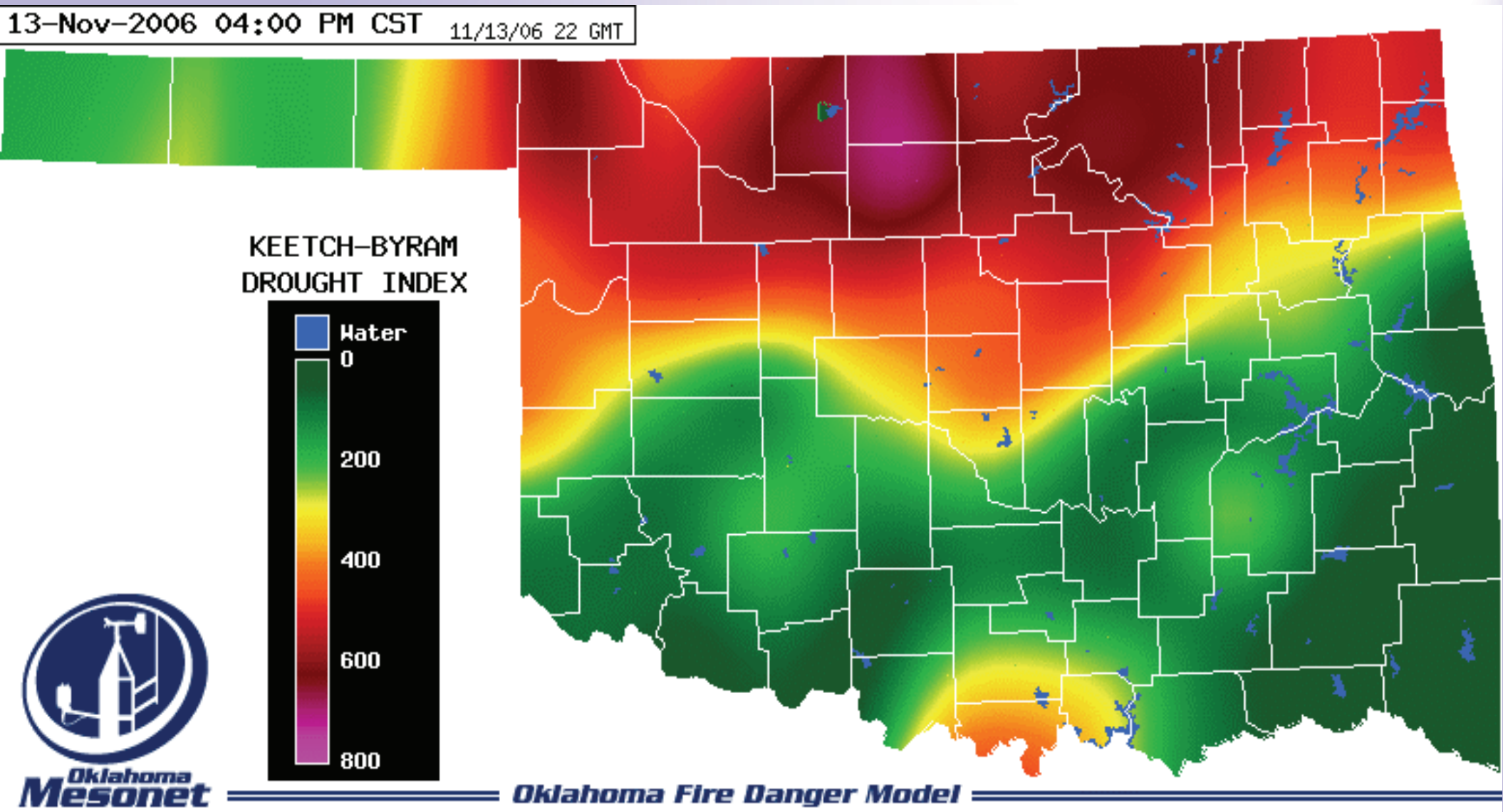
Fort Reno SWATS site, Tall Grass Prairie, Jan 1998 – Dec 2004



Preliminary data, subject to revisions

USDA-ARS-GRL

Keetch-Byram Drought Index
(November 13, 2006 — 4 PM CST)



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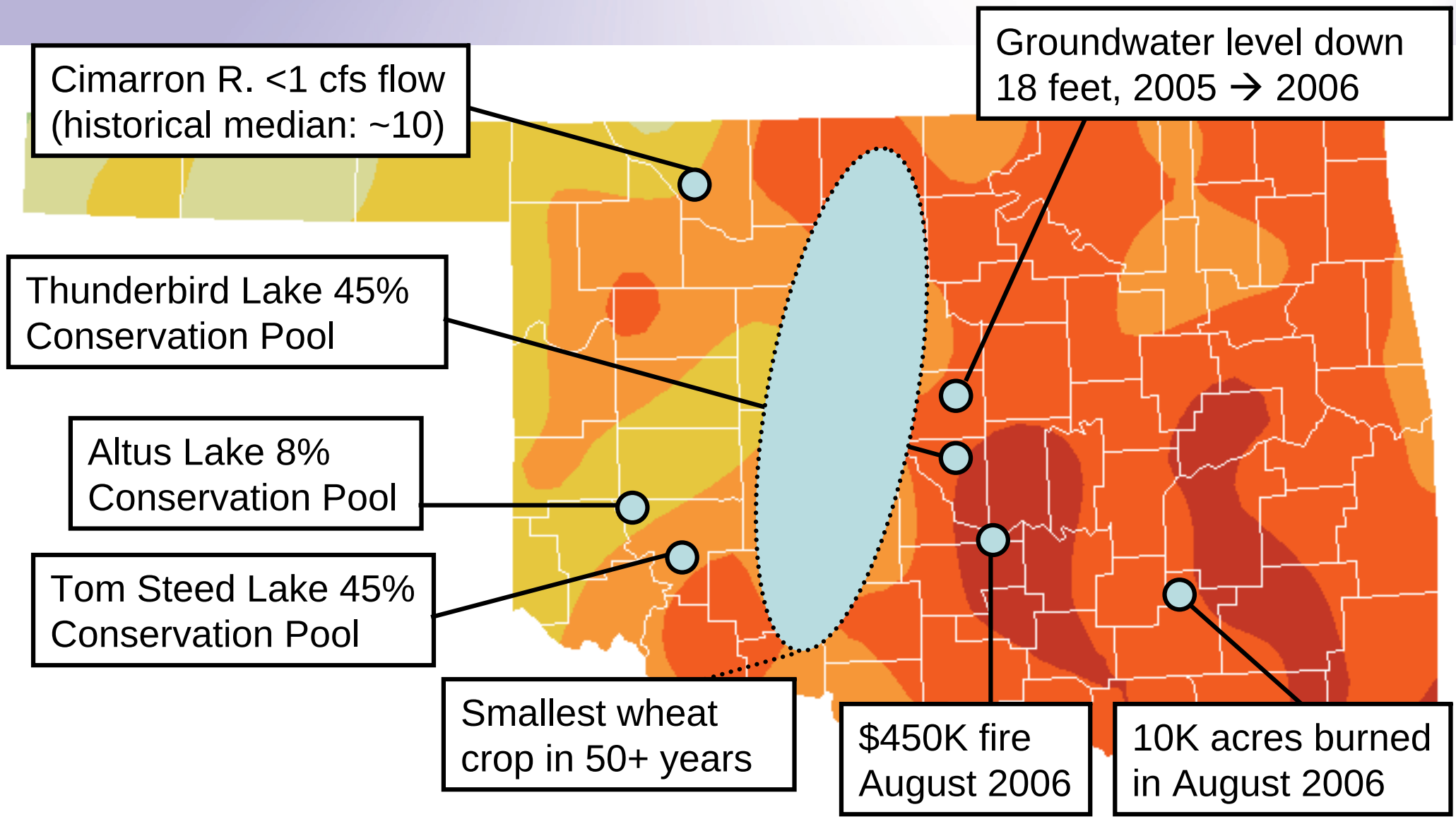
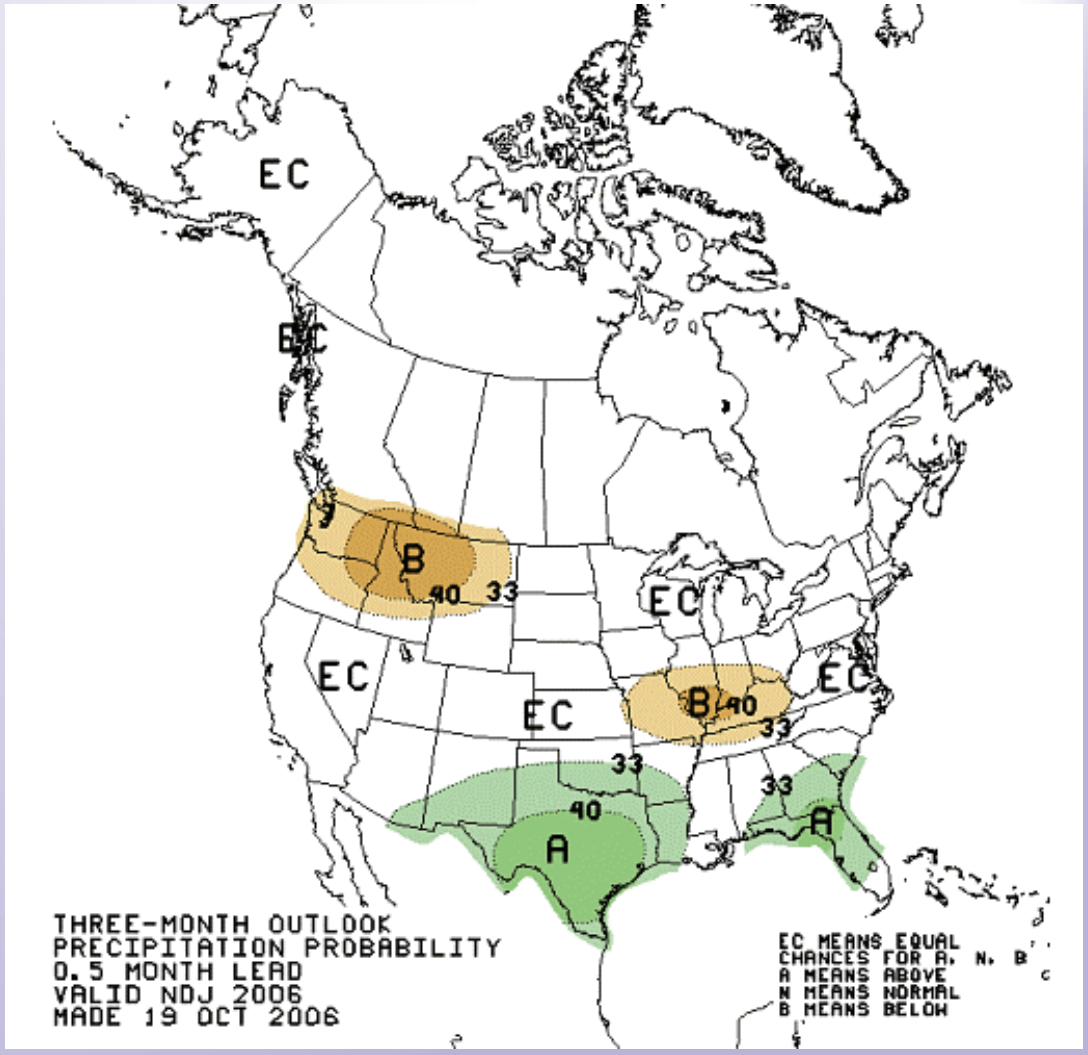
Long-term Effects of Prolonged Drought



What's In the Future? (Precipitation Outlook for Nov/Dec/Jan)

- The best chances for 'above normal' rainfall extends eastward from central Texas along the Gulf Coast states (green areas).
- 'Below normal' rainfall is anticipated across portions of the northern US (red & pink areas).
- This pattern is consistent with a weak 'El Nino' - the warming of ocean waters in the equatorial Pacific from Peru westward.



OKLAHOMA CLIMATOLOGICAL SURVEY

From NOAA's Climate Prediction Center

Two Scenarios Certain To Occur

- This drought will end.
- There will be another drought.
  - Drought is a prominent part of our climate cycle.
  - Rainfall deficits hit us hard because we do not import or export much water.
  - We rely on rains pretty much as they come.
- Visit the Oklahoma Drought Monitor at:
  - http://climate.ocs.ou.edu/drought

Thank You…Any Questions?

Come Visit Norman and See the OSU/OU Partnership at Work!

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