



North Carolina

Drought Status and Outlook

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State Climate Office of North Carolina
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Environmental Review Commission
Raleigh, NC
October 31, 2007

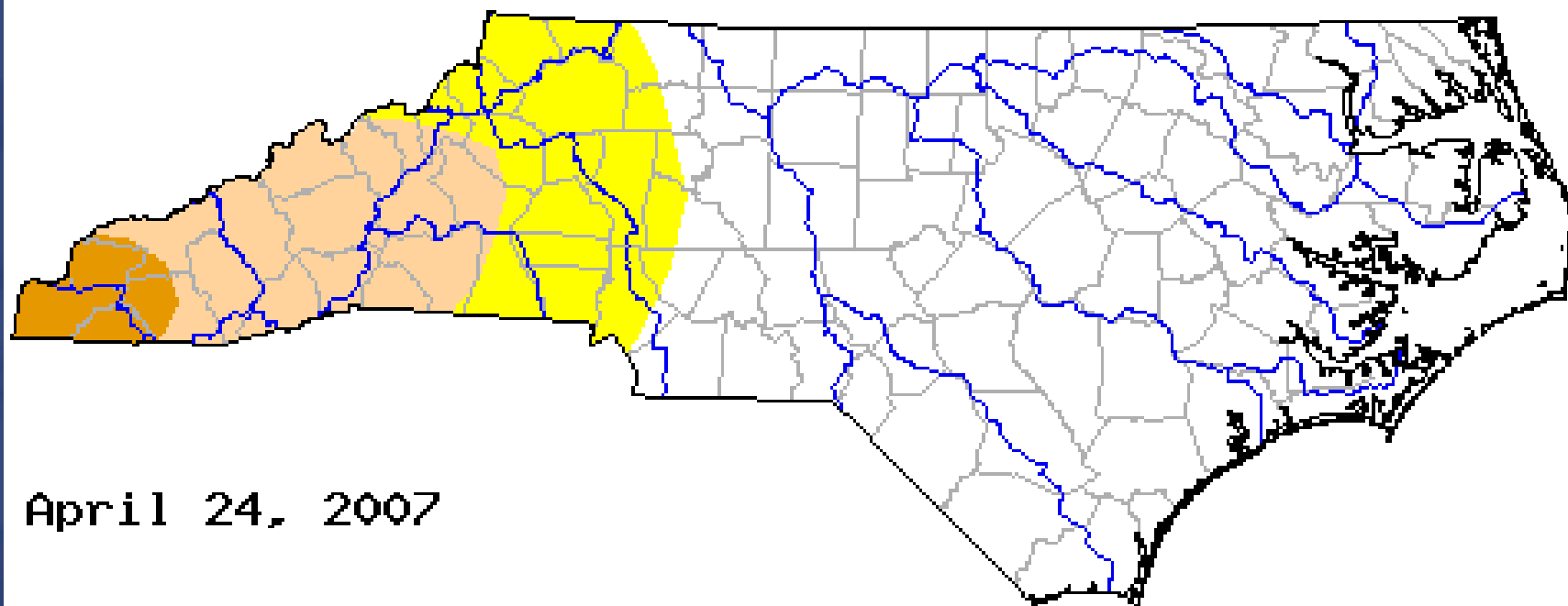
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About the State Climate Office

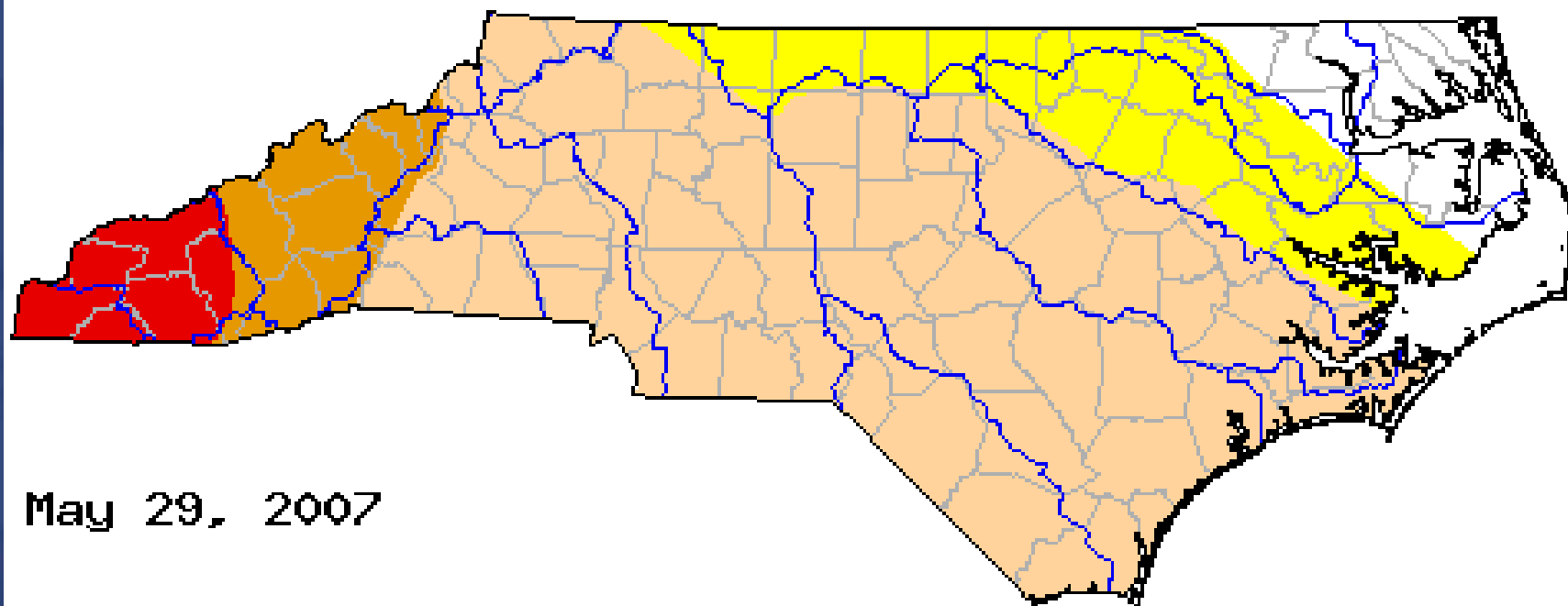
- Statewide public resource for weather and climate information and services
 - Extension of research to community applications
 - Research on NC weather and climate
 - Outreach
 - Education
- UNC Public Service Center



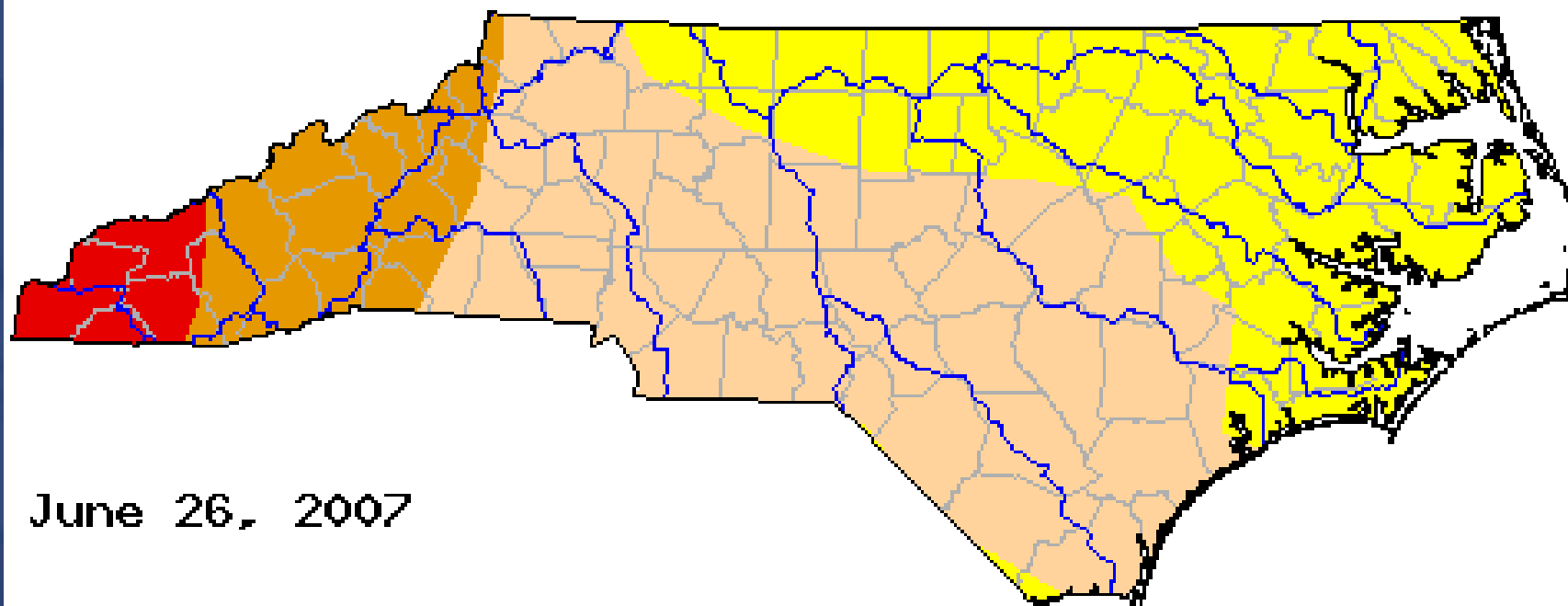
2007 Drought Evolution



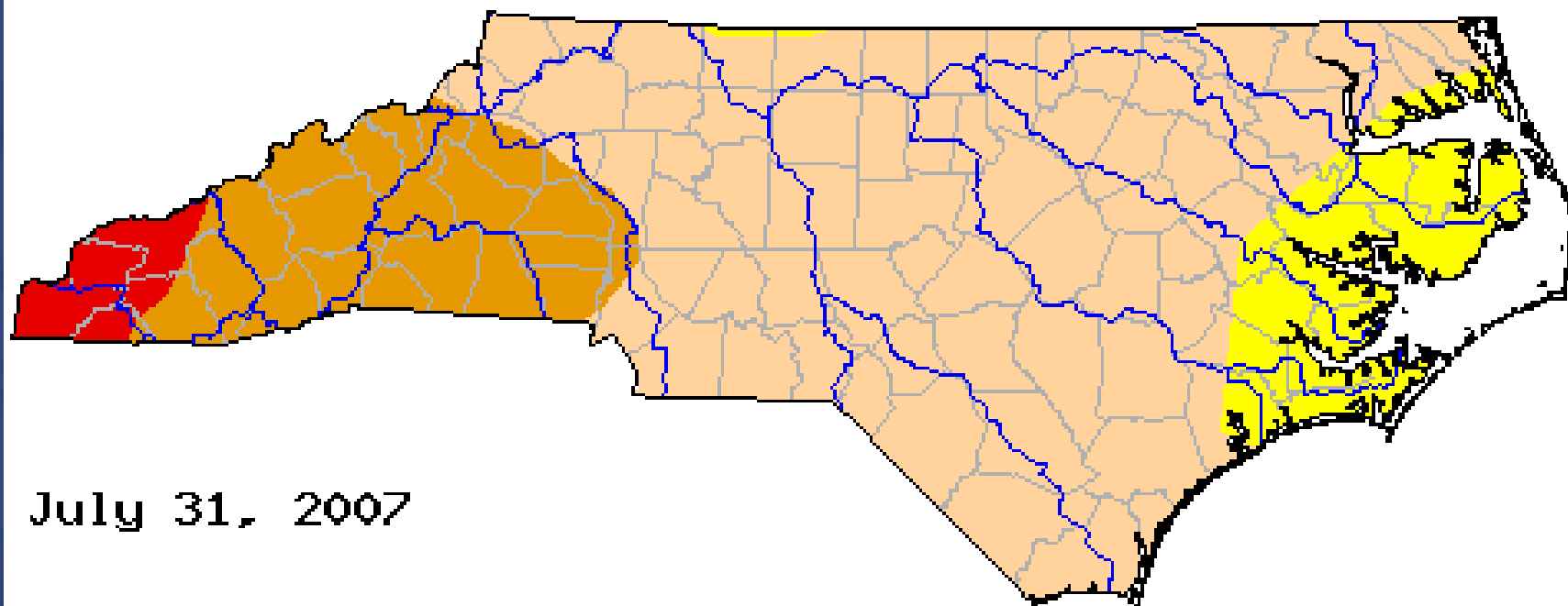
2007 Drought Evolution



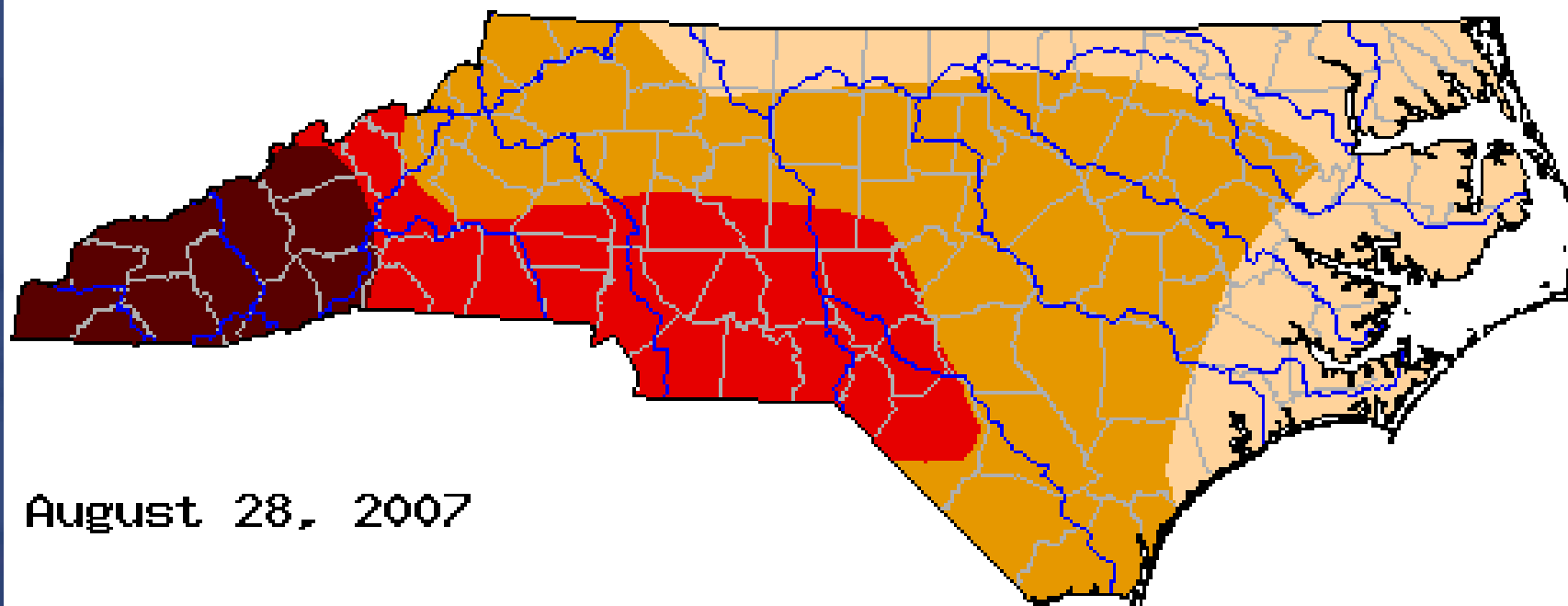
2007 Drought Evolution



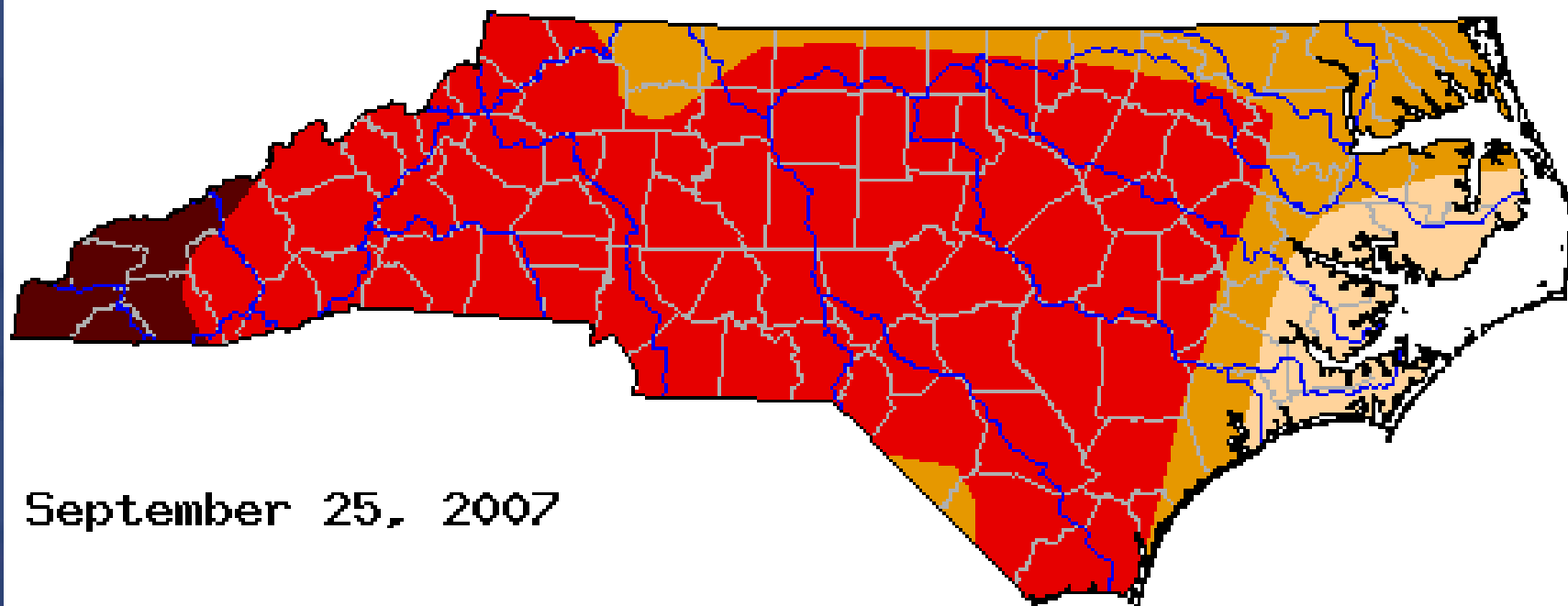
2007 Drought Evolution



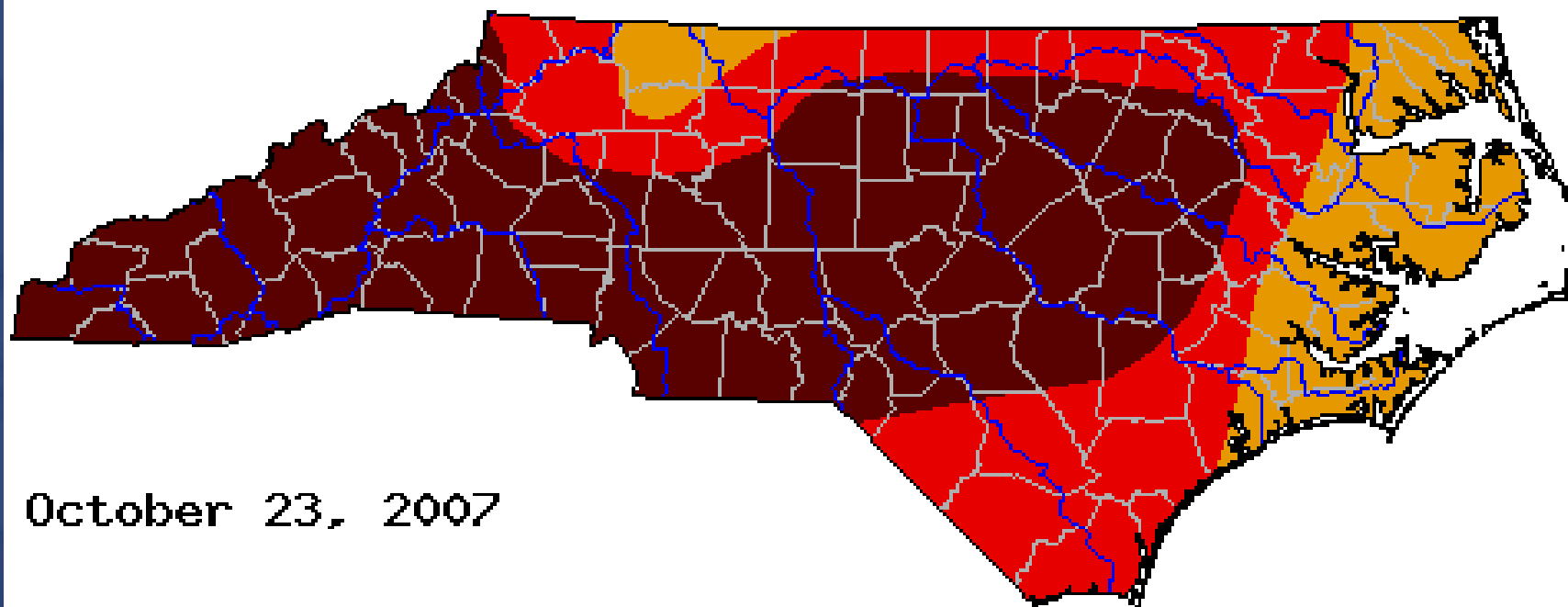
2007 Drought Evolution



2007 Drought Evolution



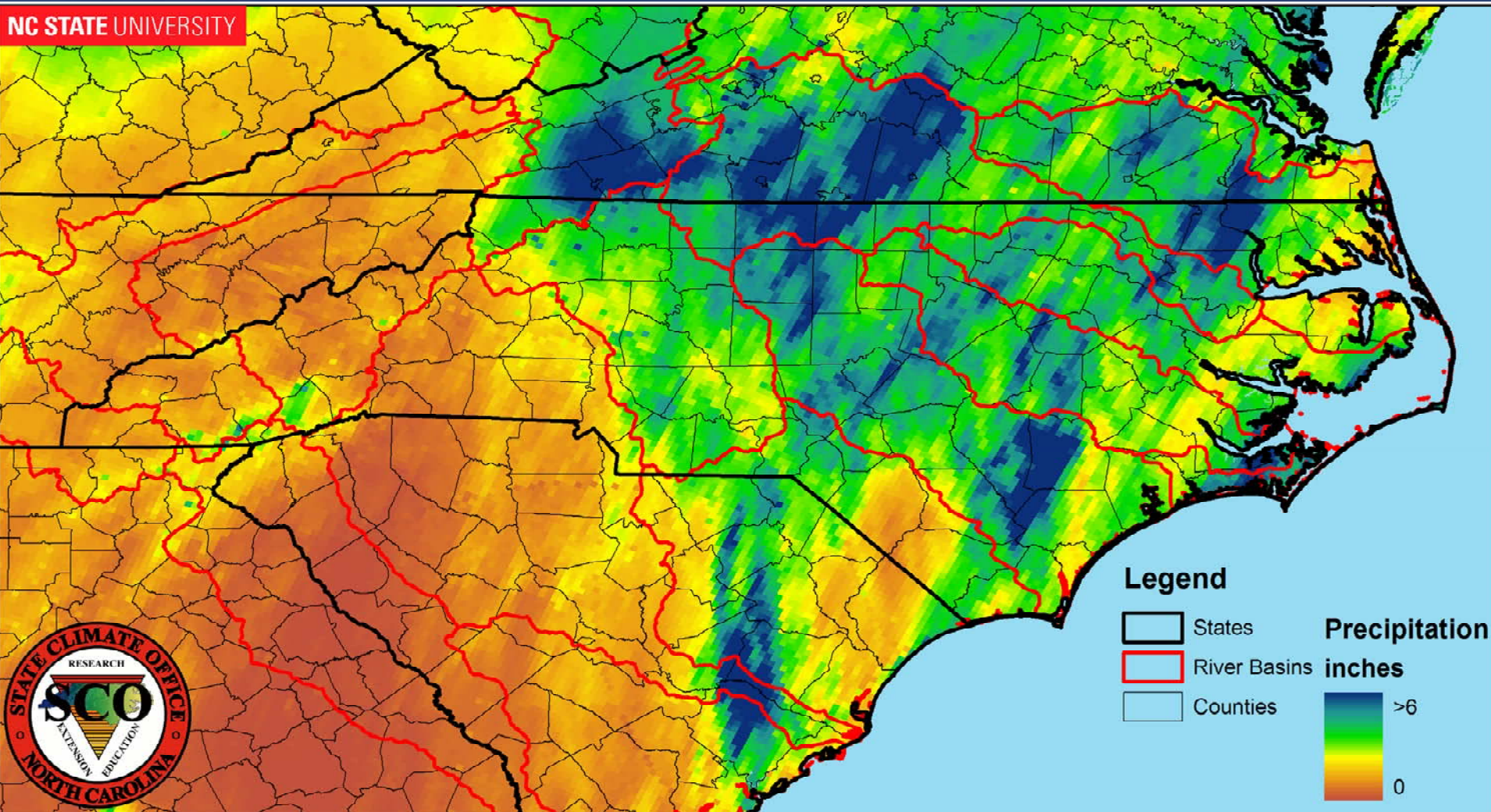
2007 Drought Evolution



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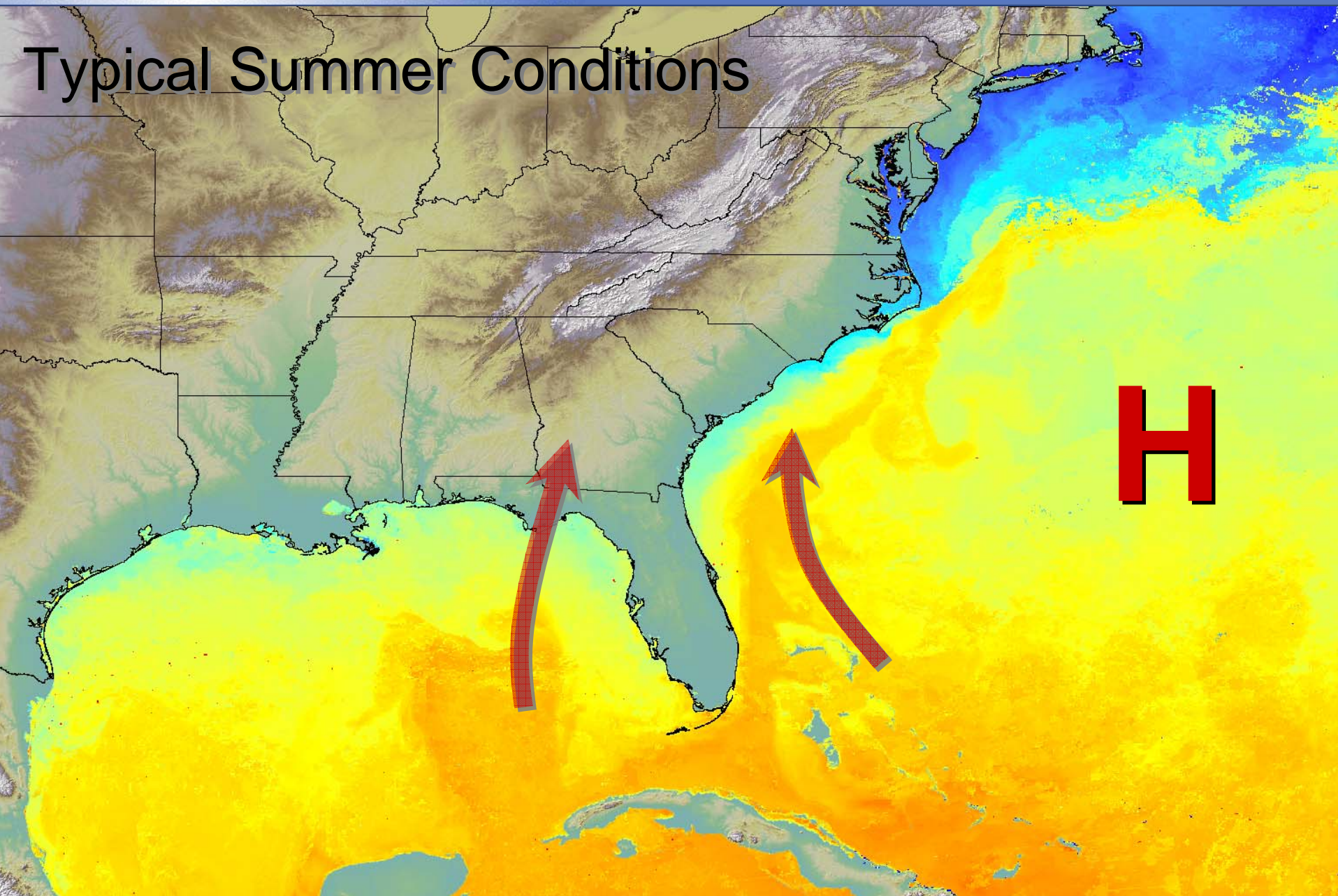
Recent Rainfall (Oct 24-27)

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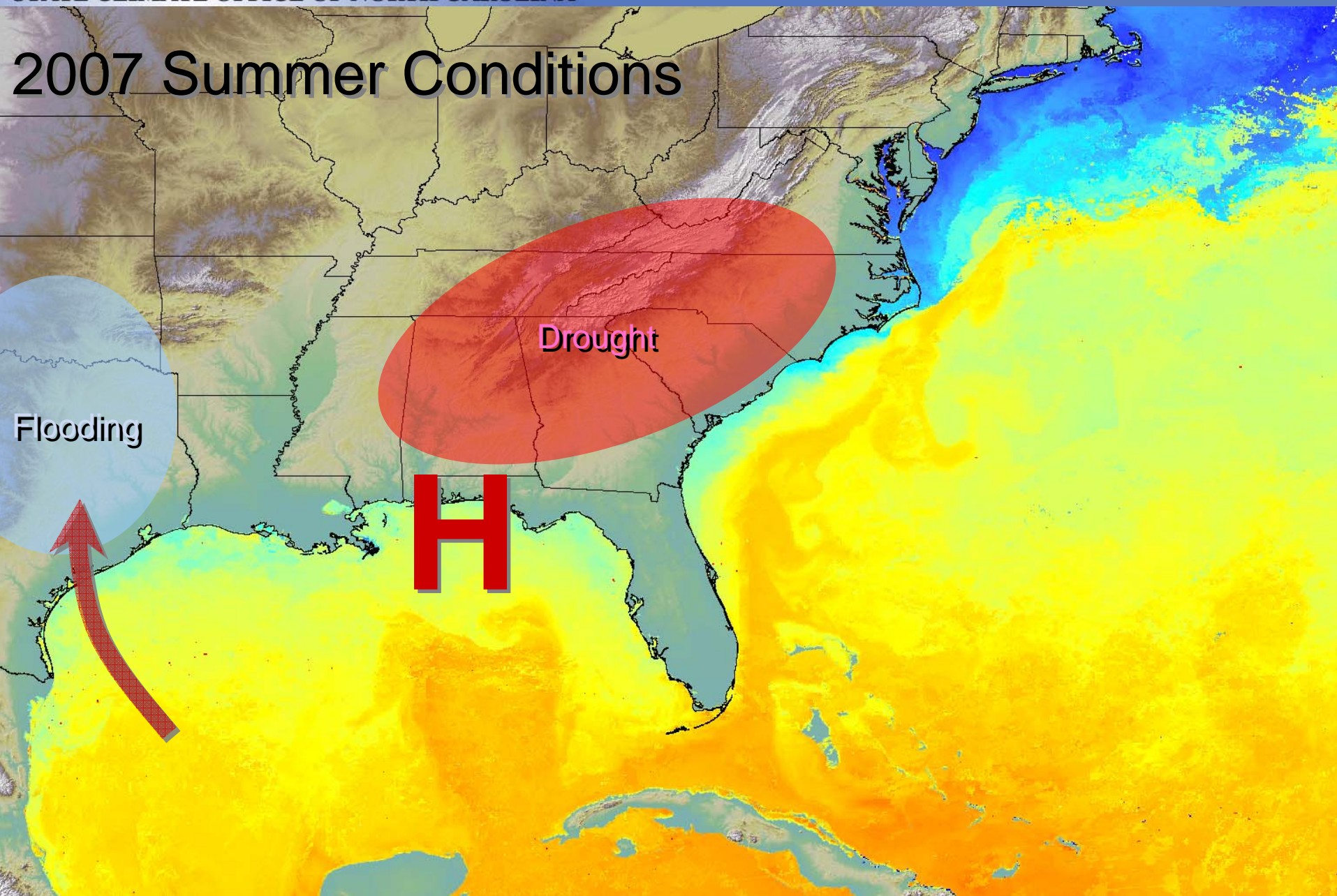
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Typical Summer Conditions



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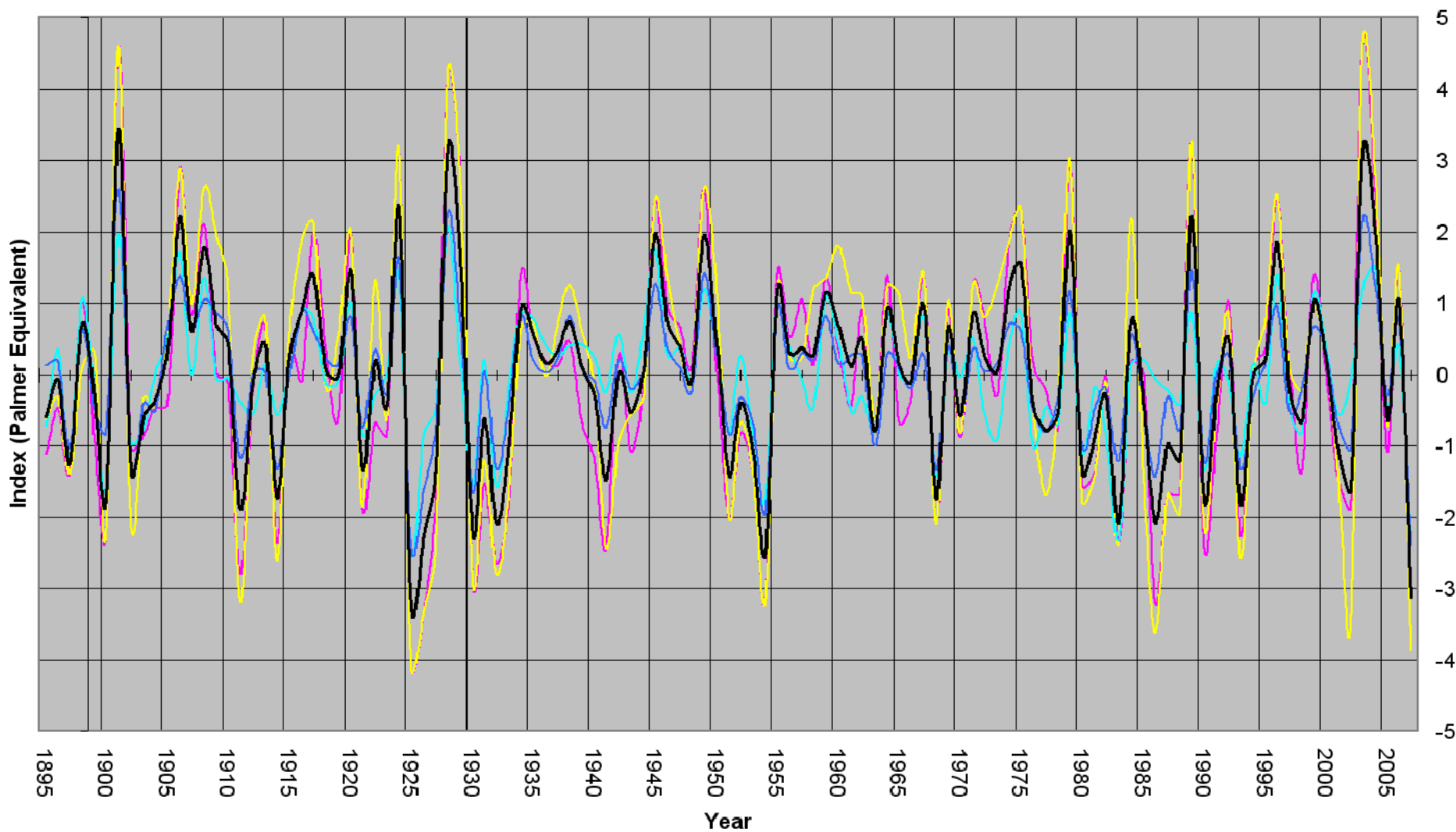
2007 Summer Conditions



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StatewideAverage Drought Indicators

PDSI PHDI SPI3 SPI6 Average

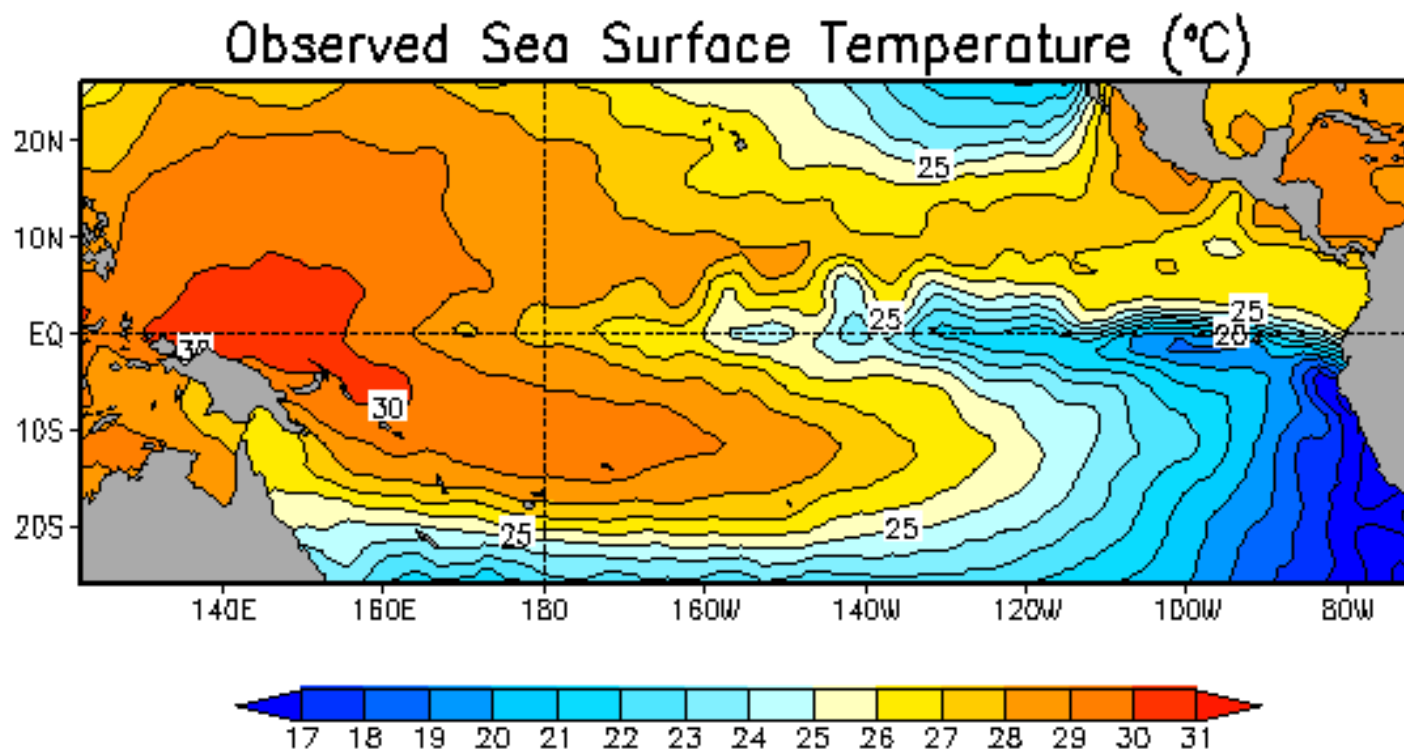


Where are we going?

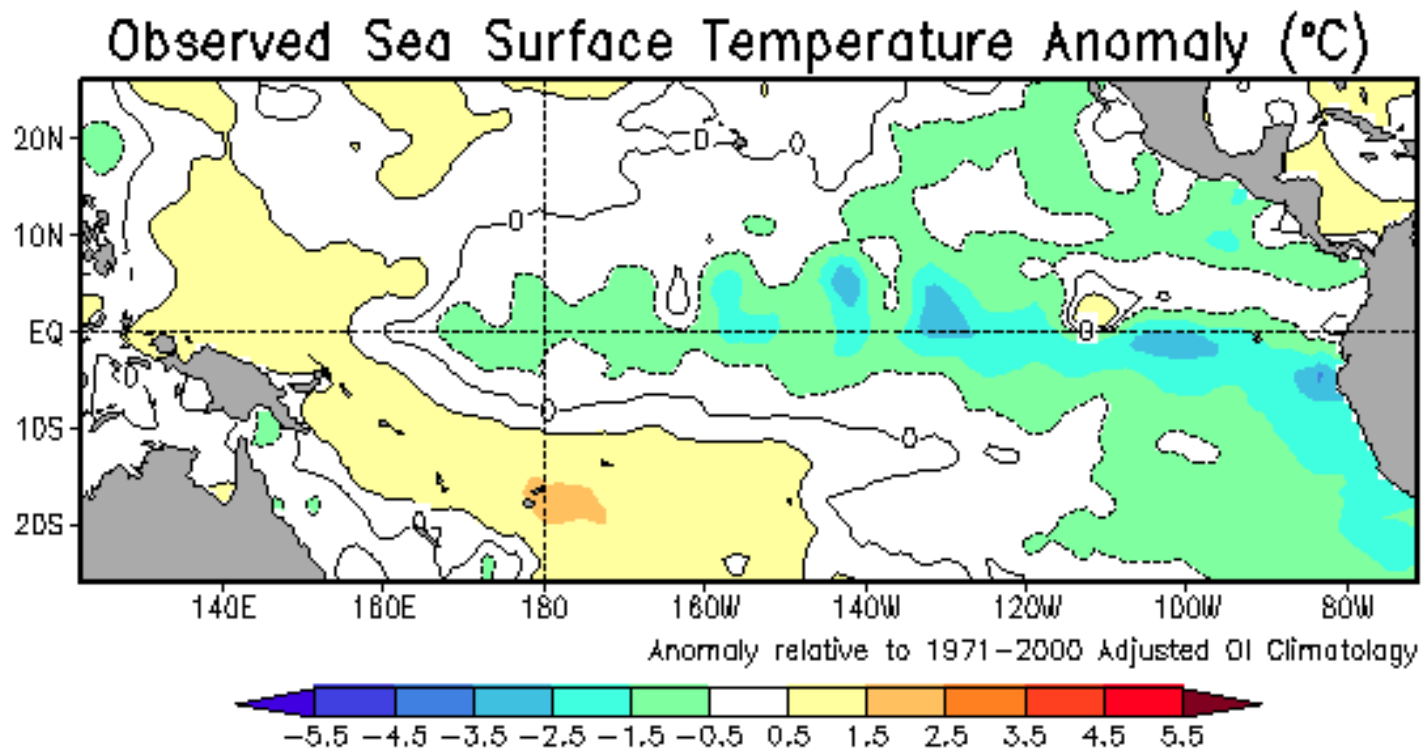
- Developing La Niña conditions
 - Cooler tropical Pacific ocean temperatures
 - Opposite of El Niño (warm phase)
- Higher likelihood of below-normal precipitation this winter and spring



La Niña SST Conditions

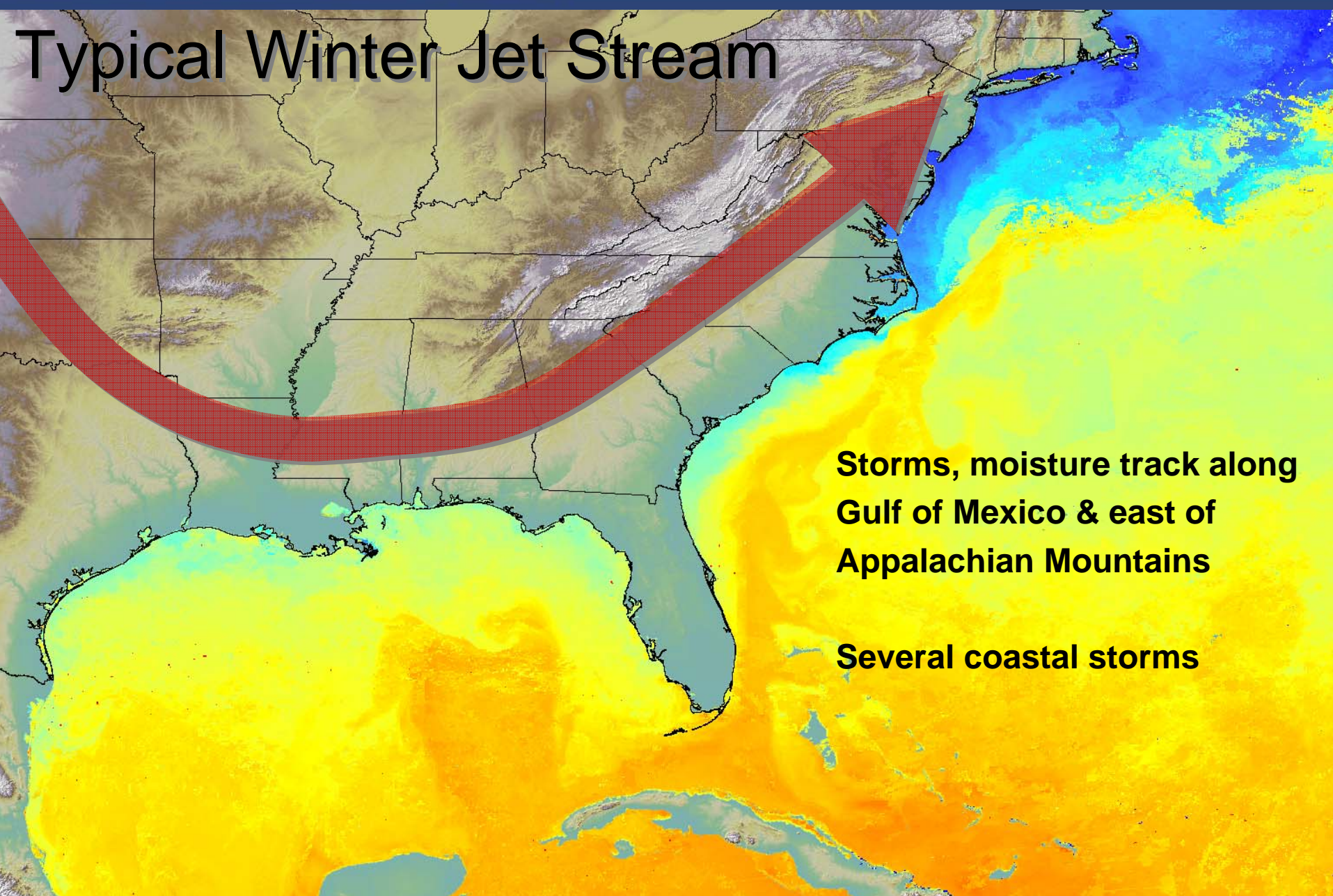


La Niña - Anomalies



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Typical Winter Jet Stream

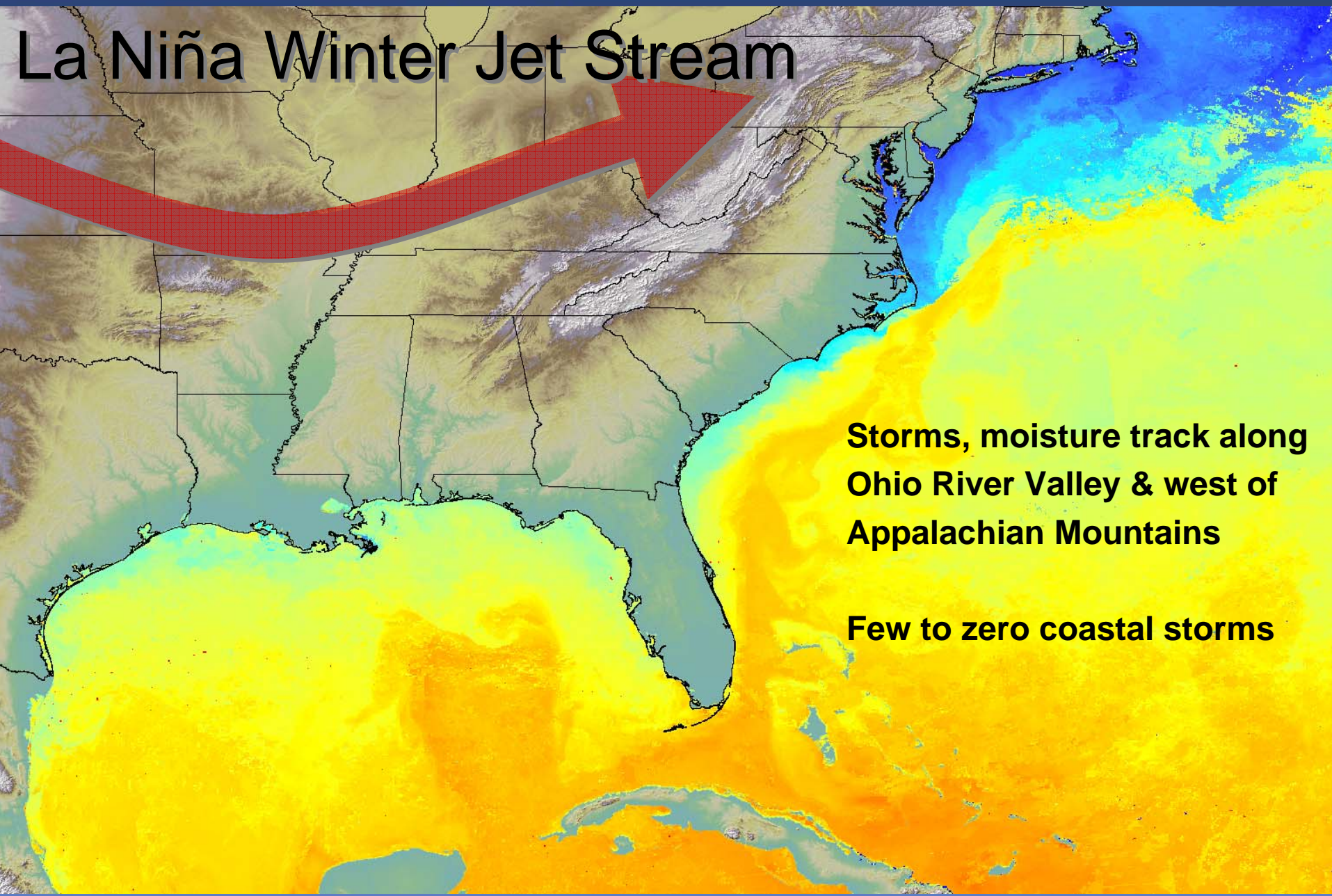


**Storms, moisture track along
Gulf of Mexico & east of
Appalachian Mountains**

Several coastal storms

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La Niña Winter Jet Stream

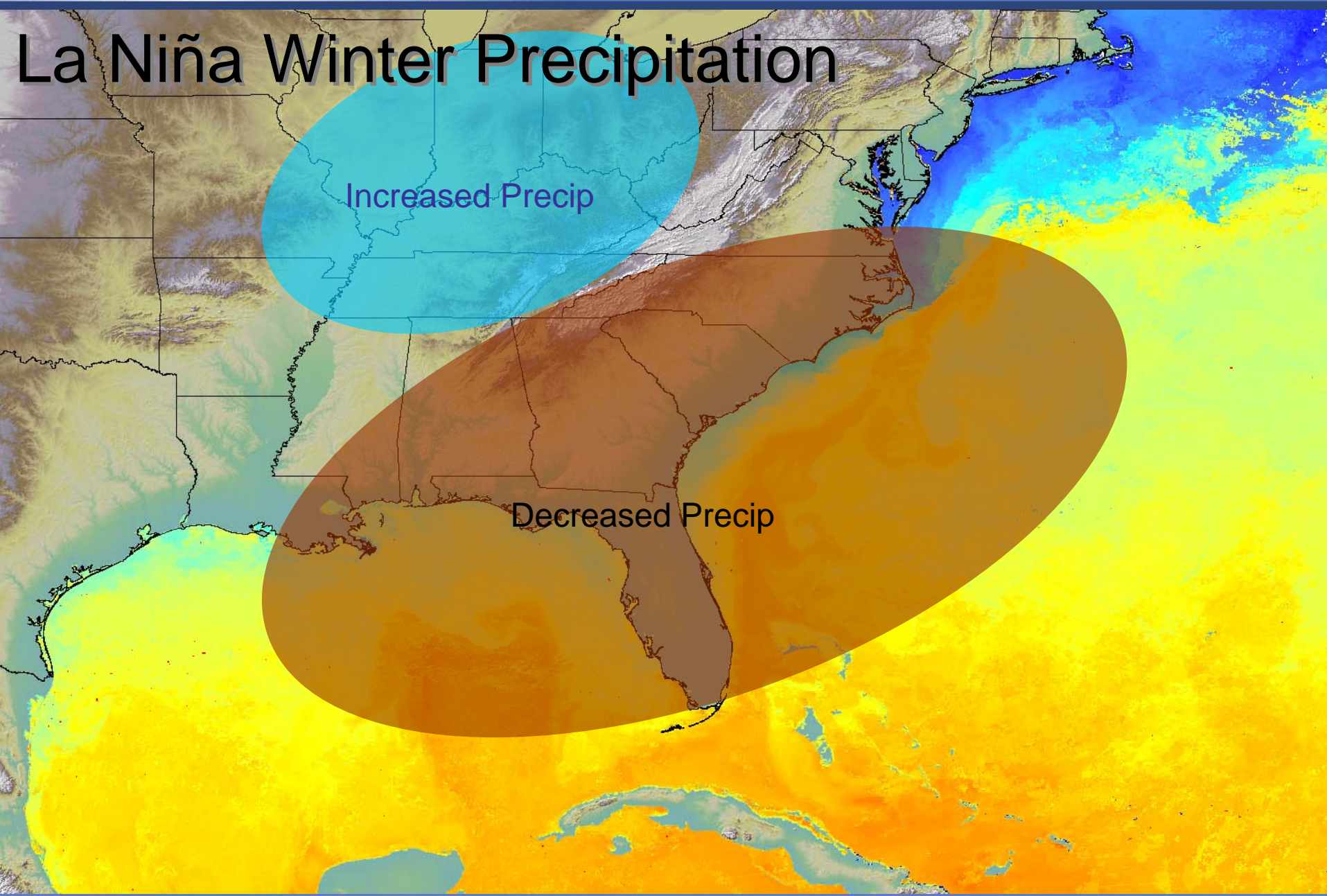


**Storms, moisture track along
Ohio River Valley & west of
Appalachian Mountains**

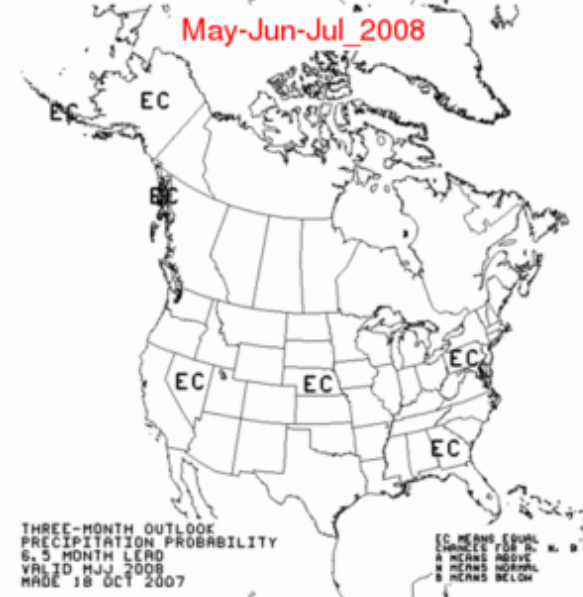
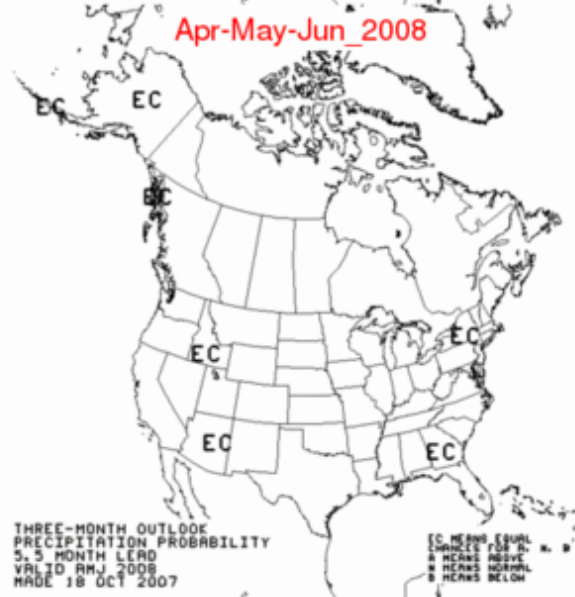
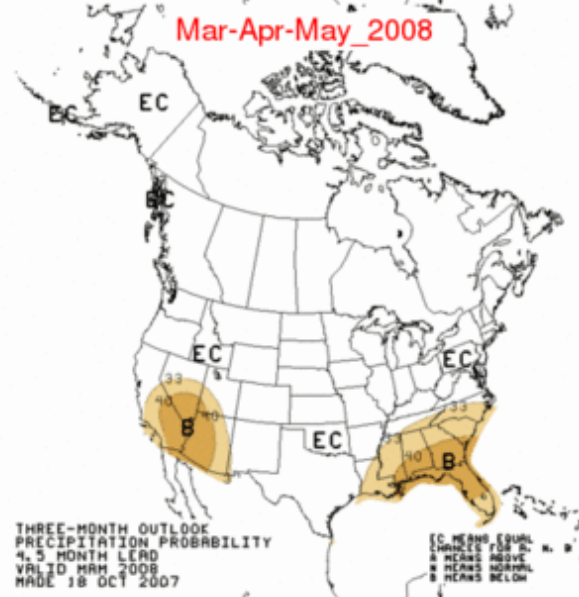
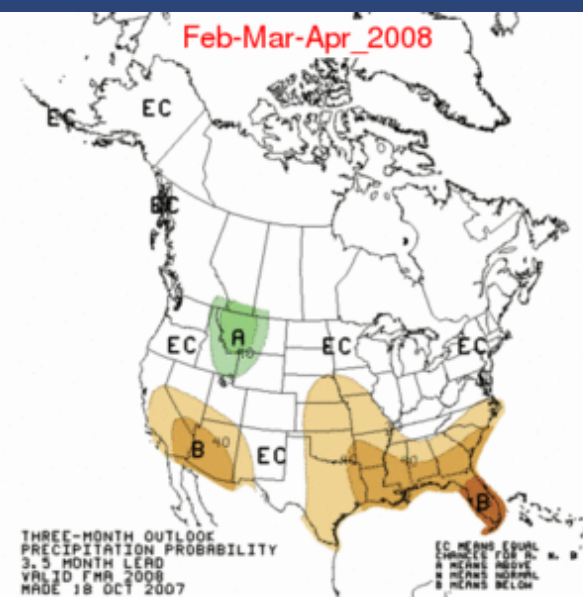
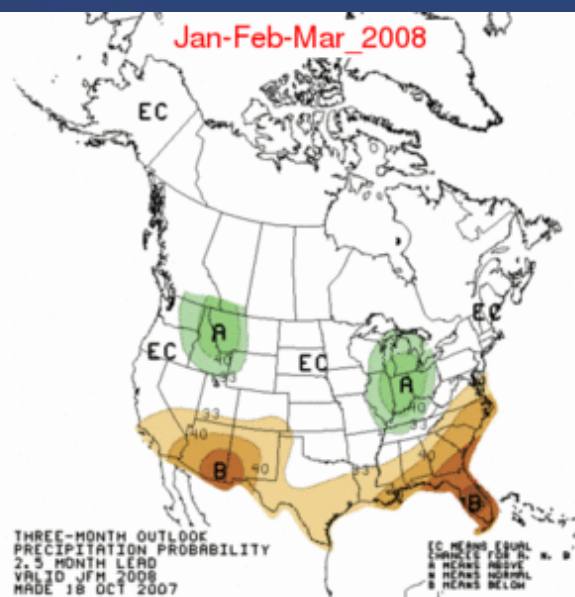
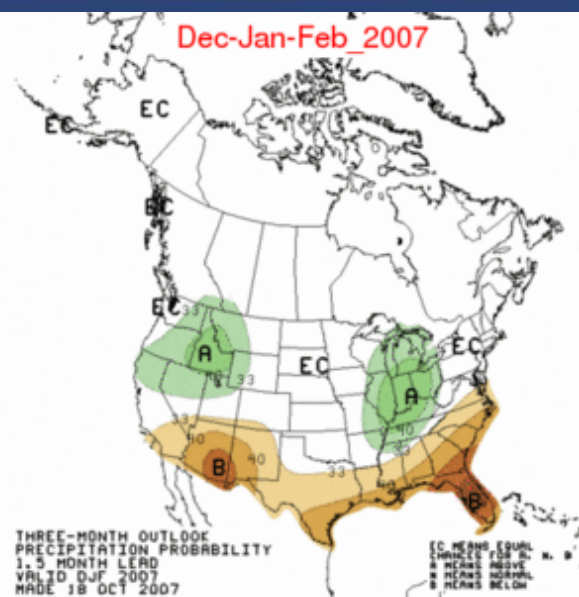
Few to zero coastal storms

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La Niña Winter Precipitation



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Winter Outlook

- Avg Precipitation (Nov-Apr): ~20in
- For substantial drought recovery
 - 20-30 inches over next 6 months
- To eliminate rainfall deficits
 - 30-45 inches over next 6 months
- **40%-60% chance of below-normal precipitation**



Winter Outlook

- Substantial recovery may not happen
- If water resources not full in spring, problems possible in summer
 - Experienced this in 2002
- No guidance for summer 2008
 - Little skill in summer forecasts
- Conserve now to prevent possible problems next summer





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919-515-3056 or 877-718-5544

Extended History of Drought in NC

Estimated PHDI from Tree Rings - Eastern NC/VA

