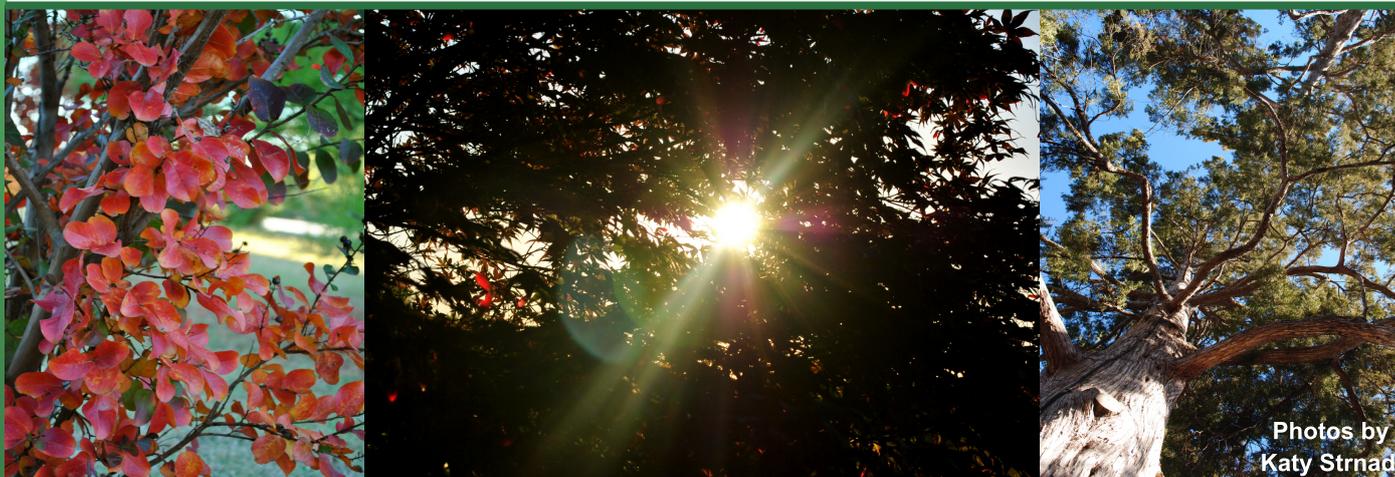


# Southern Climate Monitor

November 2013 | Volume 3, Issue 11



Photos by  
Katy Strnad



# SCIPP

Southern Climate Impacts Planning Program  
A NOAA RISA Team

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**LSU**



The Southern Climate Monitor is available at [www.srcc.lsu.edu](http://www.srcc.lsu.edu) & [www.southernclimate.org](http://www.southernclimate.org)

## Drought Management Database Debuts in 2013

*Kelly Helm Smith and Cody Knutson, National Drought Mitigation Center, University of Nebraska-Lincoln*

Decision-makers in various capacities can take preventive action to reduce the impacts of drought. The National Drought Mitigation Center (NDMC) launched a Drought Management Database in 2013 to help people find strategies for dealing with drought and see what different places are trying.

The Drought Management Database website is a valuable resource for finding the latest news on drought mitigation and response strategies that are being implemented around the country, as well as more detailed information on strategies being implemented in various sectors, such as agriculture or water management. By showcasing what people are doing in the field to better mitigate and respond to drought, the database provides information and new ideas and, hopefully, the motivation for others to undertake similar efforts that are most relevant or appropriate for their particular situation. People often need to see that someone else has tried something and that it works before they are willing to try it themselves.

The database categorizes solutions by eight main sectors and provides several filters to help refine searches. Main sectors include Farming, Livestock Production, Water Supply & Quality, Energy, Recreation & Tourism, Fire, Plants & Wildlife, and Society & Public Health. Filters include publication date, activity type (i.e., education, planning), scope (jurisdiction), where the resource originated, and resource type (i.e., media, scholarly, website). There is also a full text search.

Some scopes and sectors, such as those related to agriculture, benefit from well-

developed networks of professional support, such as extension educators at land-grant universities. In other words, there is quite a bit of good advice available for farmers and ranchers. Other scopes and sectors, such as Energy or Recreation & Tourism, with fewer available resources, may reflect lower awareness of drought or disincentives to speak about it publicly.

The Drought Management Database came about in response to needs identified by global and national disaster management agencies and organizations. According to the United Nations International Strategy for Disaster Reduction, in Drought Risk Reduction Framework and Practices (2009), "it is essential to identify and demonstrate effective approaches and opportunities for drought management and preparedness, including case studies to show examples of good, as well as weak policies. Policy makers, scientists, media, and the public often need to see actions-at-work in order to foster buy-in to similar efforts." Similarly, the National Emergency Management Association in 2010 published "Recommendations for an Effective National Mitigation Effort." It said that "a body of knowledge already exists in the various places within the community of mitigation and in academic research communities... but this knowledge base needs to be centralized, managed, grown, and accessible 'for the masses' at all levels of government... Strategies to publicize and share those successes must also be developed."

Curating content for the Drought Management Database is an ongoing project and a natural outgrowth of the NDMC's mission to circulate information that will help reduce societal vulnerability to drought. The Drought Mitigation News feature on the homepage of

the database also provides a way to display drought mitigation news stories that turn up in the NDMC's automated daily search (Figure 1). The stories provide a glimpse of issues and solutions as they occur around the country. The stories sometimes provide information about new strategies and solutions, which the NDMC staff tracks down and adds to the main Drought Management Database. We also learn about new strategies through scholarly literature, professional interactions, and other means.

The development of the Drought Risk Management Database was funded under a grant from the Sectoral Applications Research Program (SARP) of the National Oceanic and Atmospheric Administration (NOAA) Climate Program Office. Cody Knutson, leader of the Planning and Social Science program area at the drought center, was the principal investigator on the project.

The products chosen for this database represent the judgment of the National Drought Mitigation Center and its partners and do not necessarily reflect the views or policies of NOAA.

We hope that as more people implement and experiment with new drought mitigation and response strategies, they will document and pass along their lessons learned so we can share it with others through the database.

Suggestions for content for the database are welcome, as are original descriptions of what's been tried, for better or worse. Please email suggestions to [ndmc@unl.edu](mailto:ndmc@unl.edu).

[drought.unl.edu/droughtmanagement/Home.aspx](http://drought.unl.edu/droughtmanagement/Home.aspx)

Home Full Search About Submit a Strategy State Planning Info

Home Login

## Drought Management Database

### Introduction

This is a growing collection of information about what has been tried in responding to and preparing for drought in the United States. It's categorized by sector, that is, information of interest for farming, livestock production, water supply and quality, energy, recreation and tourism, fire, plants and wildlife (environment), and society and public health. Each sector is further divided into subsectors.

The **Full Search** option lets you search by many more criteria, including dates, type of activity (planning, response, monitoring, etc.), decision-making scope (from individual through federal government), by state, and by resource type. You can also do a text search.

Have something to contribute or recommend? Visit the **Submit a Strategy** page.

### Quick Search by Sector

Farming Livestock Production Water Supply & Quality Energy  
Recreation/Tourism Fire Plants & Wildlife Society & Public Health

### Featured Strategy

#### Ruinous Drought Tests Kansas Model for Supplying Water to Farms

In this in-depth analysis of how Kansas water law is holding up in drought, Brett Walton observes that "The state's authority to cut water supplies on one side of Kansas and enable strategic water supply decisions on the other is an illustration of something uncommon in American environmental policy, business practice, and perhaps culture — a system of restricting access to natural resources that has attained enough historic and legal credibility to actually work effectively in a time of crisis."

[More information...](#)

### Recent Drought Mitigation News

**State urges steps to prepare for drought in 2014**  
Sep. 6, 2013

**Fighting wildfires with science** *Fighting wildfires with science - CBS (NAT)*  
Jul. 7, 2013

**Nitrate spike tests Des Moines water supplies - Des Moines Register (IA)**  
Jul. 1, 2013

**Wind Power Firms Push to Extend Tax Credit**  
May. 10, 2013

**Can this couple have their quail habitat and graze it too? - Gilmer (Texas) Mirror**  
May. 9, 2013

Read more at the [Drought Mitigation News Archive](#)

Figure 1: Homepage of the Drought Management Database: <http://drought.unl.edu/droughtmanagement/Home.aspx>

# Drought Update

*Luigi Romolo  
Southern Regional Climate Center*

Drought conditions over the month of November changed only slightly in Texas. However, significant changes were observed in Louisiana and Mississippi, which are considered drought free as of November 26, 2013. Similar improvements were also observed in Arkansas, where just a small area of moderate drought remains. In central and eastern Texas, significant precipitation totals managed to eradicate moderate drought conditions. Drought conditions in Oklahoma have persisted, with the panhandle still experiencing moderate to severe drought with some extreme and exceptional drought in the south western counties and along the Texas border.

*Drought Conditions (Percent Area)*

	None	D0	D1	D2	D3	D4
<b>Current</b>	52.53	19.22	15.38	9.27	2.80	0.80
<b>Last Week</b> <i>11/26/2013</i>	50.19	21.67	15.30	9.33	2.71	0.80
<b>3 Months Ago</b> <i>9/3/2013</i>	25.37	14.07	18.54	31.24	9.23	1.55
<b>Start of Calendar Year</b> <i>1/1/2013</i>	21.18	15.13	13.19	17.70	21.82	10.98
<b>Start of Water Year</b> <i>10/1/2013</i>	26.20	23.69	32.21	14.74	2.91	0.25
<b>One Year Ago</b> <i>12/4/2012</i>	15.98	18.61	17.22	19.89	19.43	8.87

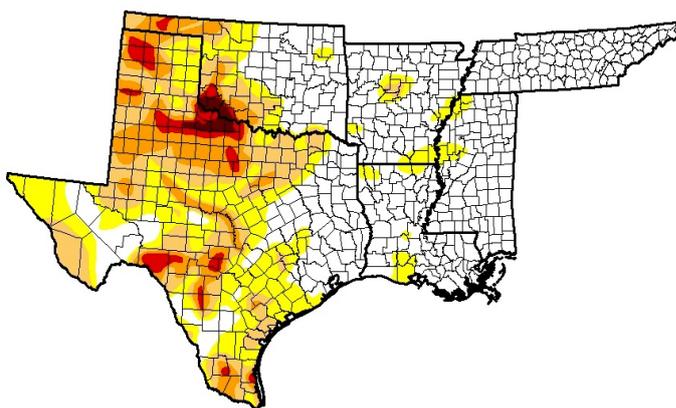
Intensity:

- 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 accompany text summary for forecast statements. <http://droughtmonitor.unl.edu>

In Texas, a mid-month storm dumped double-digit rainfall accumulations on Austin, causing an estimated \$14.4 million in flooding damages, including destroying approximately 1,000 homes.

Cooler than normal temperatures in Texas has helped much of the state in preventing significant loss of soil and lake moisture, since the state did not see normal rainfall accumulations this month with the exception of the Lower Valley, Big Bend, and a band through central and eastern Texas. Streamflow conditions in the east remain normal, while statewide reservoirs maintained their levels at around 63%. There were some notable changes in hydrological policies, however, with Wichita Falls entering Stage 4 Drought Disaster water restrictions and the Lower Colorado River Authority increasing the threshold required for water to be released downriver from 42% to 55% (Information provided by the Texas Office of State Climatology).



Released Thursday, Dec. 5, 2013.

Michael Brewer NCDC/NOAA



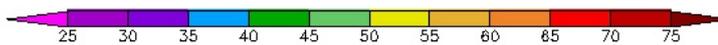
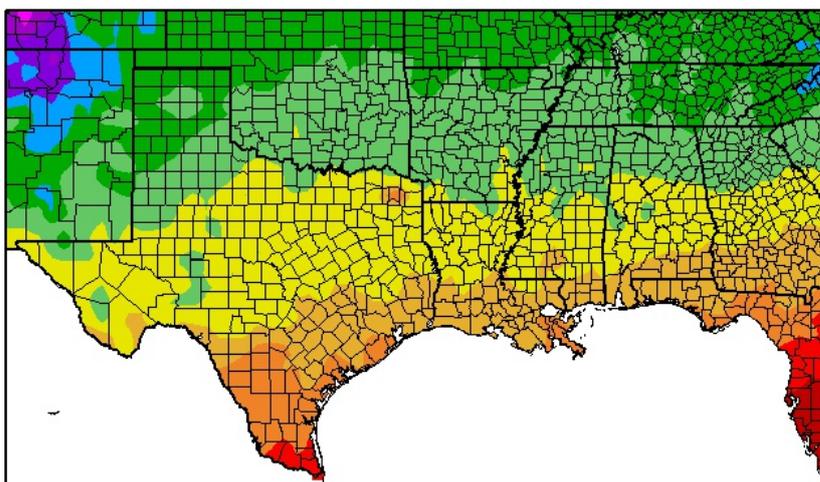
Above: Drought Conditions in the Southern Region. Map is valid for December 3, 2013. Image is courtesy of National Drought Mitigation Center.

# Temperature Summary

*Luigi Romolo*  
*Southern Regional Climate Center*

Temperature (F)  
 11/1/2013 – 11/30/2013

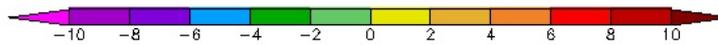
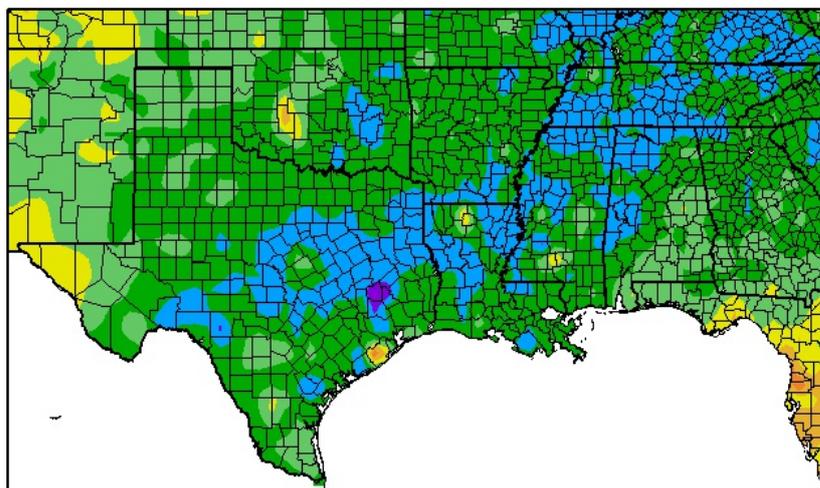
November was a cooler than normal month for the entire Southern Region, with most stations averaging between 2 to 4 degrees F (1.11 to 2.22 degrees C) below normal. Temperatures averaged slightly lower than this in central Texas, northern Louisiana and western Tennessee. In these areas, temperatures averaged between 4 to 6 degrees F (2.22 to 3.33 degrees C) below expected values. The statewide average temperatures are as follows: Arkansas averaged 47.30 degrees F (8.50 degrees C), Louisiana averaged 55.20 degrees F (12.89 degrees C), Mississippi averaged 51.10 degrees F (10.61 degrees C), Oklahoma averaged 46.10 degrees F (7.83 degrees C), Tennessee averaged 44.60 degrees F (7.00 degrees C), and Texas averaged 52.80 degrees F (11.56 degrees C). For Tennessee, it was their fifteenth coldest November on record (1895-2013), while both Arkansas and Mississippi experienced their eighteenth coldest November on record (1895-2013). Louisiana faced its twenty-fourth coldest November on record (1895-2013), while Texas experienced its twenty-fifth coldest November on record (1895-2013). For Oklahoma, it was their twenty-eighth coldest November on record (1895-2013).



Generated 12/2/2013 at HPRCC using provisional data. Regional Climate Centers

**Average November 2013 Temperature across the South.**

Departure from Normal Temperature (F)  
 11/1/2013 – 11/30/2013



Generated 12/2/2013 at HPRCC using provisional data. Regional Climate Centers

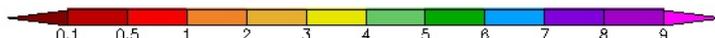
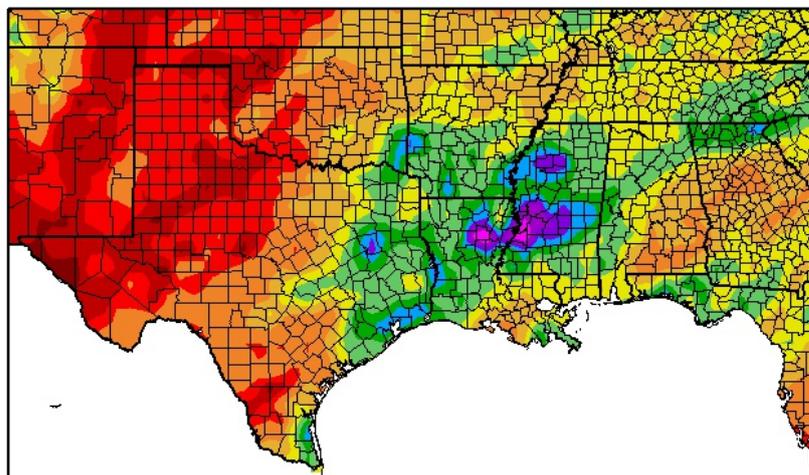
**Average Temperature Departures from 1971-2000 for November 2013 across the South.**

# Precipitation Summary

*Luigi Romolo*  
 Southern Regional Climate  
 Center

November precipitation totals in the Southern Region varied from below normal in northern states of Oklahoma, Arkansas, and Tennessee, to slightly above normal in the central portions of the region. The latter included western and central Mississippi, southern Arkansas, eastern Texas and parts of northern Louisiana. Conditions were quite wet in the southern counties of the Texas Trans Pecos climate division and in the extreme south of Texas. In those two regions, precipitation totals averaged between 150 to 400 percent of normal. The statewide average precipitation totals are as follows: Arkansas reported 4.25 inches (107.95 mm), Louisiana reported 4.77 inches (121.16 mm), Mississippi reported 5.60 inches (142.24 mm), Oklahoma reported 1.79 inches (45.47 mm), Tennessee reported 3.65 inches (92.71 mm), and Texas reported 1.93 inches (49.02 mm). With the exception of Mississippi which experienced its twenty-fourth wettest November on record (1895-2013), all statewide precipitation rankings fell within the two middle quartiles.

Precipitation (in)  
 11/1/2013 – 11/30/2013

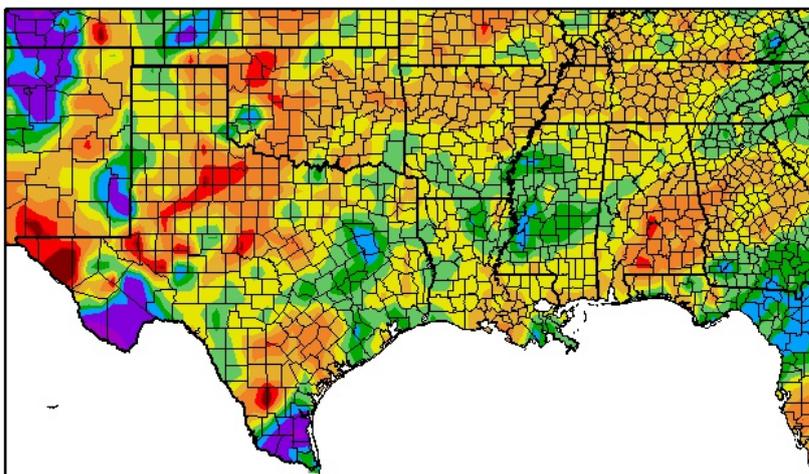


Generated 12/2/2013 at HPRCC using provisional data.

Regional Climate Centers

**November 2013 Total Precipitation across the South.**

Percent of Normal Precipitation (%)  
 11/1/2013 – 11/30/2013



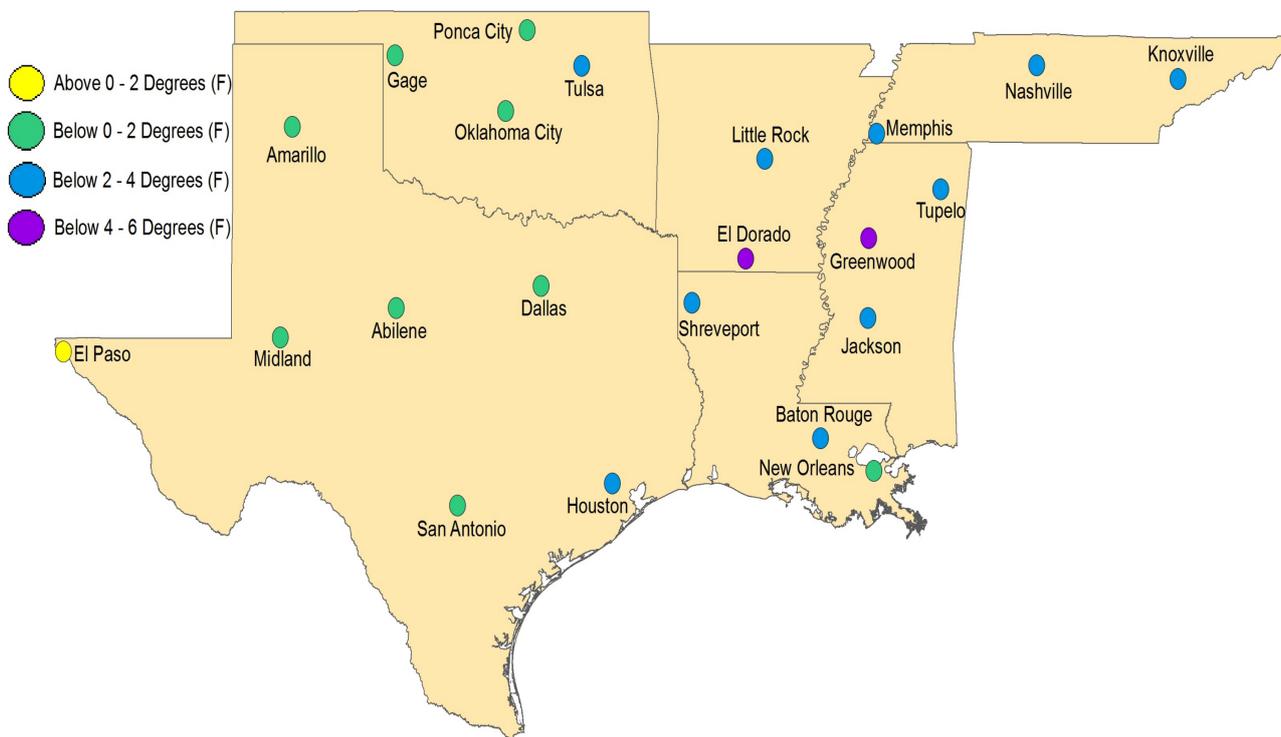
Generated 12/2/2013 at HPRCC using provisional data.

Regional Climate Centers

**Percent of 1971-2000 normal precipitation totals for November 2013 across the South.**

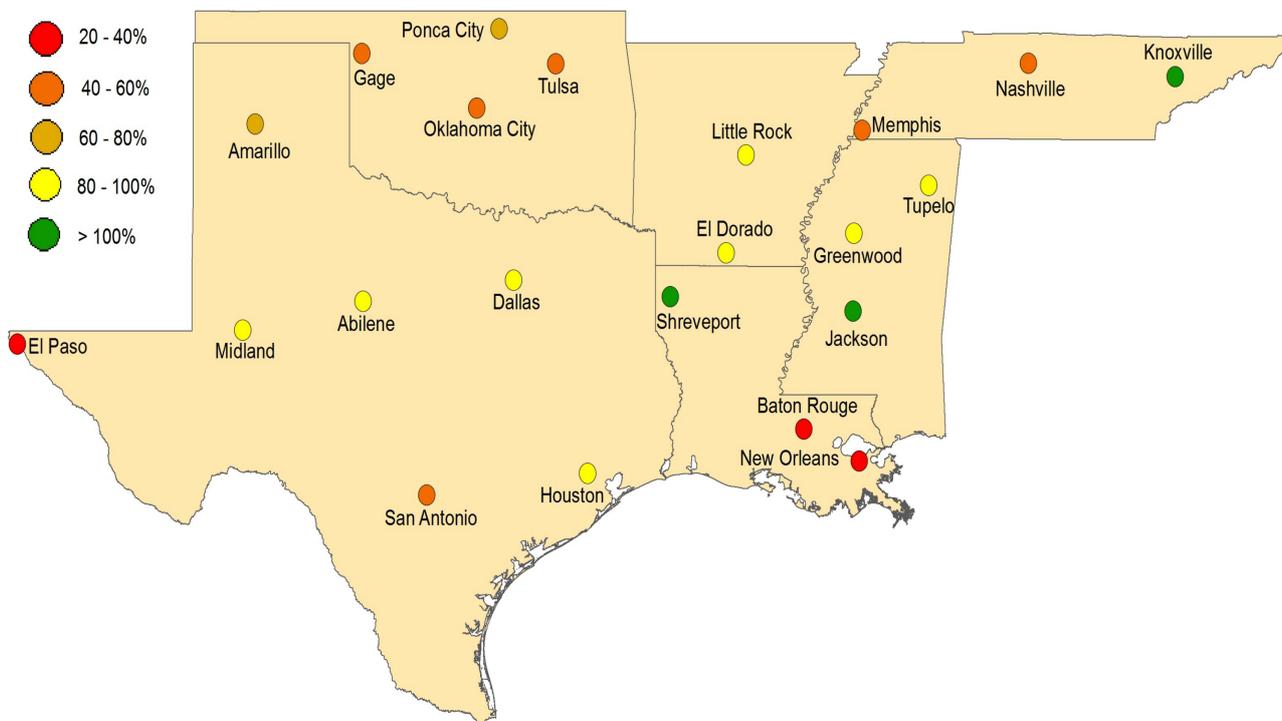
## Regional Climate Perspective in Pictures

### November Temperature Departure from Normal



November Temperature Departure from Normal from 1971-2000 for SCIPP Regional Cities

### November Precipitation Departure from Normal



November Percent of 1971-2000 Normal Precipitation Totals for SCIPP Regional Cities

**Climate Perspective**

State	Temperature	Rank (1895-2011)	Precipitation	Rank (1895-2011)
Arkansas	47.30	18th Coldest	4.25	52nd Wettest
Louisiana	55.20	24th Coldest	4.77	46th Wettest
Mississippi	51.10	18th Coldest	5.60	24th Wettest
Oklahoma	46.10	28th Coldest	1.79	56th Driest
Tennessee	44.60	15th Coldest	3.65	53rd Driest
Texas	52.80	25th Coldest	1.93	47th Wettest

State temperature and precipitation values and rankings for November 2013. Ranks are based on the National Climatic Data Center's Statewide, Regional, and National Dataset over the period 1895-2011.

**Station Summaries Across the South**

Station Summaries Across the South											
Station Name	Temperatures (degrees F)								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	%Norm
El Dorado, AR	60.3	38.3	49.3	-4.5	83	11/17	23	11/28	5.01	0.21	104
Little Rock, AR	59.8	38.8	49.3	-2.4	84	11/17	22	11/28	4.72	-1.01	82
Baton Rouge, LA	68.3	45.7	57.0	-2.0	82	11/17+	26	11/28	1.71	-3.05	36
New Orleans, LA	68.0	51.6	59.8	-1.6	82	11/17	32	11/29	1.89	-3.20	37
Shreveport, LA	63.3	42.3	52.8	-3.3	84	11/17	26	11/29+	5.18	0.50	111
Greenwood, MS	61.4	38.4	49.9	-4.7	77	11/17	19	11/28	3.99	-0.86	82
Jackson, MS	63.7	41.4	52.5	-2.2	79	11/17	23	11/28	6.63	1.59	132
Tupelo, MS	59.0	37.0	48.0	-3.5	72	11/17+	17	11/28	4.33	-0.68	87
Gage, OK	58.7	30.3	44.5	-0.3	78	11/16	10	11/27	0.60	-0.50	54
Oklahoma City, OK	58.9	37.6	48.2	-0.6	77	11/16	19	11/13	0.96	-1.15	46
Ponca City, OK	56.8	34.4	45.6	-1.8	77	11/16	11	11/27	1.77	-0.82	68
Tulsa, OK	57.9	36.8	47.3	-2.4	74	11/17+	18	11/27	1.91	-1.56	55
Knoxville, TN	56.3	34.0	45.1	-3.0	75	11/7	20	11/28	4.51	0.08	102
Memphis, TN	59.0	39.3	49.1	-3.1	77	11/17	21	11/28	2.67	-3.09	46
Nashville, TN	57.6	34.9	46.3	-3.0	75	11/6	16	11/28	2.53	-1.92	57
Abilene, TX	63.9	40.4	52.1	-1.6	84	11/17	21	11/13	1.17	-0.13	90
Amarillo, TX	58.0	32.0	45.0	-0.1	73	11/17	20	11/22	0.52	-0.16	77
El Paso, TX	65.6	42.3	53.9	1.2	78	11/11	24	11/27	0.10	-0.32	23
Dallas, TX	63.2	43.8	53.5	-1.6	87	11/17	29	11/28+	2.12	-0.45	83
Houston, TX	68.2	47.9	58.1	-2.8	85	11/17	31	11/28	3.81	-0.38	91
Midland, TX	63.0	39.3	51.1	-1.2	81	11/16	27	11/13	0.57	-0.08	88
San Antonio, TX	69.3	50.5	59.9	-0.1	89	11/17	33	11/28	1.50	-1.08	58

Summary of temperature and precipitation information from around the region for November 2013. Data provided by the Applied Climate Information System. On this chart, "depart" is the average's departure from the normal average, and "% norm" is the percentage of rainfall received compared with normal amounts of rainfall. Plus signs in the dates column denote that the extremes were reached on multiple days. Blueshaded boxes represent cooler than normal temperatures; redshaded boxes denote warmer than normal temperatures; tan shades represent drier than normal conditions; and green shades denote wetter than normal conditions.

## 2013 Hurricane Season Ends

*Barry Keim, Louisiana State Climatologist, Louisiana State University*

The 2013 hurricane season quietly ended on November 30th. In total, there were 13 named storms, which included 11 tropical storms and 2 hurricanes (Figure 1). The two hurricanes only reached Category 1 strength, hence there were no major hurricanes this season. Given the forecasts at the beginning of this season, it fell well short of expectations. However, I don't think anyone is complaining. In the United States, we only had one landfalling storm – Tropical Storm Andrea - which struck the Gulf Coast of Florida in early June. Other than that, we were spared, though Tropical Storm Karen gave us a minor scare in early October.

Thirteen named storms is actually above the long-term average number of storms for

a season (12), but the number of hurricanes (2, whereby 7 is the average) and major hurricanes (0, whereby 4 is average) is where this season paled in comparison. Another interesting fact is that until recently, the United States had only twice gone 5 straight years without a major hurricane (Category 3-5) arriving at its shores (1901-1905 and 1910-1914) since about 1880. It just so happens that our last major hurricane landfall was Hurricane Wilma in 2005, now marking 8 straight seasons without a major hurricane landfall in the United States. That is, assuming you don't include Hurricanes Ike (Category 2), Hurricane Isaac (Category 1), and Hurricane Sandy (Category 1) as major hurricanes. Although they were low on the Saffir-Simpson Hurricane Rating Scale, the damage and misery inflicted on the United States in each of those storms was incredibly

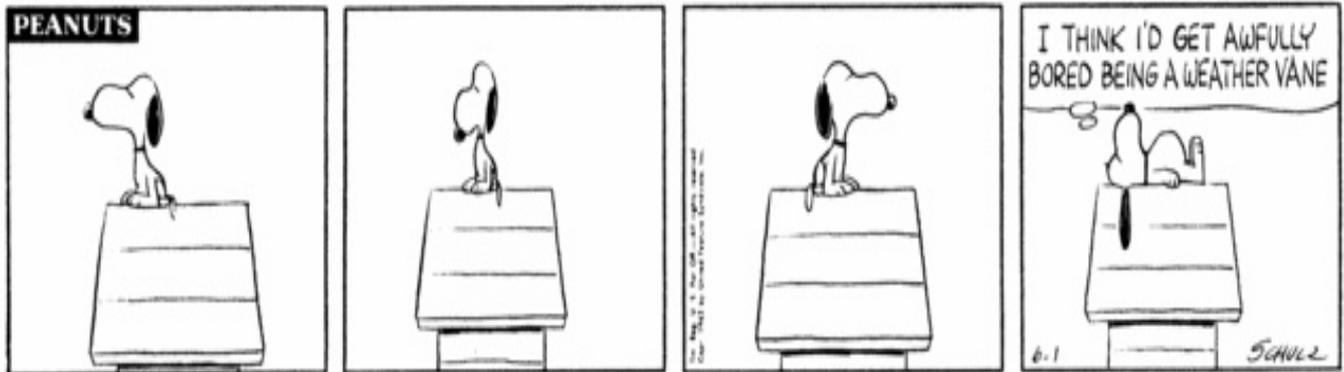


high and clearly out of proportion with the hurricane rating scale. The take home message here is that every storm is unique and you never know what you're going to get in terms of impacts. Feel free to contact me at [keim@lsu.edu](mailto:keim@lsu.edu) with any questions or comments.

Figure 1: Storms and tracks of the 2013 hurricane season across the Atlantic Basin.

Image from the Unisys website located at: <http://weather.unisys.com/hurricane/atlantic/2013/>

## Monthly Comic Relief



**Disclaimer:** This is an experimental climate outreach and engagement product. While we make every attempt to verify this information, we do not warrant the accuracy of any of these materials. The user assumes the entire risk related to the use of these data. This publication was prepared by SRCC/SCIPP with support in part from the U.S. Department of Commerce/NOAA. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA.

### Contact Us

The Monitor is an experimental climate outreach and engagement product of the Southern Regional Climate Center and Southern Climate Impacts Planning Program. To provide feedback or suggestions to improve the content provided in the Monitor, please contact us at [monitor@southernclimate.org](mailto:monitor@southernclimate.org). We look forward to hearing from you and tailoring the Monitor to better serve you. You can also find us online at [www.srcc.lsu.edu](http://www.srcc.lsu.edu) and [www.southernclimate.org](http://www.southernclimate.org).

For any questions pertaining to historical climate data across the states of Oklahoma, Texas, Arkansas, Louisiana, Mississippi, or Tennessee, please contact the Southern Regional Climate Center at 225-578-502. For questions or inquiries regarding research, experimental tool development, and engagement activities at the Southern Climate Impacts Planning Program, please contact us at 405-325-7809 or 225-578-8374.

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