SCIPP
A NOAA RISA TEAM

Southern Climate Monitor

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In This Issue:

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Integrated Warning Team – Gulf Coast: A Collaborative Effort To Improve Public Safety and Awareness Through Precise Communication of Weather and Climate Information

Kyle Brehe, User Services Climatologist,
Southern Regional Climate Center/Louisiana Office of State Climatology

Communication forms one of the basic foundations of human existence and it is no different in the weather and climate community. Communicating complex terminology and concepts amongst colleagues and to the general public can often be more difficult than learning them in the first place. Breakdowns in communication often occur between individuals and groups within the weather and climate community. Competition, mistrust, and a lack of awareness contribute to these breakdowns and result in strained personal and professional relationships.

Communication breakdowns also occur between the weather and climate community and the general public, resulting in mistrust and skepticism. Terminology not communicated in an understandable way causes users to become confused which directly impacts their ability to prepare for a weather event. Concepts considered rudimentary within the weather and climate field (e.g., the difference between a Winter Storm Watch and Winter Storm Warning or a Hurricane Watch and Hurricane Warning), have no use in emergency preparedness if their meanings are not understood. Mistrust and skepticism can also result from a forecast that is perceived as inaccurate, "they said there was a 50% chance of rain, so I cancelled our family picnic and it didn't rain at all" or "they said it was supposed to be a quiet hurricane season, but we had a storm and now my roof needs to be replaced", and from misinformation obtained from non-credible sources within the Internet and social media (Facebook, Twitter, and Instagram). Information distributed by non-credible sources has the potential to damage the public reputation of the weather and climate community; unfortunately, users often have difficulty discerning credible from non-credible sources. As a matter of public safety, it is in the best interest of the weather and climate community to forge trusting relationships amongst themselves and with the general public to improve emergency preparedness practices. This is the primary mission of an Integrated Warning Team (IWT).

An IWT is "a collaboration to review the dissemination of meteorological, climatological, and other weather phenomena and find areas for improvement" (Josh Eachus, WBRZ-TV, Baton Rouge, LA). The focus of an IWT is to improve community well being and public safety, not just carrying out personal agendas or "beating the competition". At its core, an IWT mends existing and fosters new relationships, streamlines communication, and enhances public safety (Figure 1).

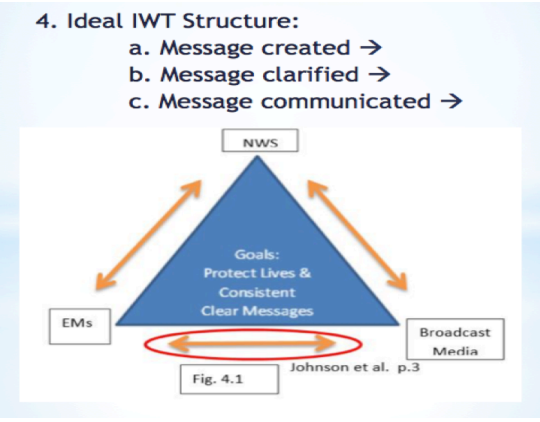
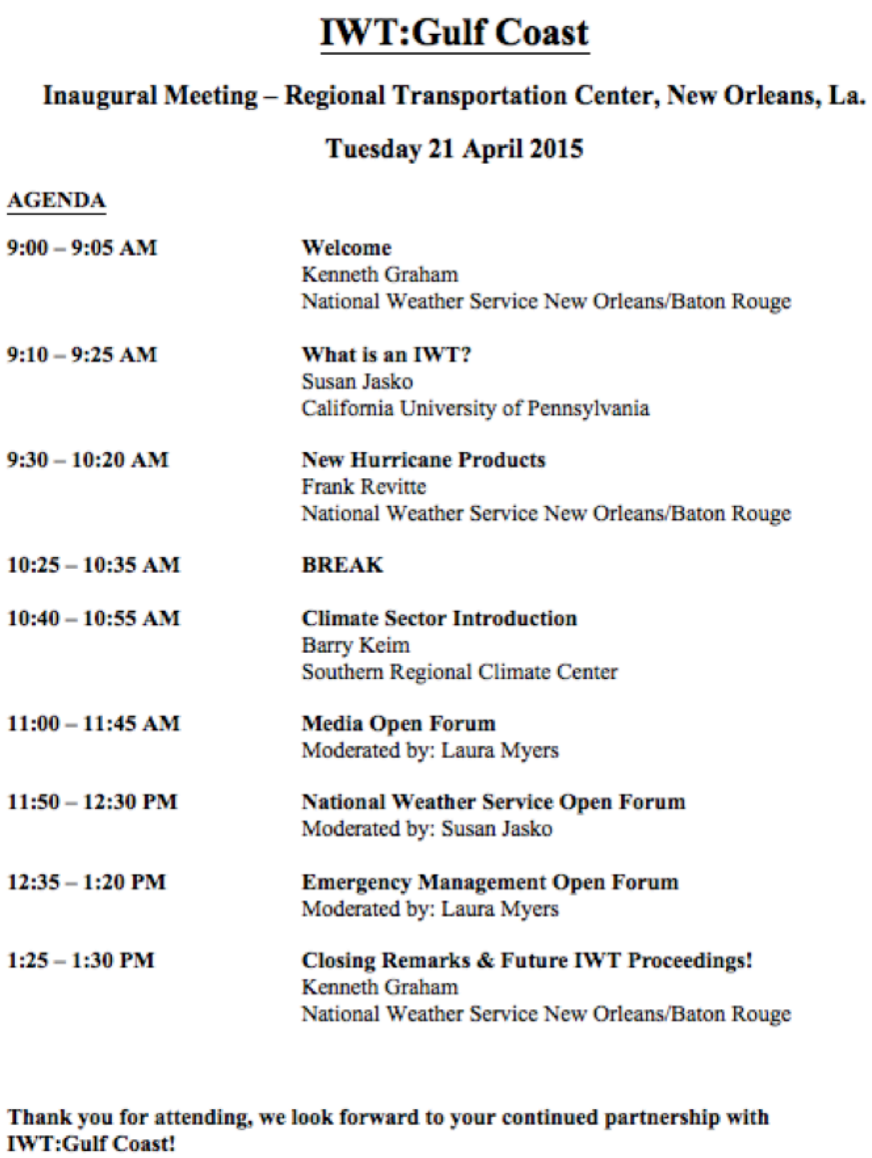


Figure 1. Courtesy of Josh Eachus, WBRZ-TV, Baton Rouge, LA

The first step in forming an IWT is assessing strong, strained, or non-existent relationships within the scientific community and the general public. This is accomplished by forming a "core committee" of representatives from each sector. The IWT – Gulf Coast core committee consists of broadcast meteorologists, representatives from the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), representatives from the National Weather Service (NWS), social scientists from the University of Alabama at Huntsville and California University of Pennsylvania, and climatologists from the Southern Regional Climate Center (SRCC) and the Louisiana Office of State Climatology (LOSC). Once the core committee is established, a series of planning meetings take place to determine regionally specific issues that the IWT can mitigate and the best approaches to doing so. In the case of IWT – Gulf Coast, concerns include but are not limited to communication during tropical system events and improving relationships between specific sectors of the weather and climate communities. Once objectives and goals of the IWT have been identified, the core committee begins planning the first workshop. The current format of IWT – Gulf Coast calls for at least an annual one-day workshop with semi-annual breakout meetings.

The first IWT – Gulf Coast workshop is planned for April 21, 2015, in New Orleans, Louisiana (Figure 2). The initial stage of this workshop involves the introduction and a statement of IWT – Gulf Coast goals. Following a briefing about new hurricane data products and a short break, open forums for the represented sectors will take place with a moderator for each. Included in the forum segment of the workshop is the climate sector introduction. This highlights a unique aspect of IWT - Gulf Coast versus other iterations in Pittsburgh and Atlanta, which have limited or no representation from the climate community.



IWT:Gulf Coast

Inaugural Meeting – Regional Transportation Center, New Orleans, La.

Tuesday 21 April 2015

AGENDA

9:00 – 9:05 AM	**Welcome** Kenneth Graham National Weather Service New Orleans/Baton Rouge
9:10 – 9:25 AM	**What is an IWT?** Susan Jasko California University of Pennsylvania
9:30 – 10:20 AM	**New Hurricane Products** Frank Revitte National Weather Service New Orleans/Baton Rouge
10:25 – 10:35 AM	**BREAK**
10:40 – 10:55 AM	**Climate Sector Introduction** Barry Keim Southern Regional Climate Center
11:00 – 11:45 AM	**Media Open Forum** Moderated by: Laura Myers
11:50 – 12:30 PM	**National Weather Service Open Forum** Moderated by: Susan Jasko
12:35 – 1:20 PM	**Emergency Management Open Forum** Moderated by: Laura Myers
1:25 – 1:30 PM	**Closing Remarks & Future IWT Proceedings!** Kenneth Graham National Weather Service New Orleans/Baton Rouge

Thank you for attending, we look forward to your continued partnership with IWT:Gulf Coast!

Figure 2. Courtesy of Josh Eachus, WBRZ-TV, Baton Rouge, LA

This opening workshop lays the foundation for future IWT – Gulf Coast activities by establishing camaraderie and receiving input from others outside the core committee. Eventually, IWT – Gulf Coast hopes to expand to other regions as contacts are made and relationships are established.

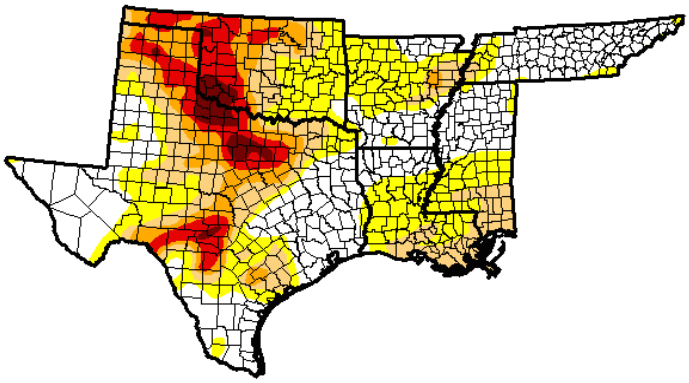
In conclusion, communication breakdowns exist within the weather and climate community and between the weather and climate community and general public. These breakdowns, which are caused by a number of factors, can compromise the delivery of important information during acute weather events. There is a wealth of information available to the general public, but users are often unable to discern between credible and non-credible sources. An IWT sets out to remedy these situations by bringing together different sectors of the weather and climate community to improve current relationships and begin new collaborations amongst themselves and with the general public. By conducting core committee meetings and periodic workshops, the IWT is able to identify and mitigate regionally specific issues. Streamlining communication within the weather and climate community and between the weather and climate community and general public results in improved and new relationships and better emergency preparedness practices; the primary mission of an IWT. Dr. Hal Needham, SCIPP Program Manager, had this to say about IWT – Gulf Coast: "Hurricane winds and storm surges are extreme events that have major impacts along the Gulf Coast, including south Louisiana. Community leaders, long-time residents and emergency managers are often unaware of the maximum wind and surge potential because in many locations the most severe storms on record occurred more than 50 years ago. The IWT team will provide a valuable service as researchers, forecasters, and media team up to improve communication about hazardous weather with the public." Dr. Barry Keim, Louisiana State Climatologist and Primary SCIPP Investigator, added: "Many folks pay lip service to interdisciplinary, and in this case, bridging interests of emergency managers with the weather community, but IWT – Gulf Coast actually does it...the IWT team is unique in that it will integrate expertise from forecasters, the media, and academia to produce the best products possible for the public...this IWT effort is win-win-win, as everyone involved will benefit from the synergy of working together as a team for the benefit of the public."

Drought Update

Luigi Romolo,
Southern Regional Climate Center

Drought conditions in the Southern Region changed only slightly from the previous month. In southwestern Texas, below normal precipitation led to an introduction of extreme drought. Similarly, persistent dryness in southern Louisiana and southern Mississippi has resulted in an area of moderate drought along the north central Gulf of Mexico coast. Above normal precipitation in western Tennessee has alleviated drought conditions there, however, much of the area is still considered abnormally dry. Elsewhere, conditions have not changed much, with a bulk of the counties in northwestern Texas and western Oklahoma still experiencing severe, extreme and exceptional drought. In terms of severe weather, snow, ice, and freezing temperatures plagued much of the northern half of the Southern Region, causing airport closures/flight cancellations, school closures, power outages, and fatalities. According to TimesFreePress.com, over the period of February 16 to February 25, approximately 30 fatalities occurred in Tennessee due to winter weather. Most of the deaths were the result of hypothermia or vehicle accidents. (source: http://www.timesfreepress.com/news/local/story/2015/feb/25/tennessees-winter-storm-death-toll-hits-30/290124/).

A snow storm at the end of the month caused havoc in the Dallas area and over much of Northern Texas. The storm dumped several inches of snow, and Highway US 75 was closed in both directions just north of Dallas.



Released Thursday, March 5, 2015
David Simeral, Western Regional Climate Center

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	36.76	63.24	35.83	20.17	10.48	2.47
Last Week 2/24/2015	33.91	66.09	40.23	20.98	10.95	3.02
3 Months Ago 12/2/2014	46.47	53.53	32.26	16.58	7.24	1.97
Start of Calendar Year 12/30/2014	41.57	58.43	33.88	18.43	8.80	2.36
Start of Water Year 9/30/2014	41.74	58.26	35.49	22.66	8.47	1.98
One Year Ago 3/4/2014	32.43	67.57	42.36	19.69	6.04	0.86

Intensity:

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

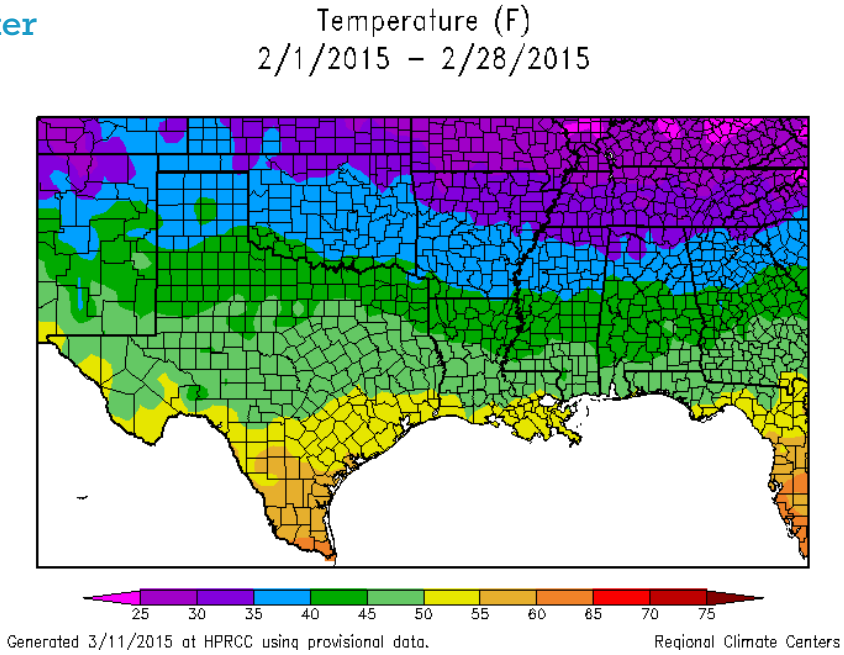
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Above: Drought conditions in the Southern Region. Map is valid for March 3, 2015. Image is courtesy of National Drought Mitigation Center.

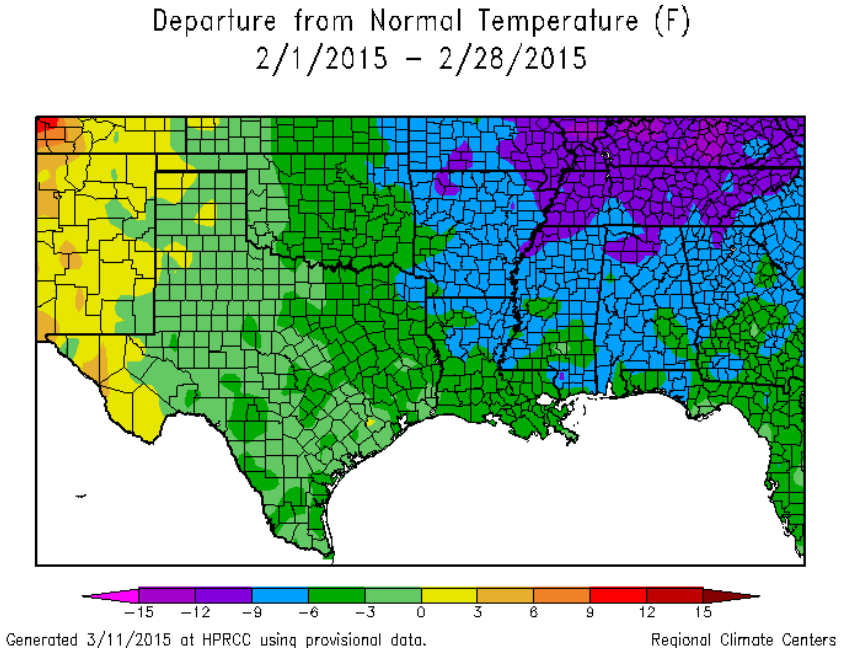
Temperature Summary

Luigi Romolo,
Southern Regional Climate Center

February was a cold month for all six states in the Southern Region. In Texas and Oklahoma, temperatures averaged between 2 to 5 degrees F (1.11 to 2.78 degrees C) below normal. Elsewhere, temperatures were even colder, ranging between 5 to 10 degrees F (2.78 to 5.56 degrees C) below normal. Further to this, stations in northern Tennessee reported average temperatures between 10 and 15 degrees F (5.56 to 8.33 degrees C) below the monthly normal. The state-wide average temperatures are as follows: Arkansas averaged 36.20 degrees F (2.33 degrees C), Louisiana averaged 47.50 degrees F (8.61 degrees C), Mississippi averaged 41.80 degrees F (5.44 degrees C), Oklahoma averaged 38.10 degrees F (3.39 degrees C), Tennessee averaged 31.40 degrees F (-0.33 degrees C), and Texas averaged 48.40 degrees F (9.11 degrees C). Both Arkansas and Tennessee recorded their eighth coldest February on record (1895-2015). For Mississippi it was the eleventh coldest February, while Louisiana posted its fourteenth coldest February on record (1895-2015). All other state rankings fell within the two middle quartiles.



Average February 2015 Temperature across the South

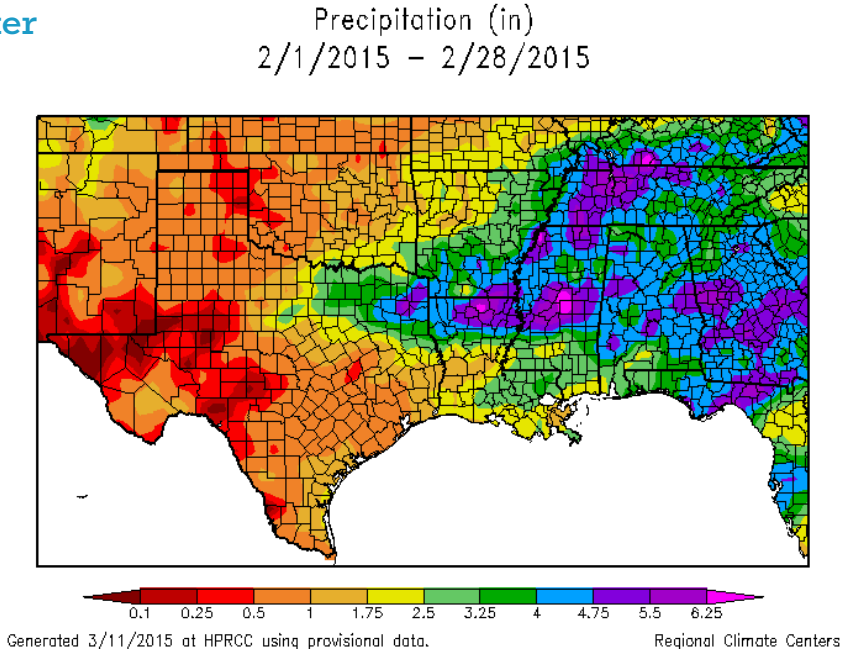


Average Temperature Departures from 1971-2000 for February 2015 across the South

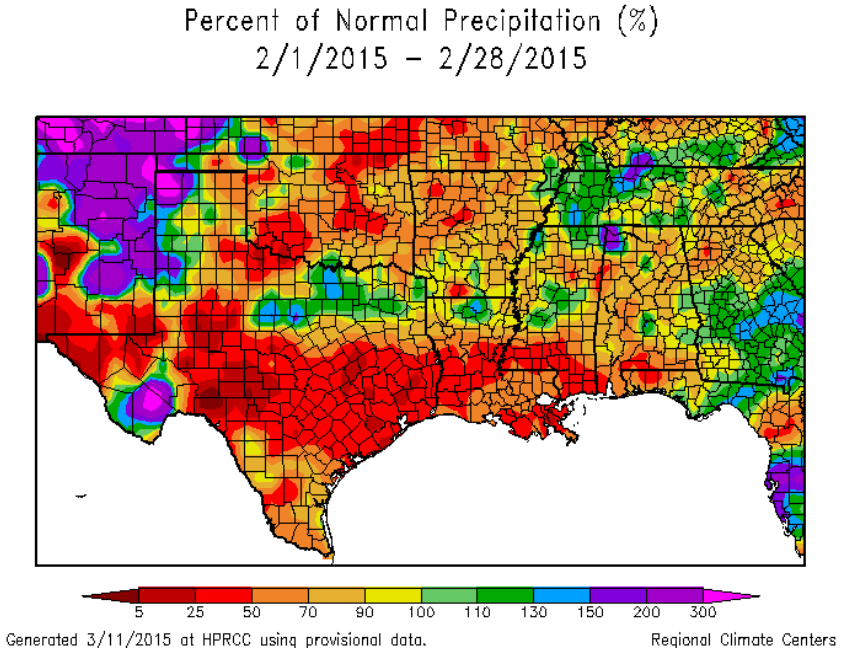
Precipitation Summary

Luigi Romolo,
Southern Regional Climate Center

With the exception of western Tennessee, the month of February was a drier than normal month. Conditions were especially dry throughout central Texas, where most stations received half (or less) of the normal precipitation for the month. Similar shortfalls were observed across central Louisiana, southwestern Oklahoma, and southern Mississippi. Elsewhere, precipitation totals ranged between 70 to 90 percent of normal, except for in western Tennessee, where most stations reported values that were near normal to slightly above normal. The state-wide average precipitation totals for the month of February are as follows: Arkansas averaged 3.09 inches (78.49 mm), Louisiana averaged 2.91 inches (73.91 mm), Mississippi averaged 4.09 inches (103.89 mm), Oklahoma averaged 1.07 inches (27.18 mm), Tennessee averaged 4.29 inches (108.97 mm), and Texas averaged 1.06 inches (26.92 mm). For Louisiana, it was their twenty-seventh driest February on record (1895-2015). All other state rankings fell within the two middle quartiles.

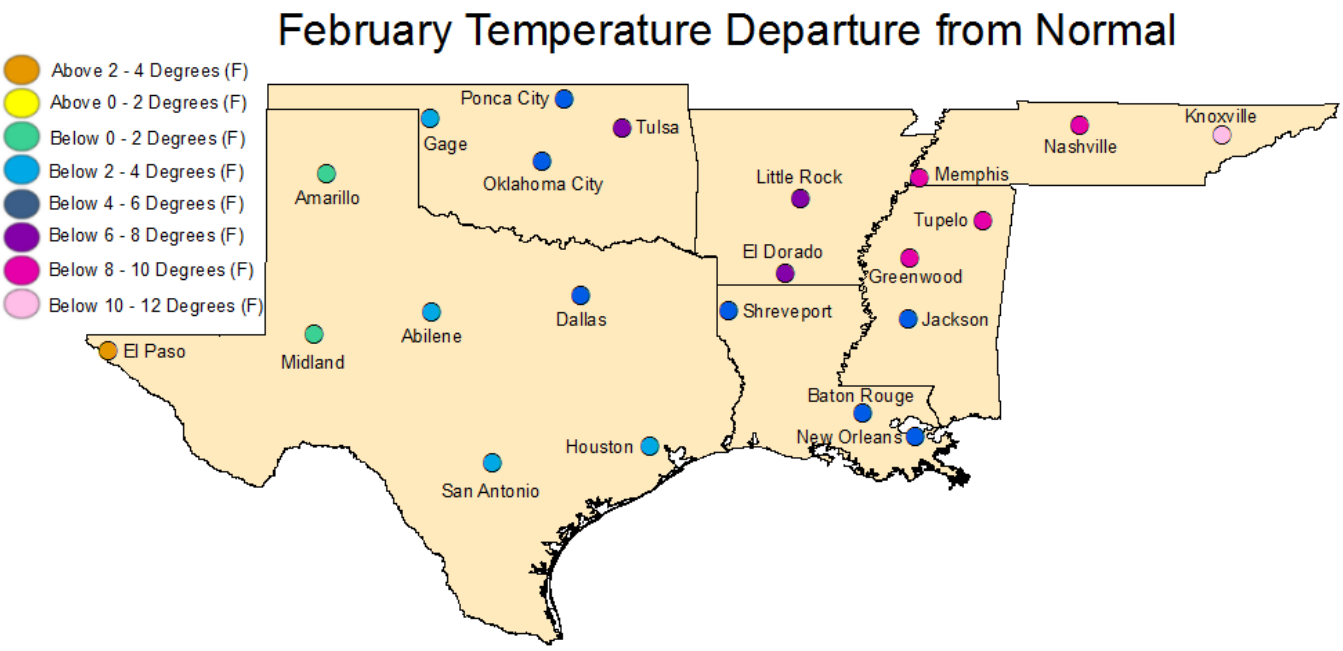


February 2015 Total Precipitation across the South

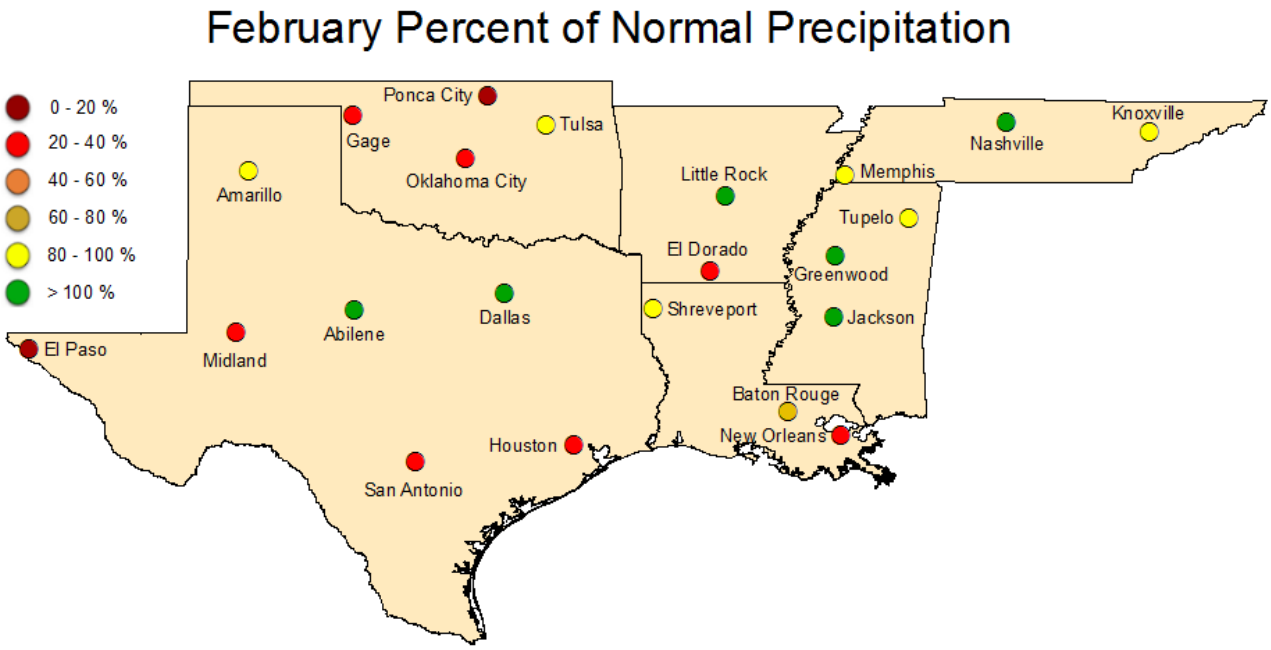


Percent of 1971-2000 normal precipitation totals for February 2015 across the South

Regional Climate Perspective in Pictures



February 2015 Temperature Departure from Normal from 1971-2000 for SCIPP Regional Cities



February 2015 Percent of 1971-2000 Normal Precipitation Totals for SCIPP Regional Cities

Climate Perspective

State	Temperature	Rank (1895-2011)	Precipitation	Rank (1895-2011)
Arkansas	36.20	8th Coldest	3.09	53rd Driest
Louisiana	47.50	14th Coldest	2.91	27th Driest
Mississippi	41.80	11th Coldest	4.09	44th Driest
Oklahoma	38.10	31st Coldest	1.07	43rd Driest
Tennessee	31.40	8th Coldest	4.29	52nd Wettest
Texas	48.40	45th Coldest	1.06	37th Driest

State temperature and precipitation values and rankings for February 2015. Ranks are based on the National Climatic Data Center's Statewide, Regional, and National Dataset over the period 1 895-201 1 .

Station Summaries Across the South

Station Summaries Across the South

Station Name	Temperatures								Precipitation (inches)		
	Averages				Extremes				Totals		
	Max	Min	Mean	Depart	High	Date	Low	Date	Obs	Depart	%Norm
El Dorado, AR	51.0	29.5	40.2	-7.5	73	02/14	22	02/27+	1.34	-3.45	28
Little Rock, AR	47.5	28.6	38.1	-6.7	75	02/14	19	02/19	3.84	0.18	105
Baton Rouge, LA	61.4	38.1	49.8	-5.3	79	02/09	28	02/18	3.38	-1.66	67
New Orleans, LA	61.4	43.4	52.4	-4.3	79	02/22	30	02/18	2.03	-3.27	38
Shreveport, LA	55.3	35.0	45.2	-5.4	76	02/14+	26	02/24	4.28	-0.47	90
Greenwood, MS	49.4	28.8	39.1	-8.4	72	02/08	17	02/19	4.95	0.53	112
Jackson, MS	55.0	32.4	43.7	-5.8	74	02/08	23	02/19+	5.48	0.72	115
Tupelo, MS	46.7	27.1	36.9	-9.0	68	02/08	13	02/19	4.92	-0.04	99
Gage, OK	51.2	20.9	36.0	-2.6	86	02/07	8	02/24	0.27	-0.52	34
Oklahoma City, OK	51.2	27.1	39.1	-4.6	80	02/14	16	02/02	0.41	-1.17	26
Ponca City, OK	47.8	22.0	34.9	-4.8	78	02/08	10	02/02	0.23	-1.11	17
Tulsa, OK	47.5	24.5	36.0	-6.3	79	02/08	11	02/02	1.57	-0.28	85
Knoxville, TN	41.4	22.8	32.1	-10.3	63	02/08	3	02/20	3.75	-0.51	88
Memphis, TN	45.0	27.4	36.2	-9.3	66	02/14	13	02/19	4.35	-0.04	99
Nashville, TN	42.5	22.4	32.5	-9.2	65	02/07	5	02/19	4.60	0.66	117
Abilene, TX	58.1	33.5	45.8	-2.8	83	02/10	19	02/27	1.74	0.38	128
Amarillo, TX	55.1	25.3	40.2	-0.1	83	02/07	11	02/28+	0.47	-0.09	84
El Paso, TX	67.1	39.0	53.0	2.9	79	02/08	26	02/28	0.03	-0.43	7
Dallas, TX	56.3	35.0	45.7	-4.2	78	02/14	24	02/27+	2.96	0.30	111
Houston, TX	63.4	41.7	52.5	-3.9	83	02/09	31	02/26	0.66	-2.54	21
Midland, TX	59.6	34.1	46.8	-1.7	82	02/10	19	02/27	0.26	-0.45	37
San Antonio, TX	63.0	43.3	53.2	-2.4	84	02/09	32	02/24+	0.53	-1.26	30

Summary of temperature and precipitation information from around the region for February 2015. 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 wdays. 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.

Are You Ready to Spring Forward?

Barry Keim, Louisiana State Climatologist, Louisiana State University

Any mention of spring is much welcomed right now, even if that spring means propelling your clock forward to start daylight saving time (DST). The start of DST is also a signal that seasonal spring is right around the corner...so hang on a little longer. Apparently, DST was first proposed in 1895 by a Kiwi entomologist named George Vernon Hudson. So what is a Kiwi entomologist you ask? Well, it's a person from New Zealand who studies insects, and our Mr. Hudson apparently valued afternoon and after-work daylight for the purpose of collecting insect specimens. DST was first used on a large scale by the Germans during World War I in an effort to conserve coal during the war, but the practice was mostly abandoned after the war. The practice took wings in the United States during the 1970s in response to the energy crisis at the time and it has more or less remained in place here. In the U.S., from 1987-2006, DST ran from the first Sunday in April to the last Sunday in October. However, given the wide acceptence and preference of the practice in the United States, the timeframe has since been exteneded and now begins on the second Sunday in March and runs to the first Sunday in November. Oh, and did you know that Arizona does not practice DST, and they currently are the only State that does not accept the practice.

Now, DST is still often sold to the public as a means of saving energy, and it probably did during World War I. However, modern economic studies no longer support this notion. The reason many believe this practice is so popular today is because it increases consumerism in the form of retailing, sports, and tourism, though farmers are generally opposed to it – heck they already get up early and with DST they need to get up even earlier! Personally, I like the practice in one sense, but not in another. I do appreciate the extra daylight in the evenings much more than I would appreciate the daylight in the morning. BUT, I do have a fundamental problem with practice of changing the time for OUR convenience, when noon is supposed to best represent the time when the sun reaches the highest point in the sky during the day. However, with DST, the sun's zenith then occurs nearest to 1 pm. It would make more sense to me for the general public to get over the notion of moving time on the clock for convenience, and adjust our working hours by an hour during the time of year when we practive DST. In other words, get to work an hour earlier and get off of work an hour earlier – while maintaining standard time - rather than shifting the clock, which is based on the sun's position in the sky. I know I'm going to lose this argument, but at least I got this opportunity to vent about it. Whether you like DST or not, make sure to spring your clock forward early on Sunday morning, or more likely, before you go to bed on Saturday night, or you're likely to miss some important events on Sunday! If you have any questions, feel free to contact me at keim@lsu.edu.

Figure 1. The U.S. Senate clock being changed for the first Daylight Saving Time in the United States in 1918. Image is in the public domain and can be found at http://commons.wikimedia.org/wiki/File:First_Daylight_Savings_Time_(Cropped).png.

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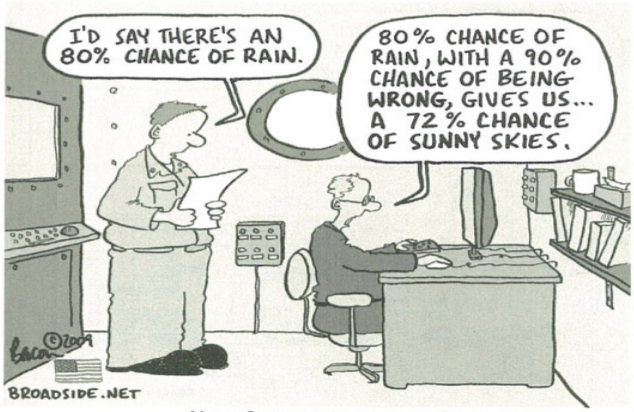
Contact Us

To provide feedback or suggestions to improve the content provided in the Monitor, please contact us at 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 & 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 225-578-5021.

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.

Monthly Comic Relief



How forecasts are made

SCIPP
A NOAA RISA TEAM