

The Importance of water



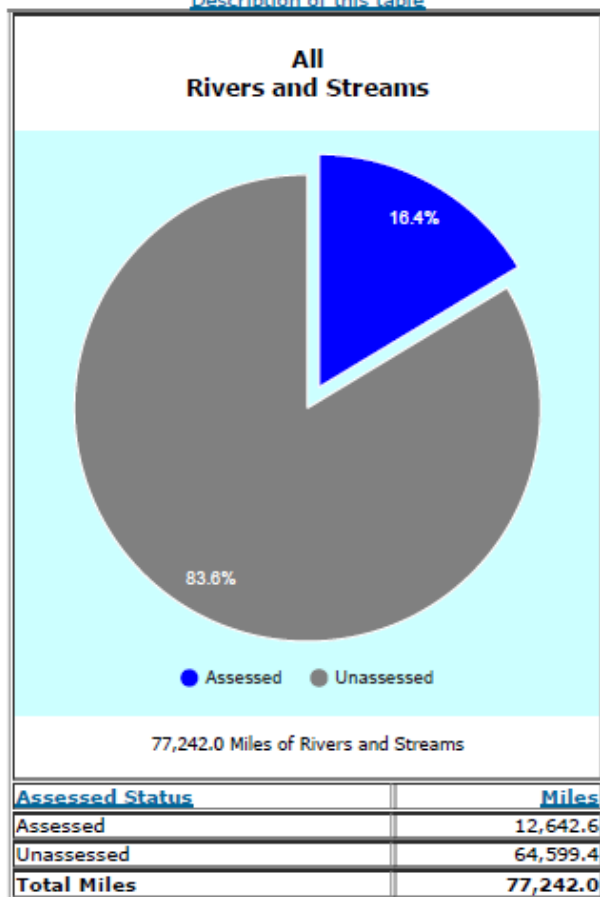
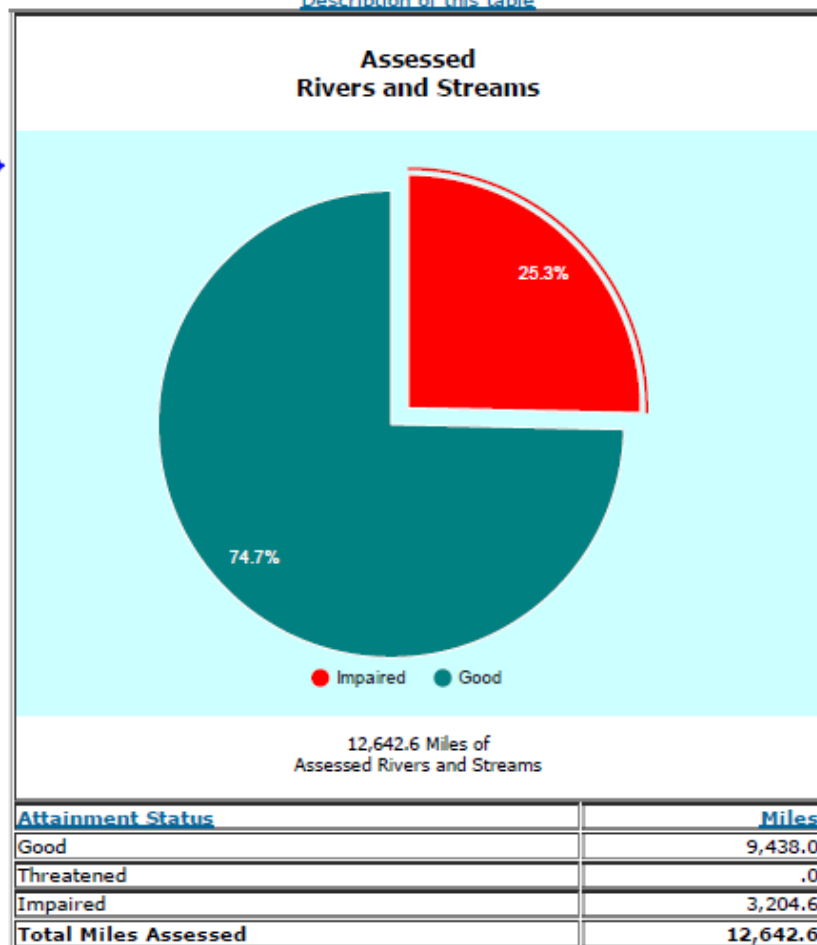
**2014 INTEGRATED WATER QUALITY
MONITORING AND ASSESSMENT REPORT**



**Water Quality in Alabama
2012-2014**

Summary of Water Quality Assessments for Each Waterbody Type for Reporting Year 2014

Site-specific Targeted Monitoring Results Alabama Rivers and Streams 2014

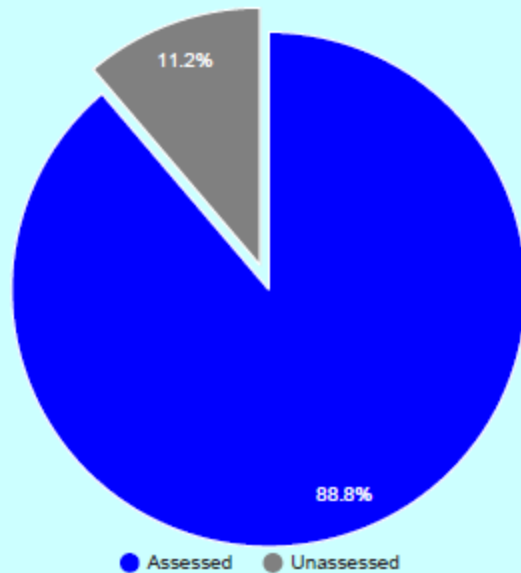
[Description of this table](#)

[Description of this table](#)


Site-specific Targeted Monitoring Results

Alabama Lakes, Reservoirs, and Ponds 2014

[Description of this table](#)

**All
Lakes, Reservoirs, and Ponds**

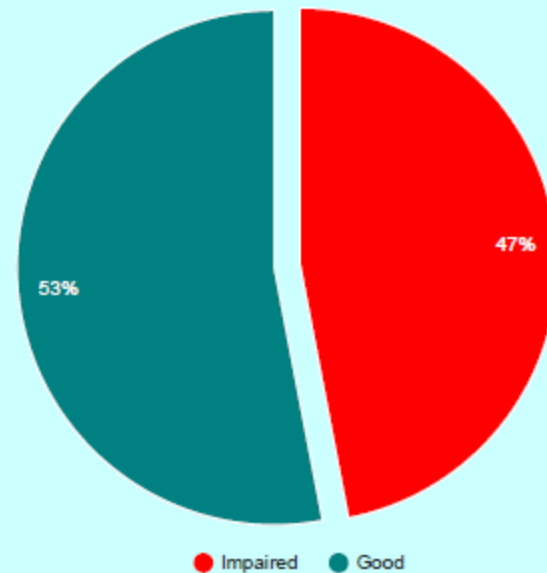


490,472.0 Acres of Lakes, Reservoirs, and Ponds

<u>Assessed Status</u>	<u>Acres</u>
Assessed	435,384.3
Unassessed	55,087.8
Total Acres	490,472.0

[Description of this table](#)

**Assessed
Lakes, Reservoirs, and Ponds**



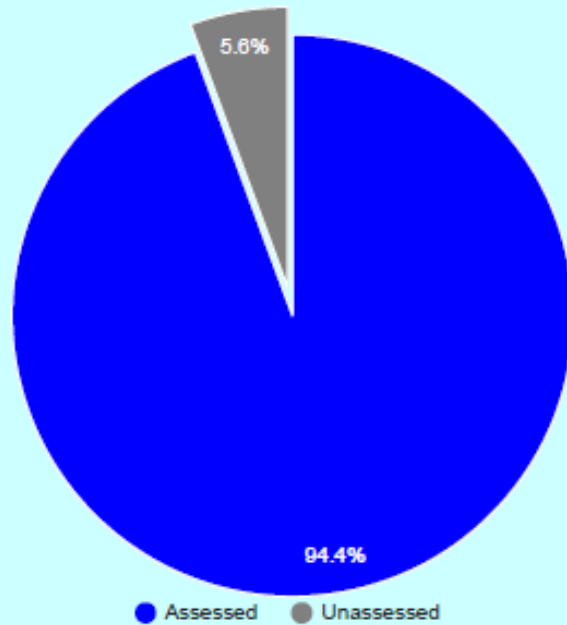
435,384.3 Acres of
Assessed Lakes, Reservoirs, and Ponds

<u>Attainment Status</u>	<u>Acres</u>
Good	230,778.8
Threatened	.0
Impaired	204,605.4
Total Acres Assessed	435,384.3

Site-specific Targeted Monitoring Results Alabama Bays and Estuaries 2014

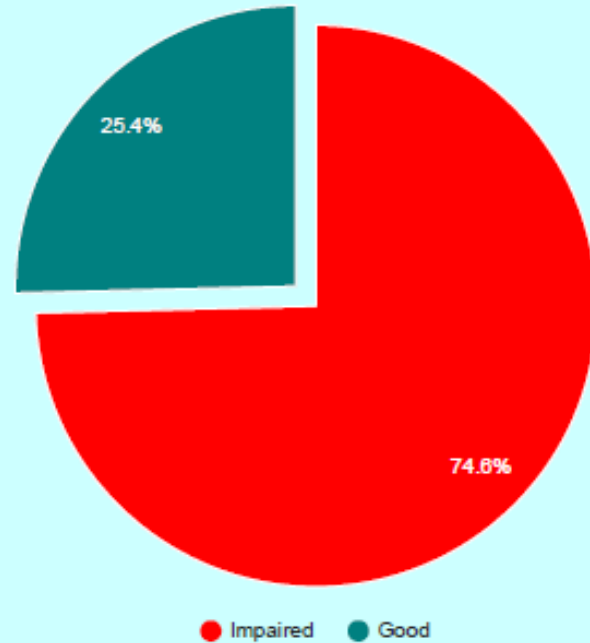
[Description of this table](#)

**All
Bays and Estuaries**



[Description of this table](#)

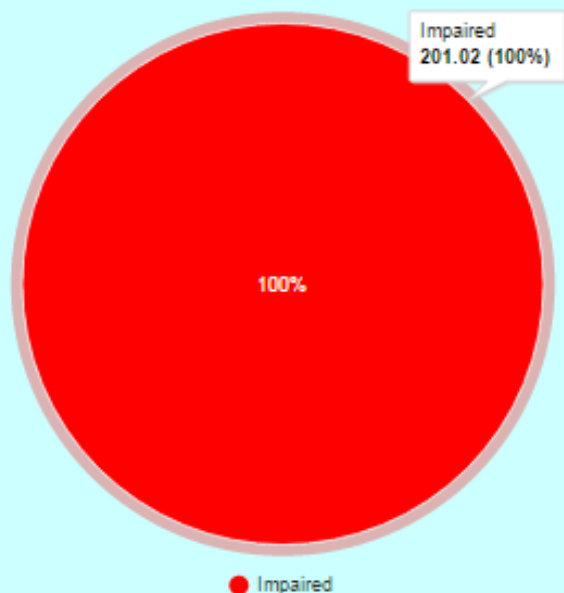
**Assessed
Bays and Estuaries**



Site-specific Targeted Monitoring Results Alabama Ocean and Near Coastal 2014

[Description of this table](#)

Assessed Ocean and Near Coastal



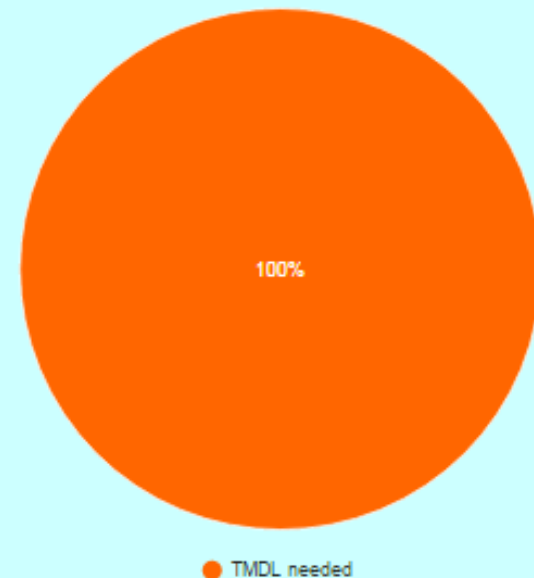
201.0 Square Miles of
Assessed Ocean and Near Coastal

Attainment Status	Square Miles
Good	.0
Threatened	.0
Impaired	201.0
Total Square Miles Assessed	201.0



[Description of this table](#)

Threatened and Impaired Ocean and Near Coastal



201.0 Square Miles of
Threatened and Impaired
Ocean and Near Coastal

TMDL Development Status	Square Miles
All TMDLs completed	.0
TMDL alternative	.0
Non-pollutant impairment	.0
TMDL needed	201.0
Total Threatened and Impaired	201.0

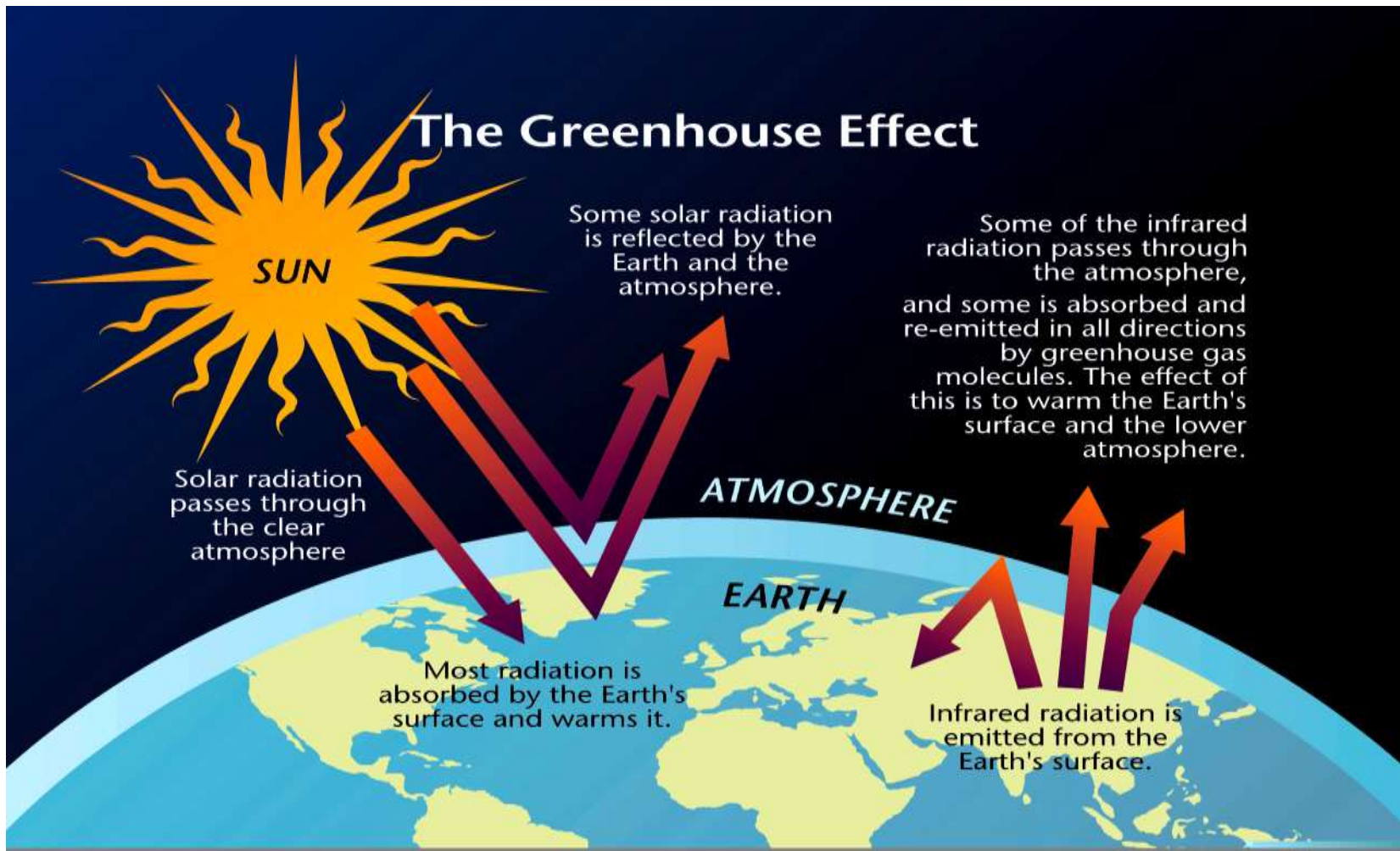
Alabama Probable Sources Contributing to Impairments for Reporting Year 2014

[Description of this table](#)

NOTE: Click on the underlined Probable Source Group to see a list of specific state Probable Sources making up the Probable Source Group.

Probable Source Group	Size of Assessed Waters with Probable Sources of Impairments			
	Rivers and Streams (Miles)	Lakes, Reservoirs, and Ponds (Acres)	Bays and Estuaries (Square Miles)	Ocean and Near Coastal (Square Miles)
Agriculture	1,393.4	93,606.1		
Aquaculture ★	9.0			
Atmospheric Deposition ★	894.7	40,891.2	.7	201.0
Construction ★	352.4			
Habitat Alterations (Not Directly Related To Hydromodification)	56.4			
Hydromodification	39.4	58,712.6		
Industrial	265.7	32,909.9	94.6	
Land Application/Waste Sites/Tanks	44.8			
Legacy/Historical Pollutants	69.0	32,281.9		
Municipal Discharges/Sewage ★	563.4	12,276.8	7.7	
Natural/Wildlife	12.4			
Other	30.8	50,019.3		
Resource Extraction ★	351.2	412.5		
Silviculture (Forestry)	4.2			
Spills/Dumping		412.5		
Unknown	91.4	1,435.1		
Unspecified Nonpoint Source		62.6		
Urban-Related Runoff/Stormwater ★	757.7	22,499.2	426.2	

Climate Variability and Change



Source: *Climate Change Impacts on the US*, NAST, 2000

SPECIAL REPORT GLOBE

TIP

**BE WORRIED.
BE *VERY* WORRIED**

Climate change isn't some vague future problem—it's already damaging the planet at an alarming pace. Here's how it affects you, kids and their kids as well.

**EARTH AT THE TIPPING POINT
HOW IT THREATENS YOU
HOW CHINA & INDIA CAN
SAVE THE WORLD—OR
THE CLIMATE *CRACKS***

NEW YORK FIGHTS BACK!

What you're not being told: Official City report predicts massive climate catastrophes, public health disasters.

 **NEW YORK POST** **Page Six**

EARLY CITY SPECIAL

 **WORLD LEADERS SLIP
ON UN SUMMIT SLOPE** 

WE'RE SCREWED

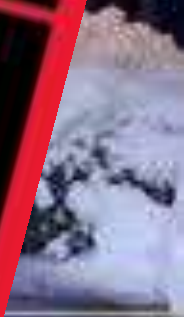


**NEW YORK
FIGHTS BACK!**

**What you're not being told:
Official City report predicts
massive climate catastrophes,
public health disasters.**

CLAC 83 HOU

**GLOBAL
WARMING,
RIPID**



CLAC 83 HOU

Near-term Climate Challenges and Opportunities in Southeast Water Resource Management

Steven McNulty, PhD
Director

USDA Southeast Climate Hub
smcnulty@fs.fed.us

U.S. Drought Monitor

CONUS

August 24, 2010






(Released Thursday, Aug. 26, 2010)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	73.99	26.01	8.01	1.44	0.14	0.00
Last Week <i>8/17/2010</i>	72.40	27.60	8.46	1.66	0.14	0.00
3 Months Ago <i>5/25/2010</i>	76.25	23.75	9.26	2.48	0.18	0.00
Start of Calendar Year <i>12/29/2009</i>	72.07	27.93	12.40	4.24	0.19	0.00
Start of Water Year <i>9/29/2009</i>	63.99	36.01	14.98	6.18	1.30	0.28
One Year Ago <i>8/25/2009</i>	68.13	31.87	14.13	6.02	2.33	1.66

Intensity:

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

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

Author(s):

Brian Fuchs

National Drought Mitigation Center

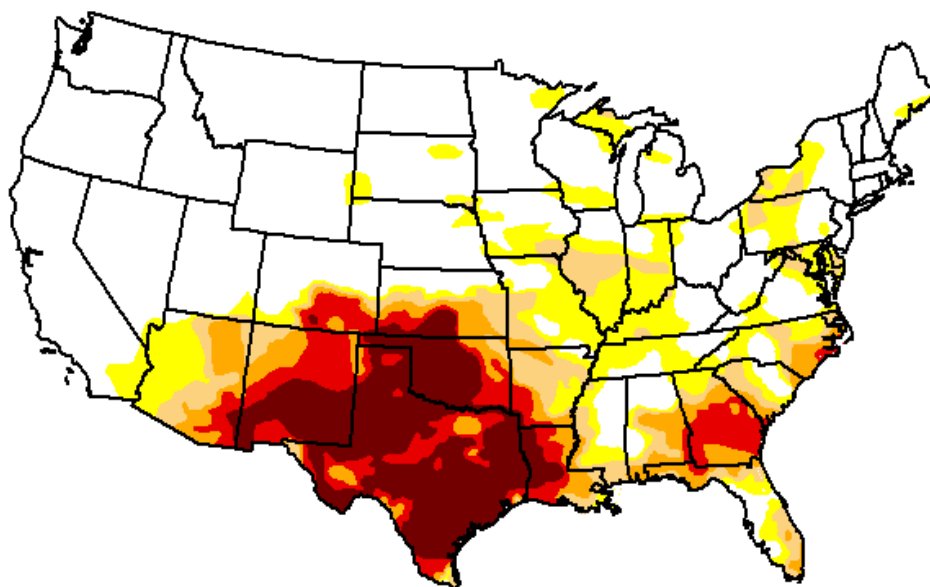


<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor

CONUS

August 16, 2011
 (Released Thursday, Aug. 18, 2011)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	55.14	44.86	31.00	23.43	17.37	10.83
Last Week 8/9/2011	55.01	44.99	32.86	24.74	18.48	11.46
3 Months Ago 5/17/2011	67.69	32.31	26.35	20.68	13.18	6.04
Start of Calendar Year 1/4/2011	60.50	39.50	21.74	8.50	2.60	0.00
Start of Water Year 9/28/2010	60.05	39.95	13.16	3.09	0.30	0.00
One Year Ago 8/17/2010	72.40	27.60	8.46	1.66	0.14	0.00

Intensity:

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

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

Author(s):

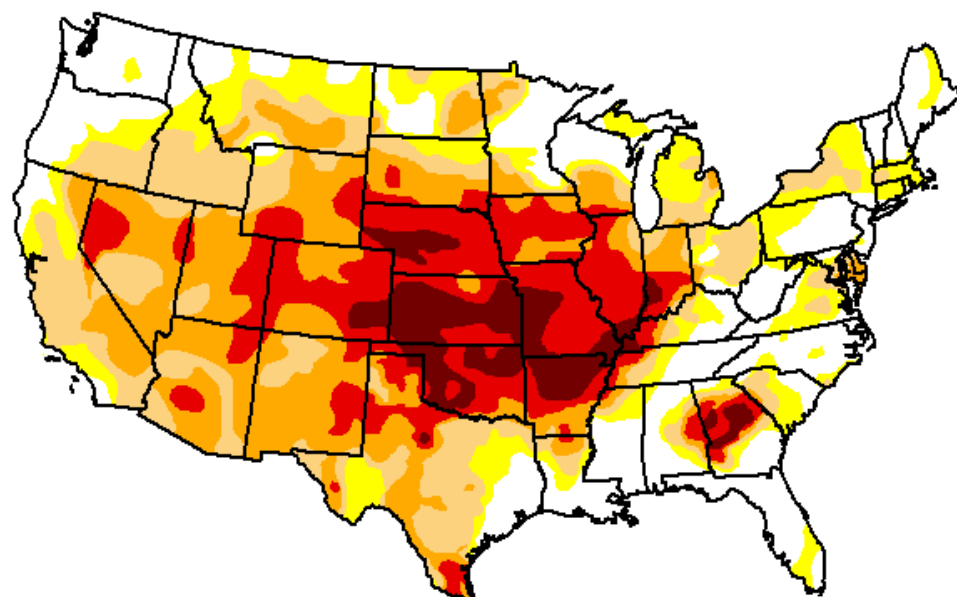
Laura Edwards
 Western Regional Climate Center



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor CONUS

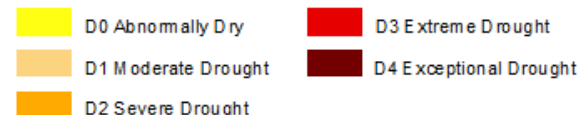
August 21, 2012
(Released Thursday, Aug. 23, 2012)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	22.72	77.28	63.20	44.03	23.01	6.31
Last Week 8/14/2012	22.32	77.68	61.77	45.54	23.68	6.26
3 Months Ago 5/22/2012	37.68	62.32	35.30	19.46	5.95	0.95
Start of Calendar Year 1/3/2012	50.41	49.59	31.90	18.83	10.18	3.32
Start of Water Year 9/27/2011	56.45	43.55	29.13	23.44	17.80	11.37
One Year Ago 8/23/2011	54.81	45.19	30.95	23.43	17.24	11.14

Intensity:



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

Author(s):

Michael Brewer
NCDC/NOAA



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor CONUS

August 27, 2013






(Released Thursday, Aug. 29, 2013)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	37.66	62.34	50.04	33.37	10.53	1.32
Last Week 8/20/2013	40.02	59.98	45.61	32.23	10.54	1.32
3 Months Ago 5/29/2013	43.13	56.87	44.34	29.56	11.75	4.74
Start of Calendar Year 1/1/2013	27.22	72.78	61.09	42.05	21.31	6.75
Start of Water Year 9/25/2012	23.41	76.59	65.45	42.12	21.48	6.12
One Year Ago 8/29/2012	22.31	77.69	62.89	42.34	23.18	6.04

Intensity:

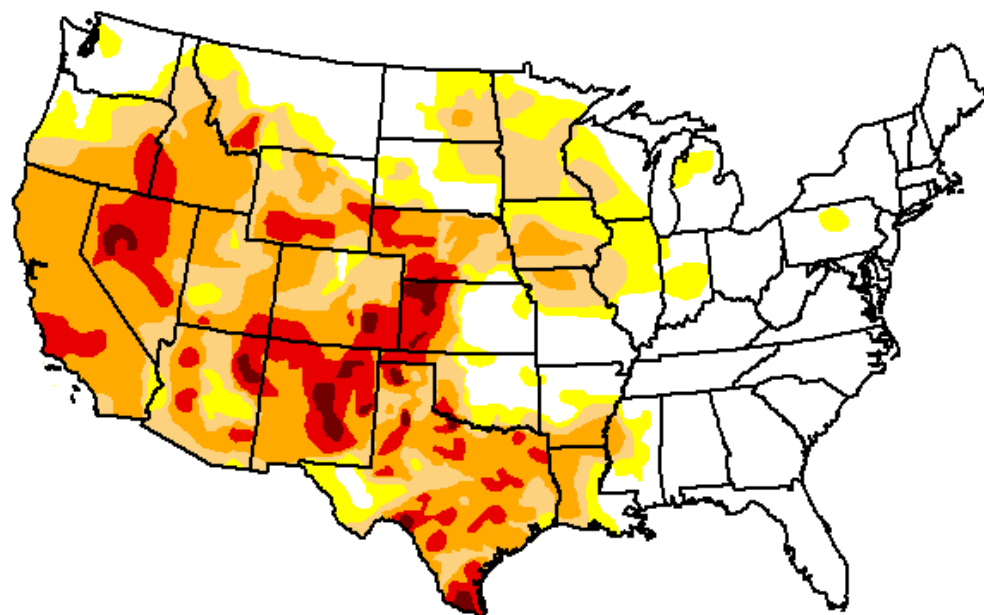
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 D2 Severe Drought	

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

Author(s):

Anthony Artusa

NOAA/NWS/NCEP/CPC



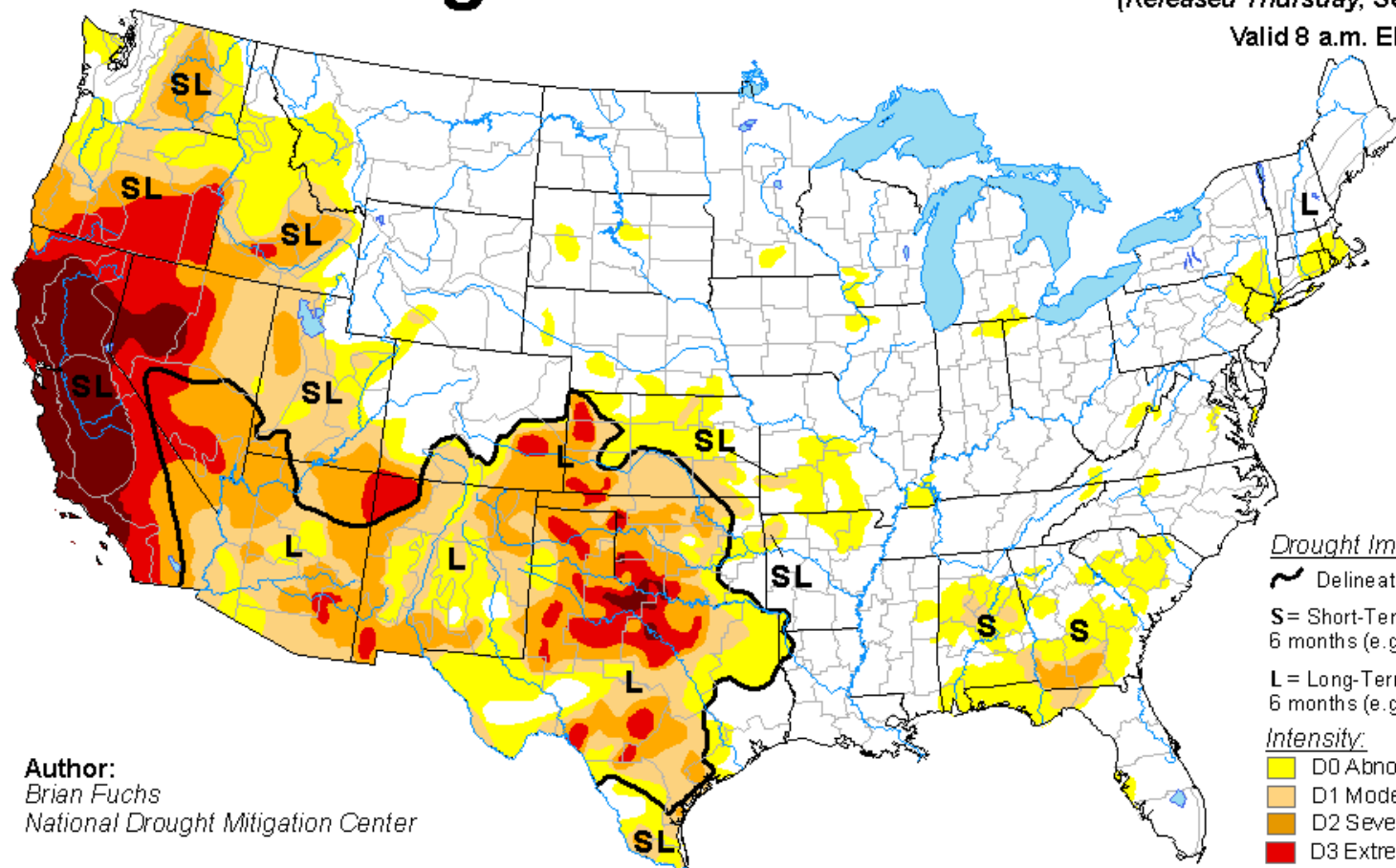
<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor

September 9, 2014

(Released Thursday, Sep. 11, 2014)

Valid 8 a.m. EDT



Drought Impact Types:

~ Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

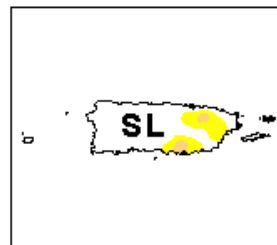
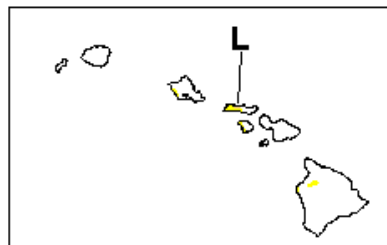
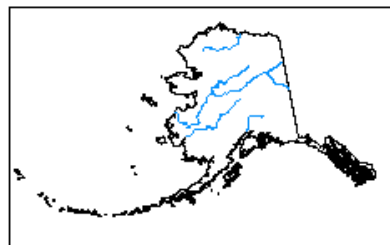
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

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.

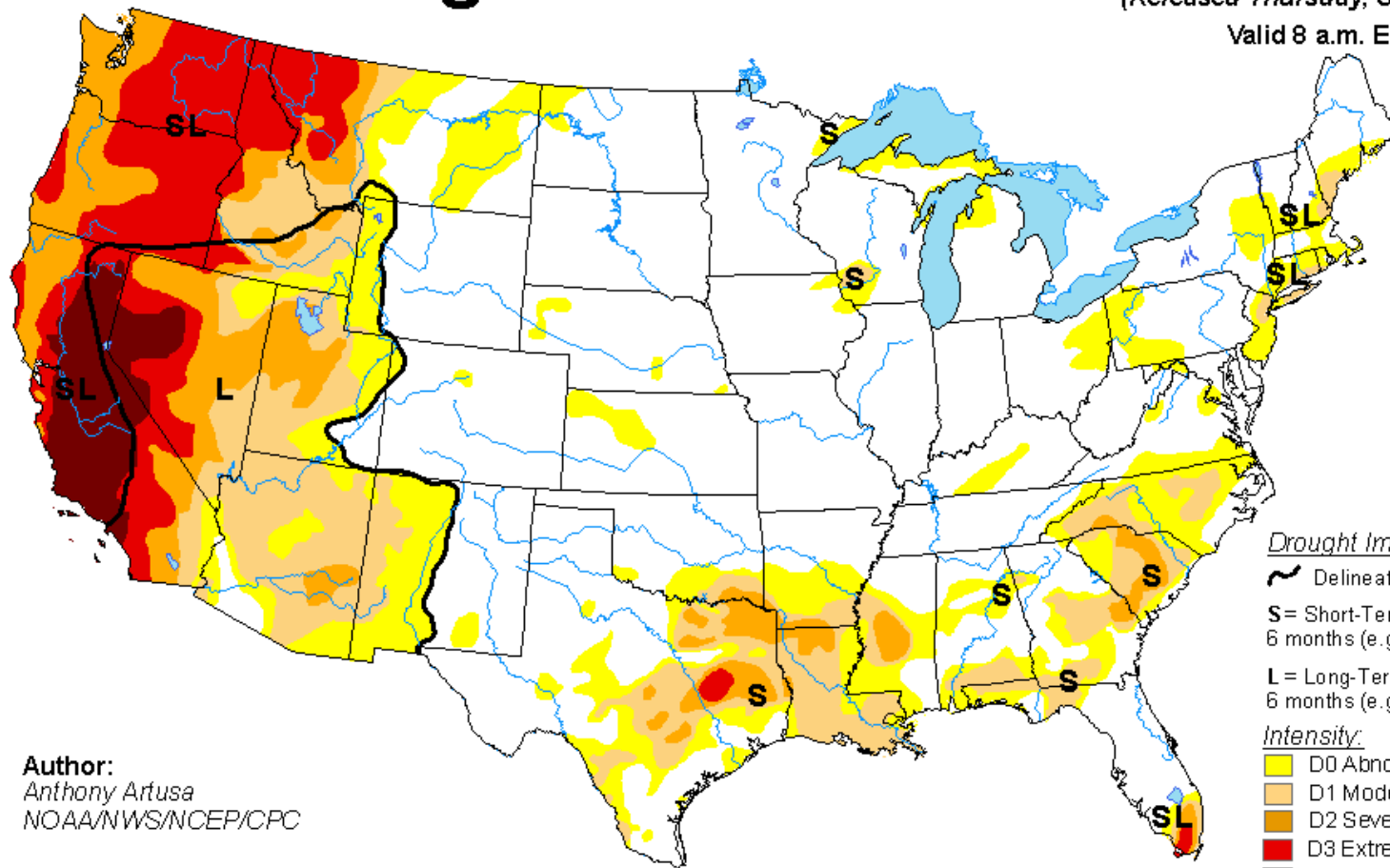
Author:
Brian Fuchs
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor

September 1, 2015
(Released Thursday, Sep. 3, 2015)
Valid 8 a.m. EDT



Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC

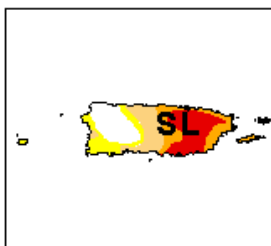
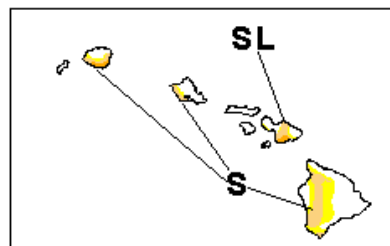
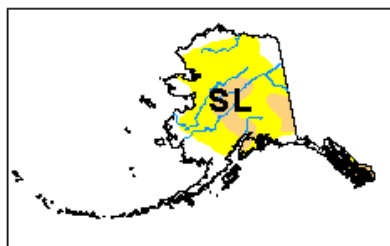
Drought Impact Types:

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- S** = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L** = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

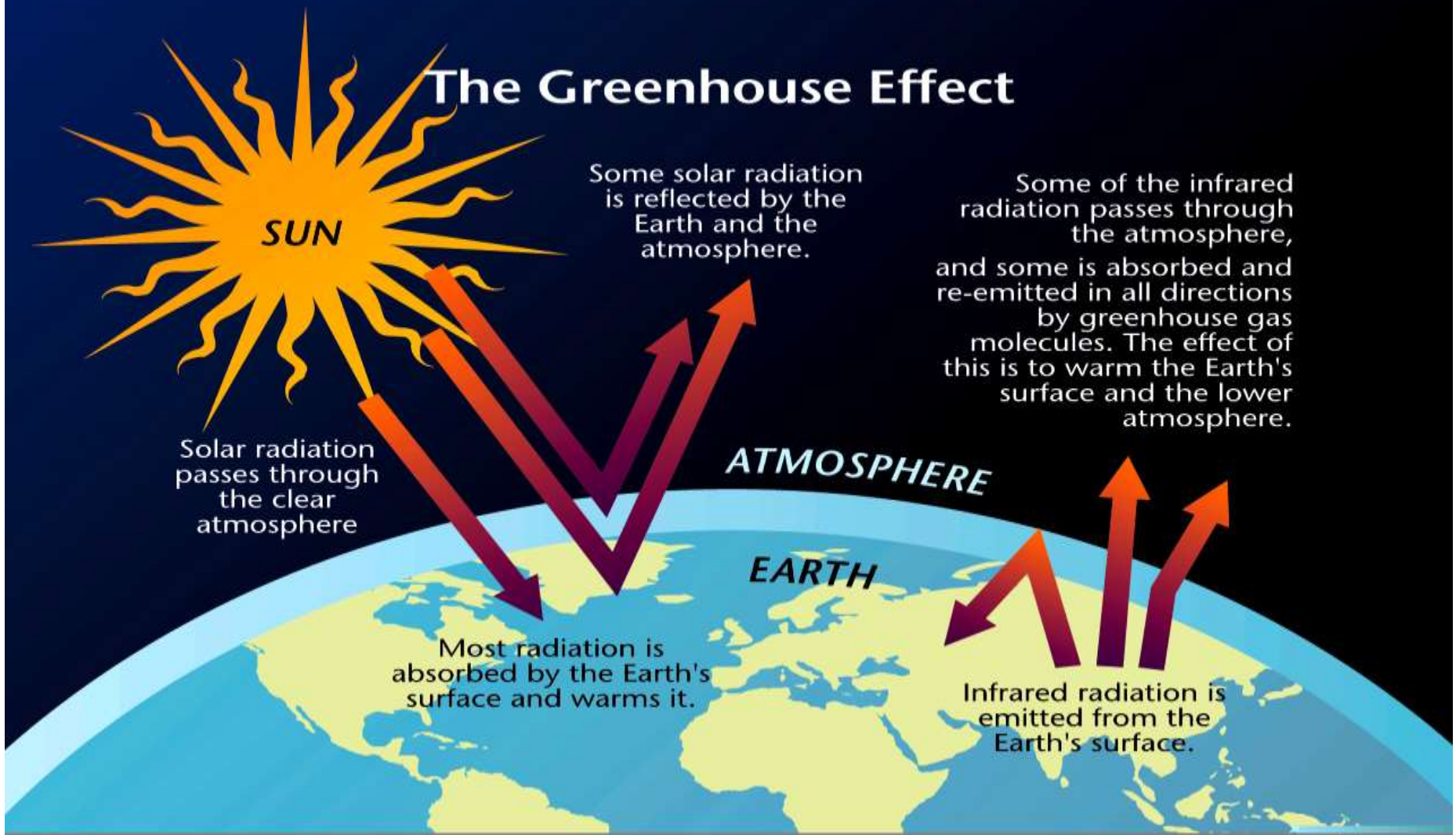
- D0 Abnormally Dry
- D1 Moderate Drought
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The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



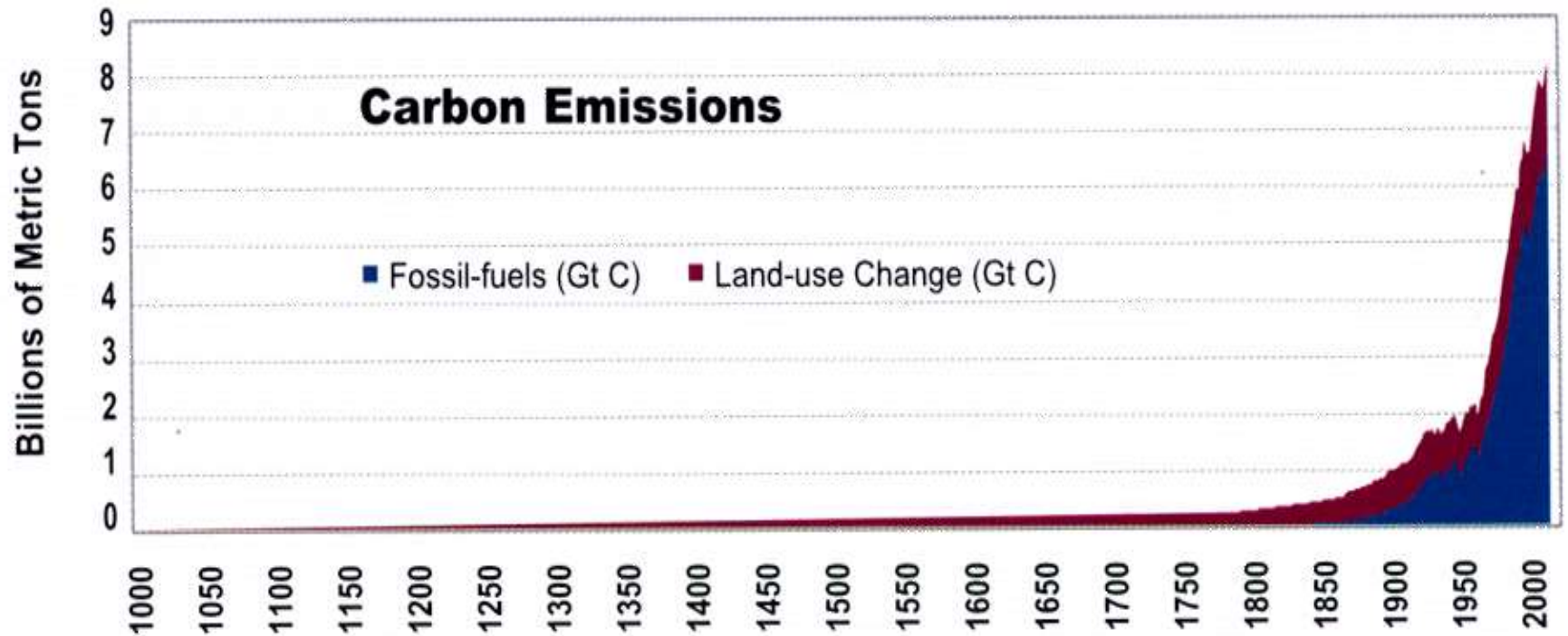
<http://droughtmonitor.unl.edu/>

The Greenhouse Effect



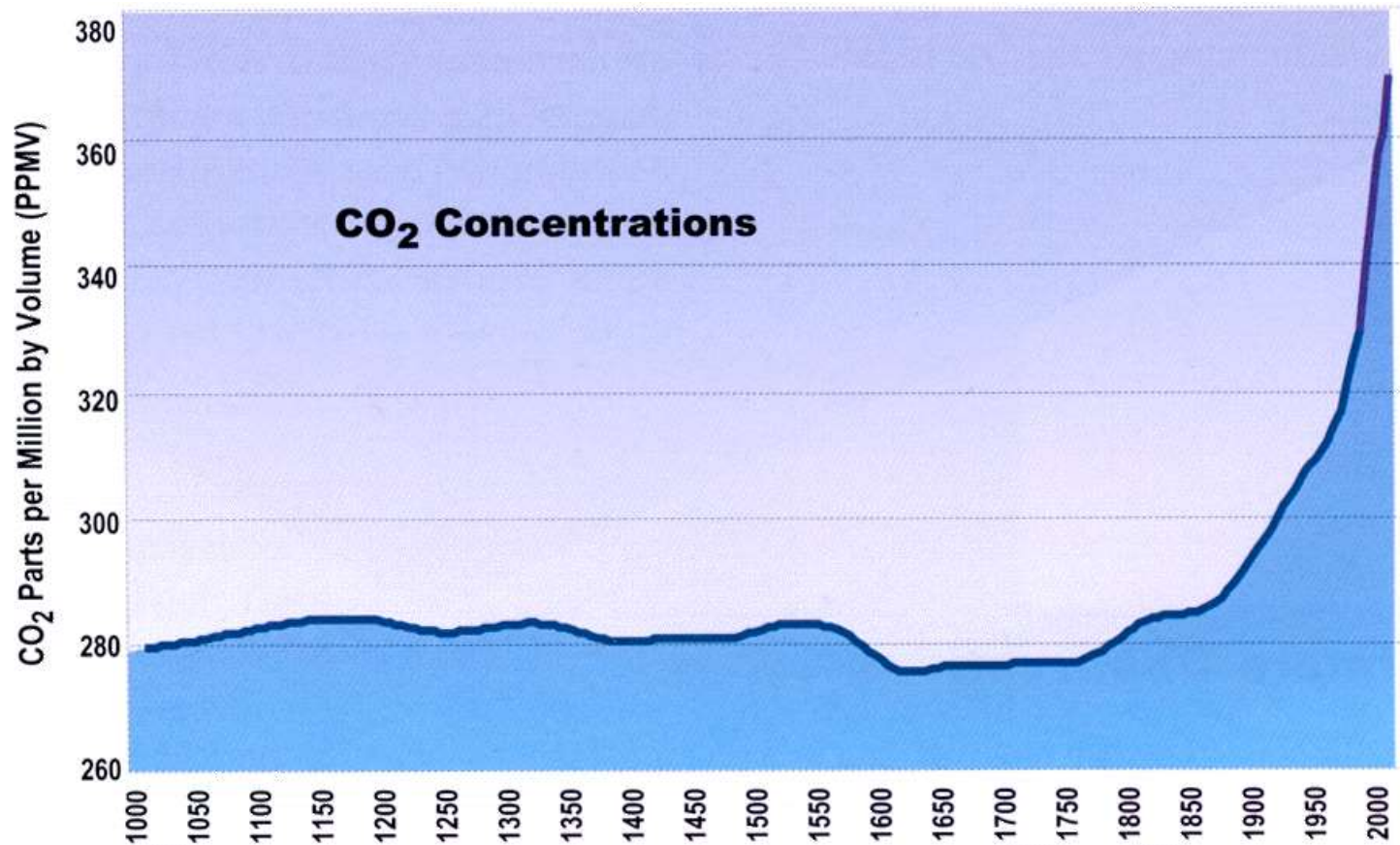
Source: *Climate Change Impacts on the US*, NAST, 2000

Northern Hemisphere Carbon Emissions



Source: Climate Change Impacts on the US, NAST, 2000

Atmospheric CO₂ Concentrations



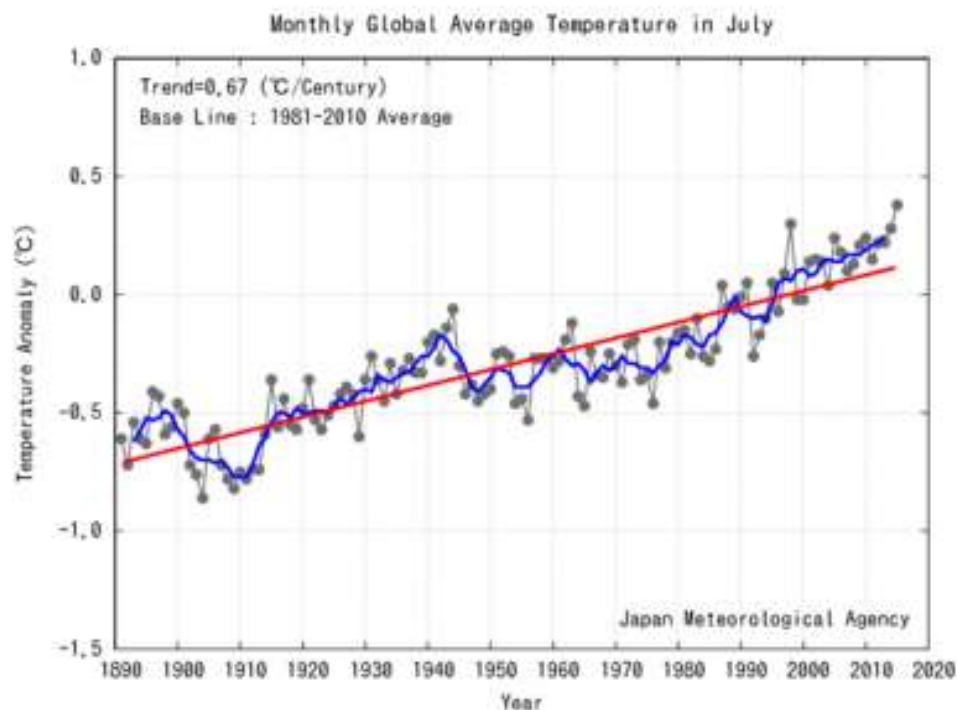
Source: Climate Change Impacts on the US, NAST, 2000

Global Warming Is Here and Now: July 2015 Was the Hottest Month on Record

By Phil Plait

Both **NASA** and the Japan Meteorological Agency are reporting that July 2015 was the hottest July on record—and those records go back to before 1900.

The **Japanese chart** makes this most clear:

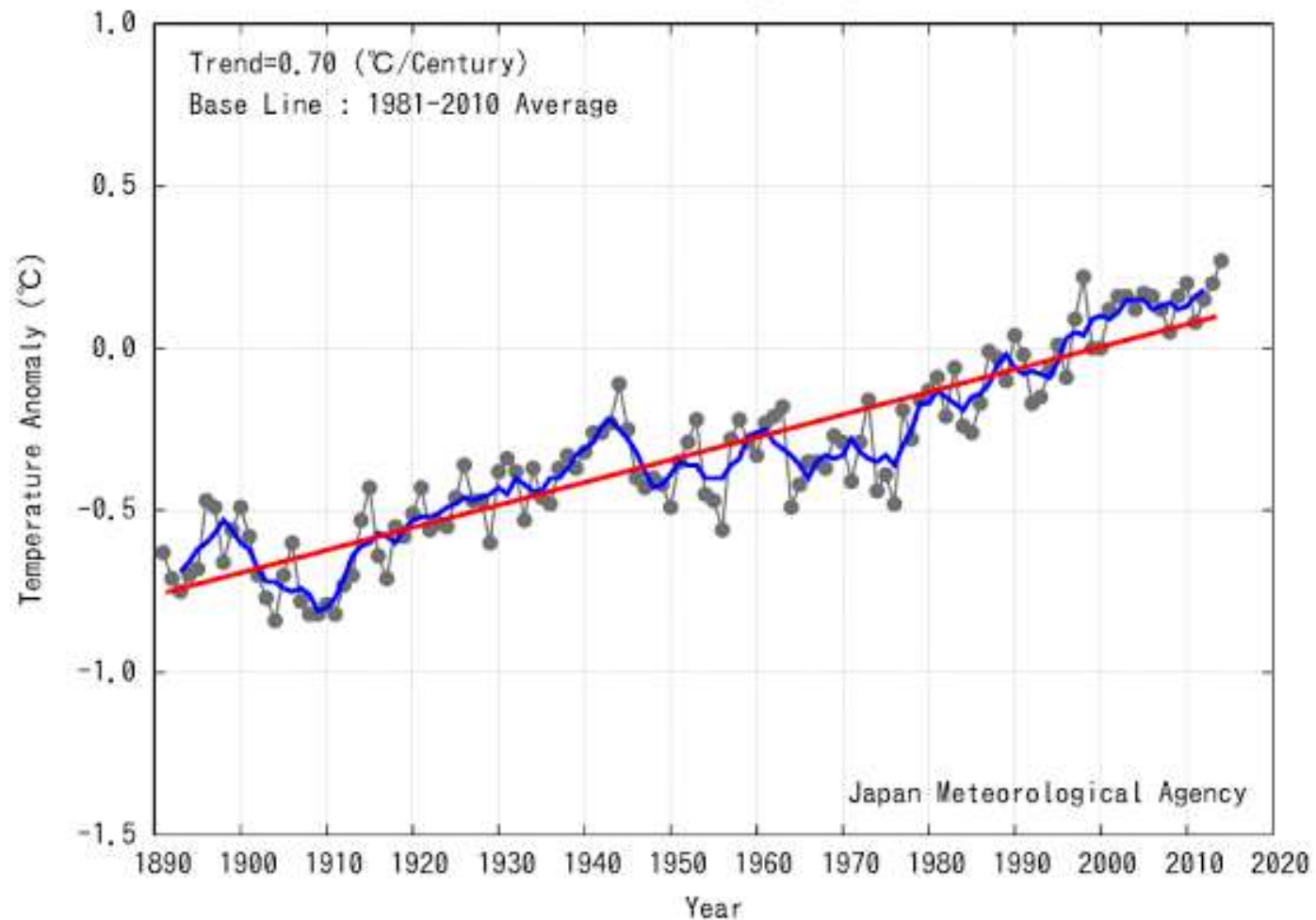


Anomalies are deviation from baseline (1981-2010 Average).
The black thin line indicates surface temperature anomaly of each year.
The blue line indicates their 5-year running mean.
The red line indicates the long-term linear trend.

Japanese Meteorological Agency data show that this last July was the hottest on record.
The plot shows deviations from the average temperature over the years 1981-2010.

Graph by JMA

Annual Global Average Temperature

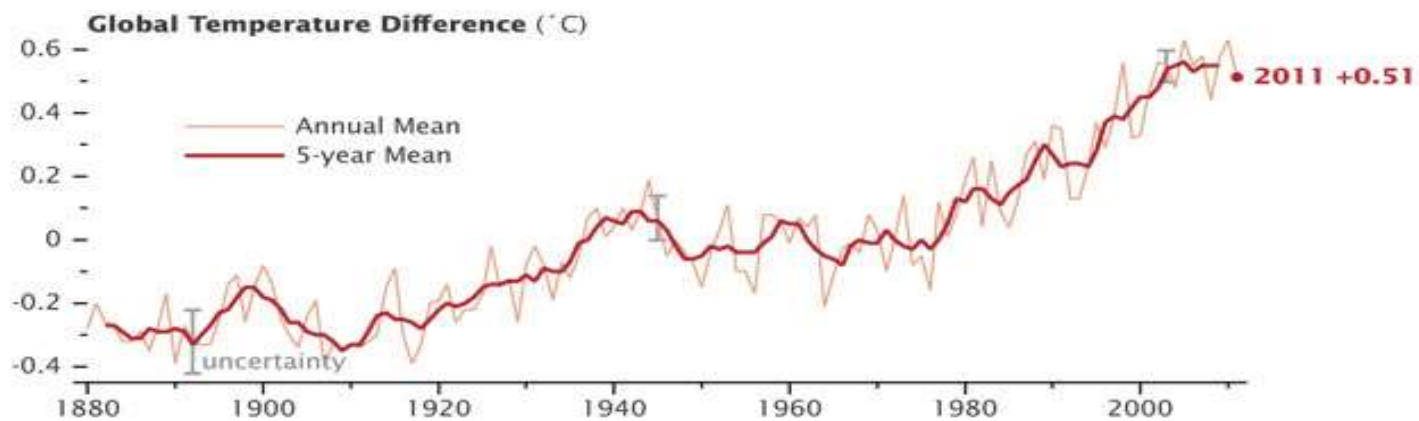
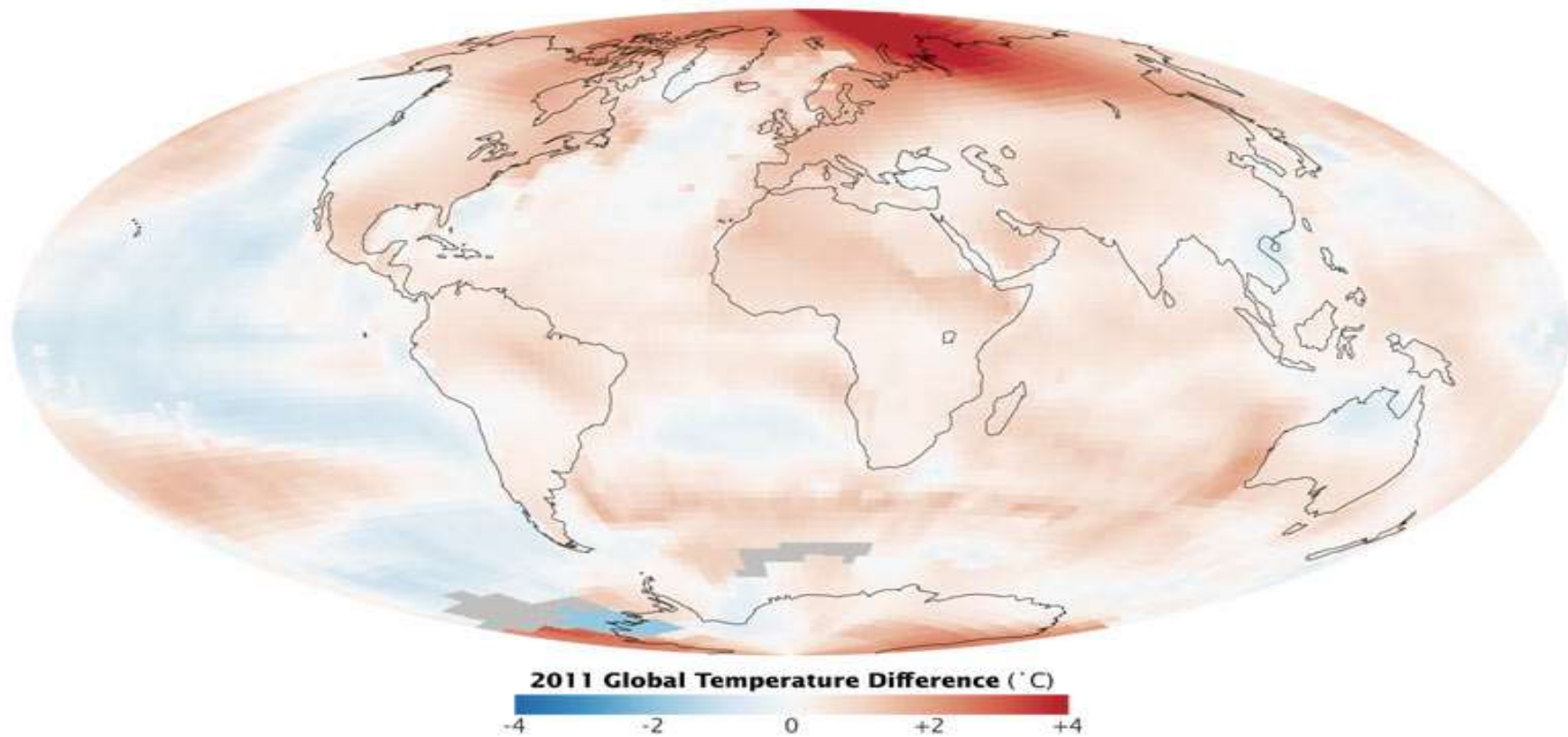


Anomalies are deviation from baseline (1981-2010 Average).

The black thin line indicates surface temperature anomaly of each year.

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Changes in Earth axis

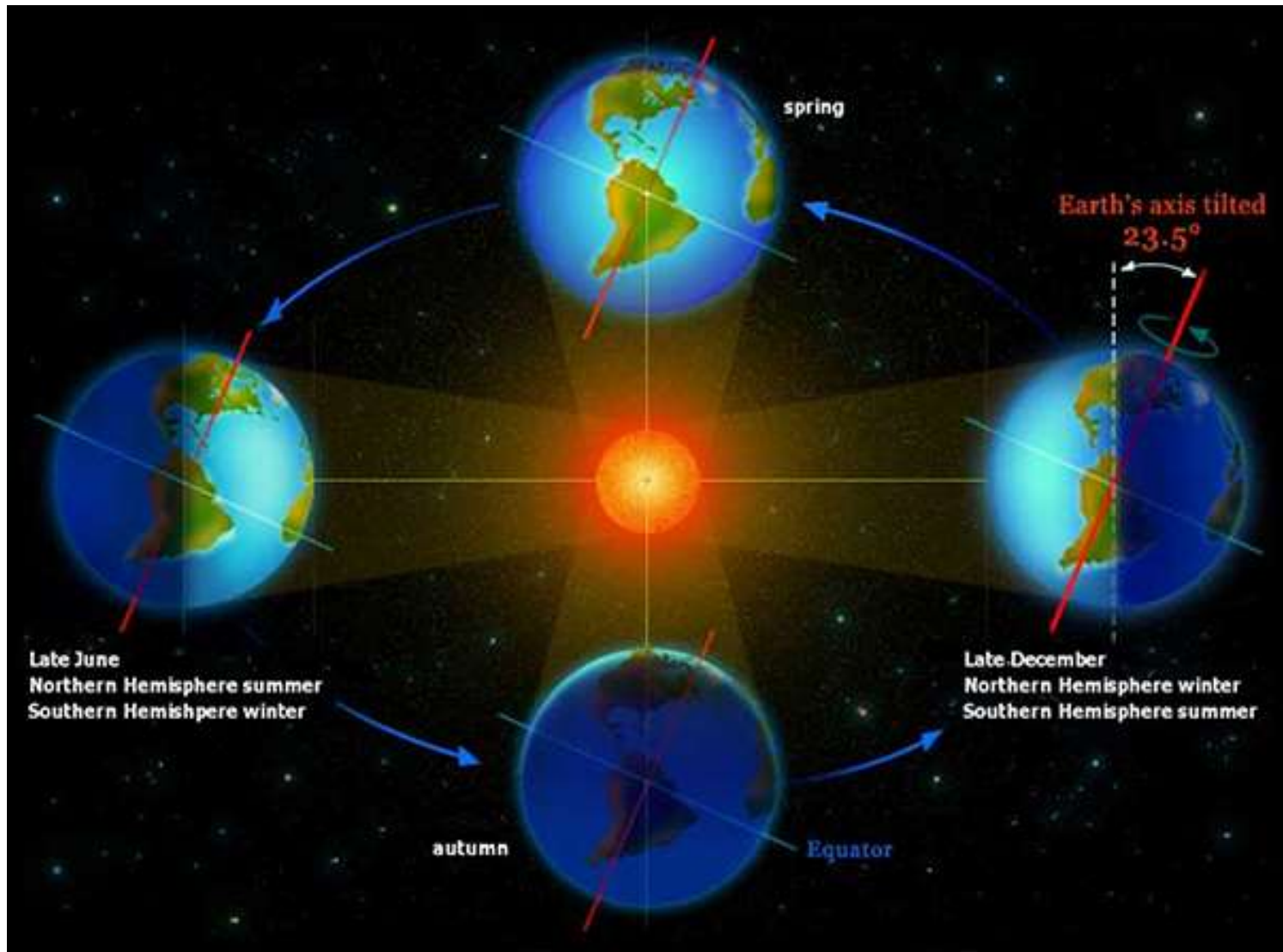


Image by NOAA

Changes in solar radiation

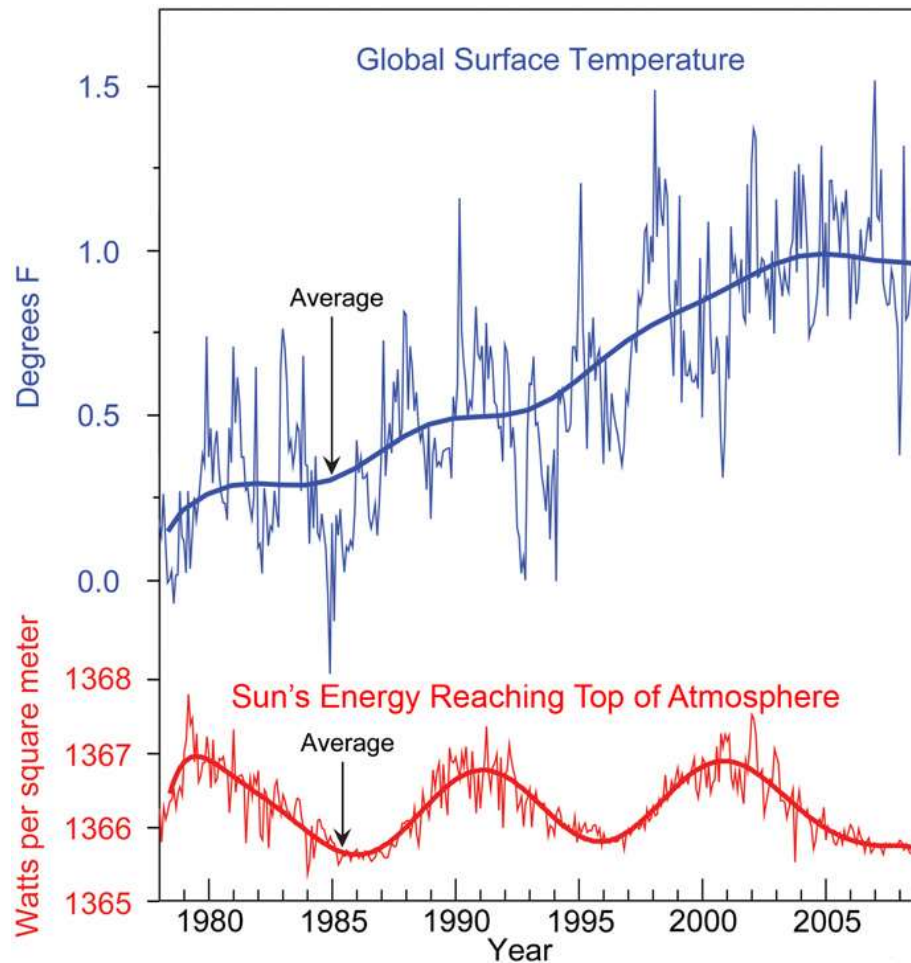




Photo from Shutterstock)

1816

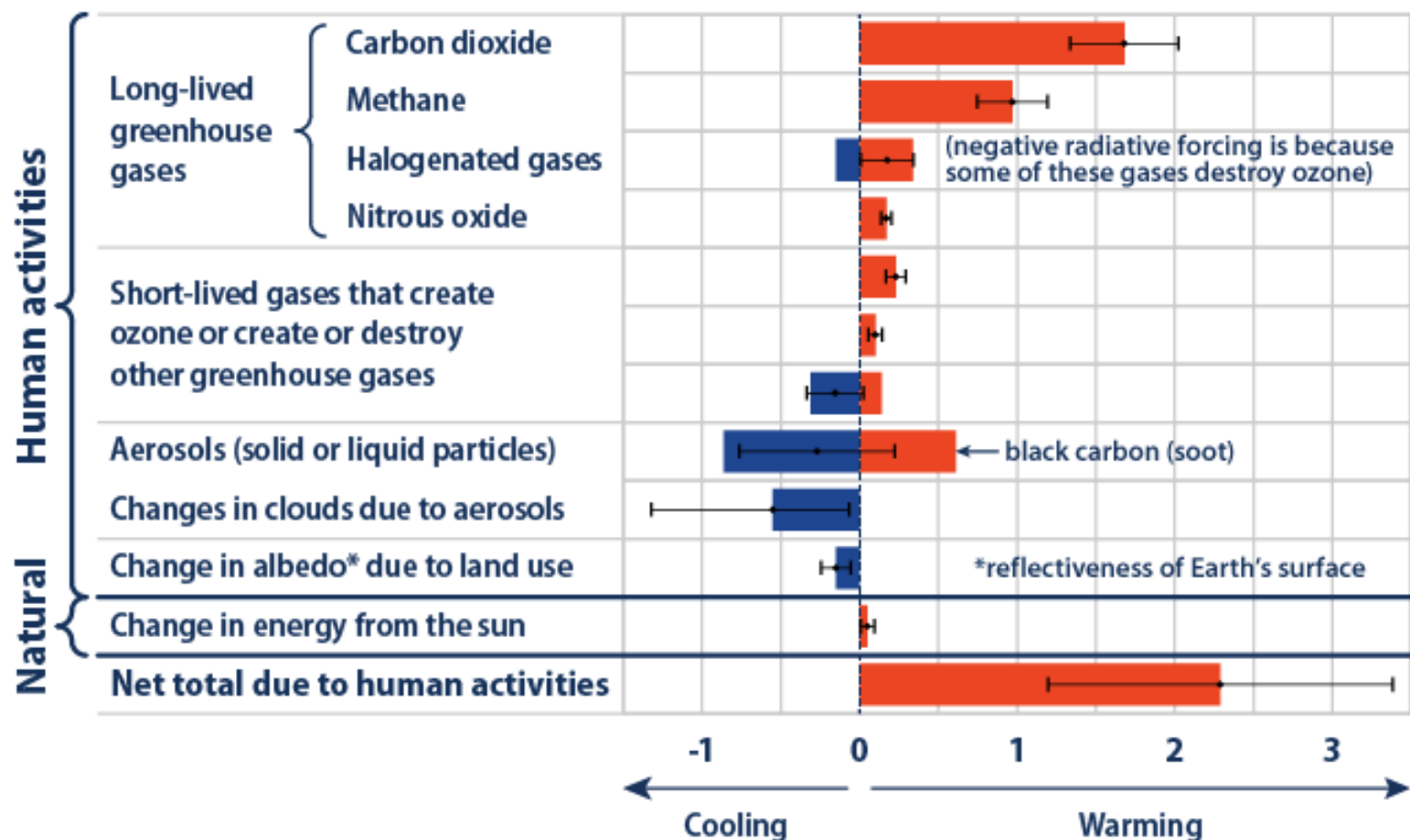
The Year without a Summer

- Average Earth temperature decreased by 0.5°C
- June frosts in New England
- Major crop losses

Mt. Tambora,
Indonesia



Radiative Forcing Caused by Human Activities Since 1750

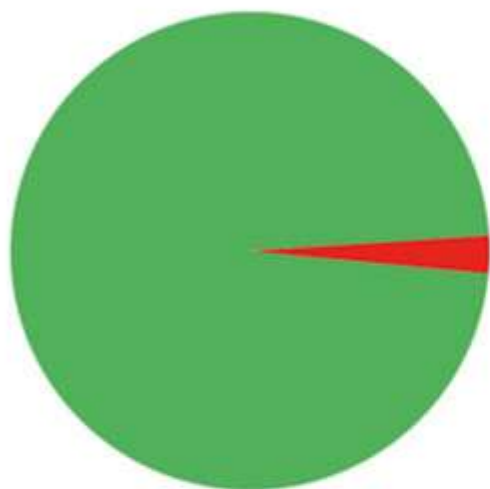


Radiative forcing (watts per square meter)

Data source: IPCC (Intergovernmental Panel on Climate Change). 2013. Climate change 2013: The physical science basis. Working Group I contribution to the IPCC Fifth Assessment Report. Cambridge, United Kingdom: Cambridge University Press. www.ipcc.ch/report/ar5/wg1.

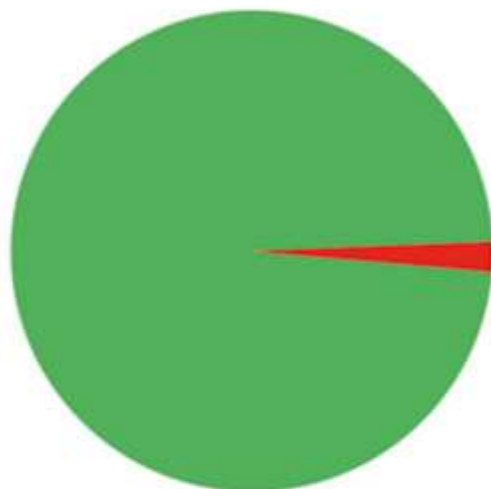
For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climatechange/indicators.

The Scientific Consensus on Climate Change



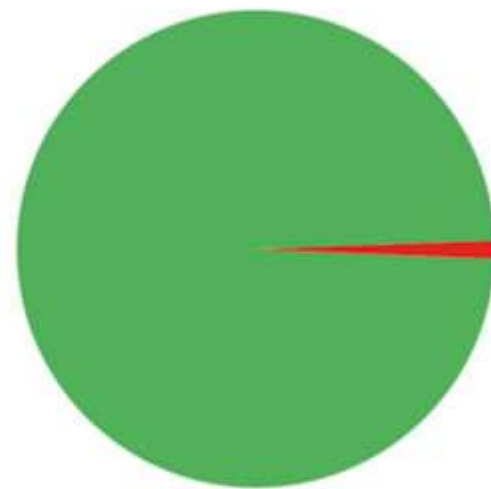
97%

Doran and
Zimmerman 2009
79 scientists



97.5%

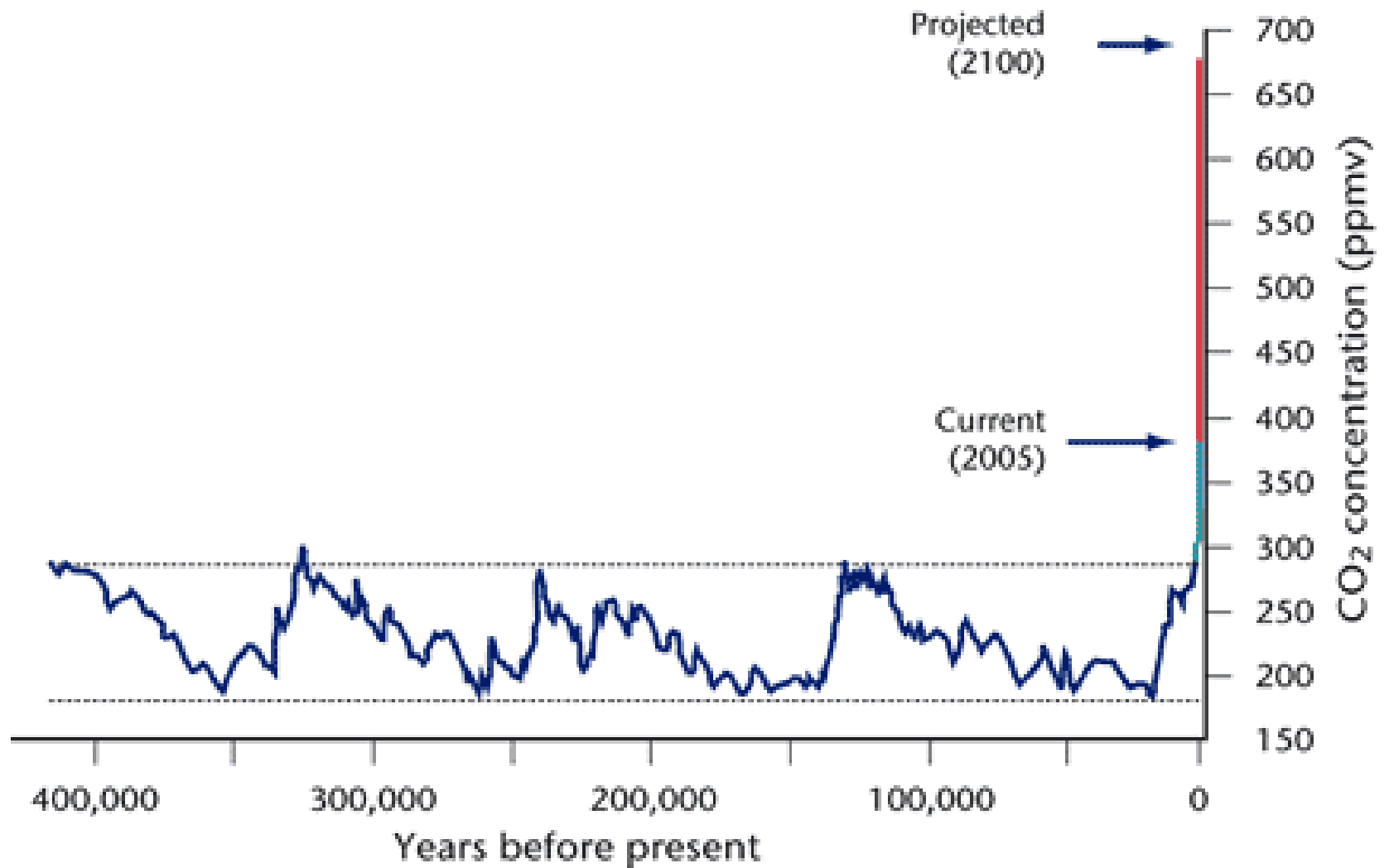
Anderegg et al 2010
908 scientists



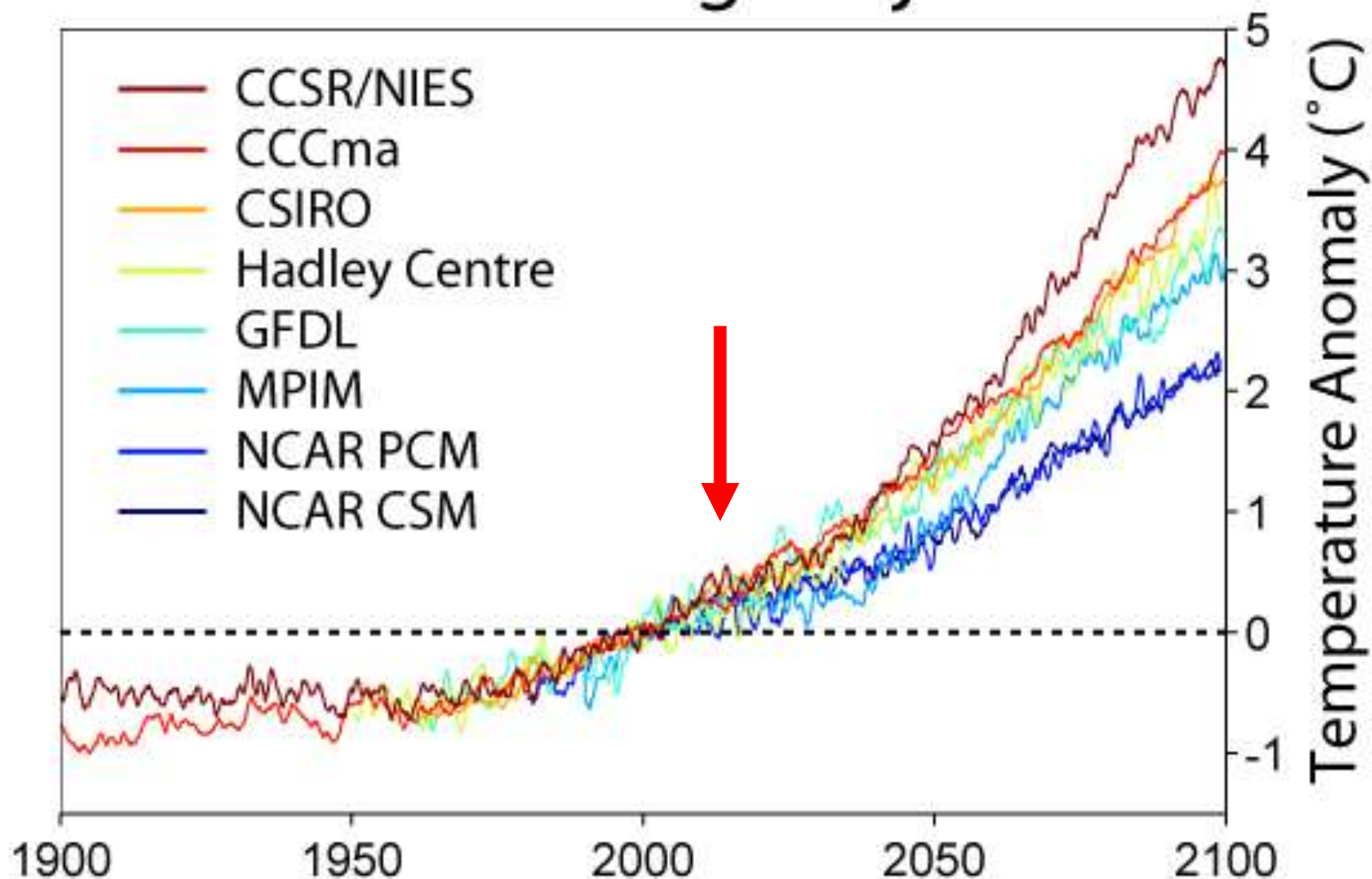
98.5%

Cook et al 2013
10,306 scientists

Vostok ice core



Global Warming Projections





[comments on this story](#)

Published online 21 January 2010 | Nature | doi:10.1038/news.2010.24

News

Most powerful hurricanes on the rise

Global warming could lead to fewer but more-intense storms.

Quirin Schiermeier

The number of major Atlantic hurricanes per year may almost double by the end of the century in response to global warming, according to a new study.

A team of hurricane researchers suggests that damage from a larger number of very strong — Category 4 and 5 — hurricanes is likely to outweigh a projected decline in less-intense storms¹.

In 2008, a group led by Thomas Knutson of the National Oceanic and Atmospheric Administration (NOAA) Geophysical Fluid Dynamics Laboratory (GFDL) in Princeton, New Jersey, projected a marked reduction in the overall number of tropical storms and hurricanes in the western North Atlantic Ocean².



Fewer, more powerful hurricanes in future? NASA

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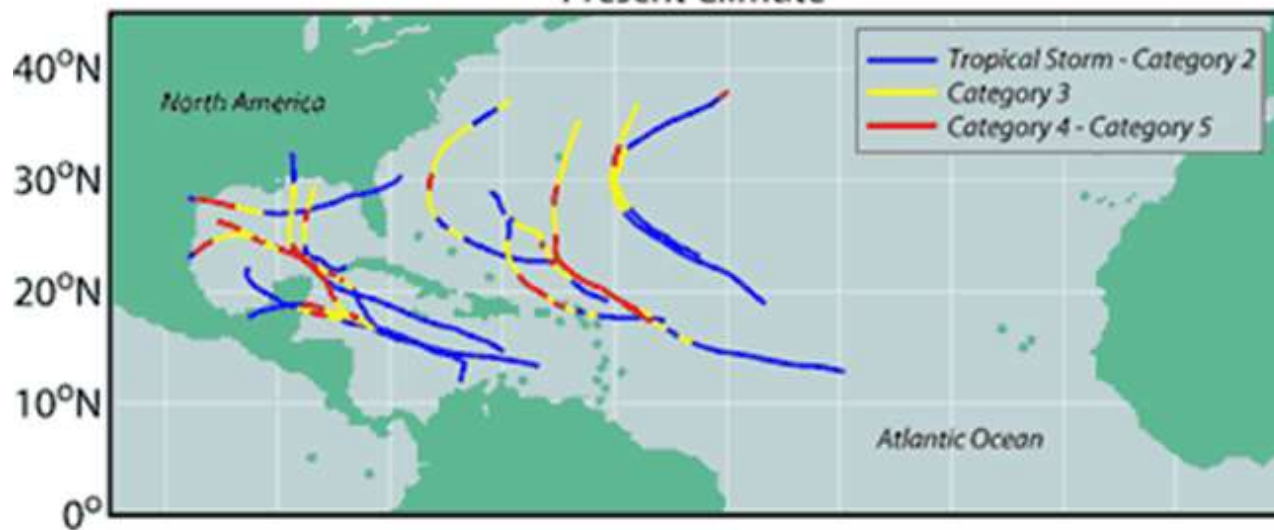
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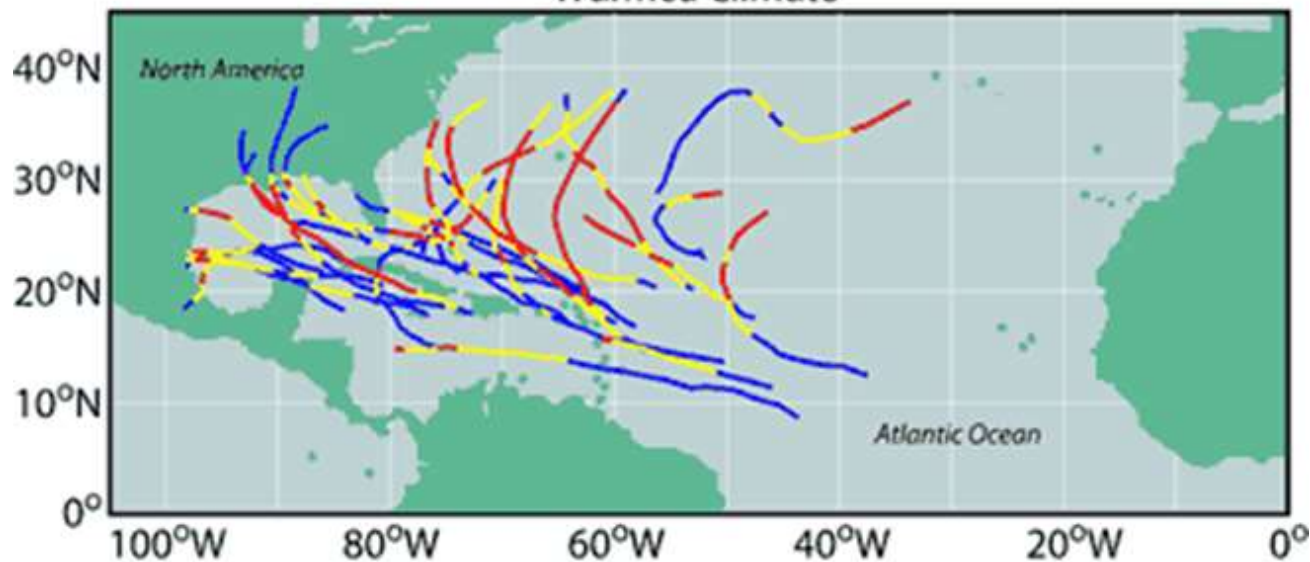
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Modeled Category 4 & 5 Hurricane Tracks

Present Climate



Warmed Climate



Bender et al. 2010

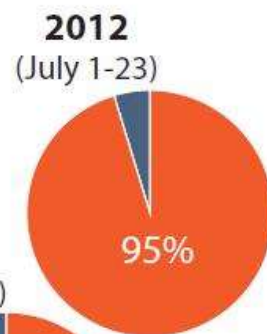
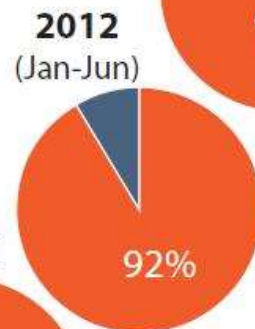
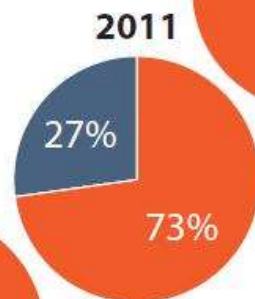
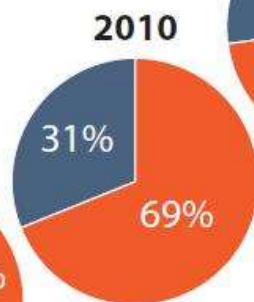
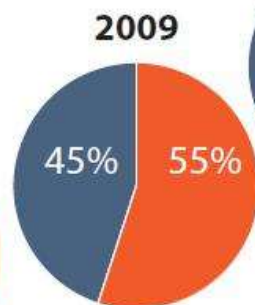
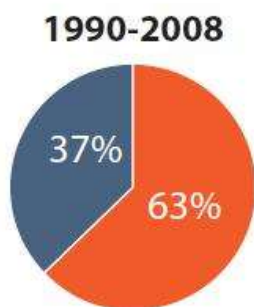
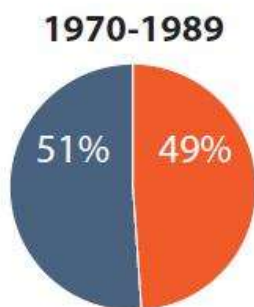
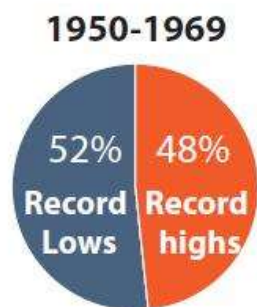


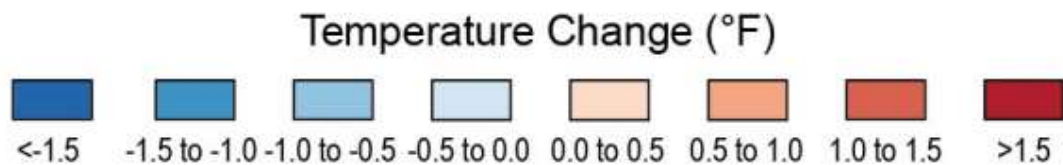
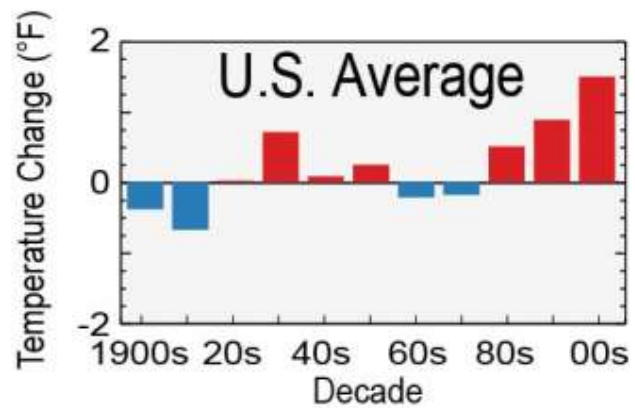
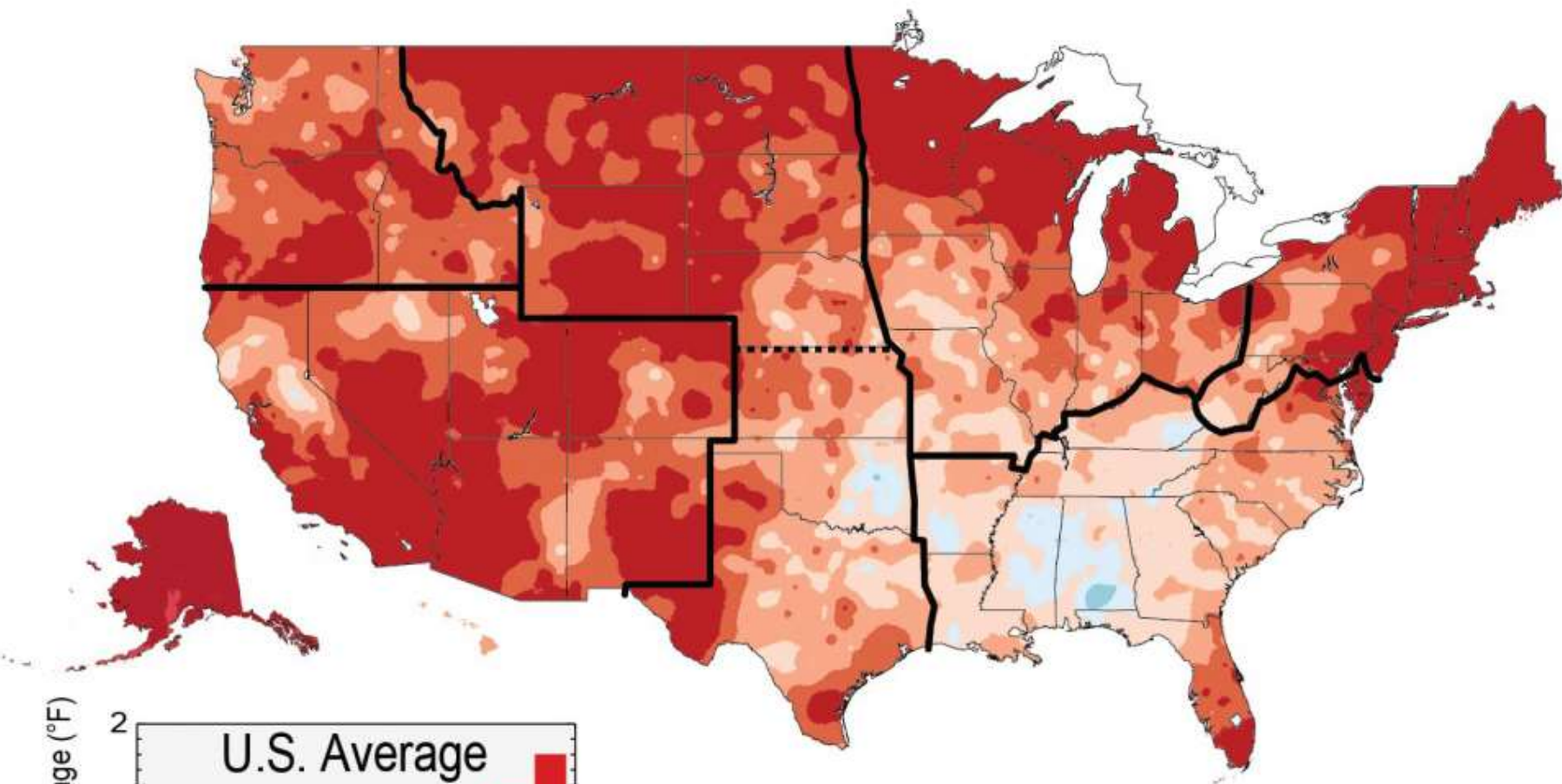
Our view of the world in 2100



Daily Temperatures in the US

More Record Highs than Lows



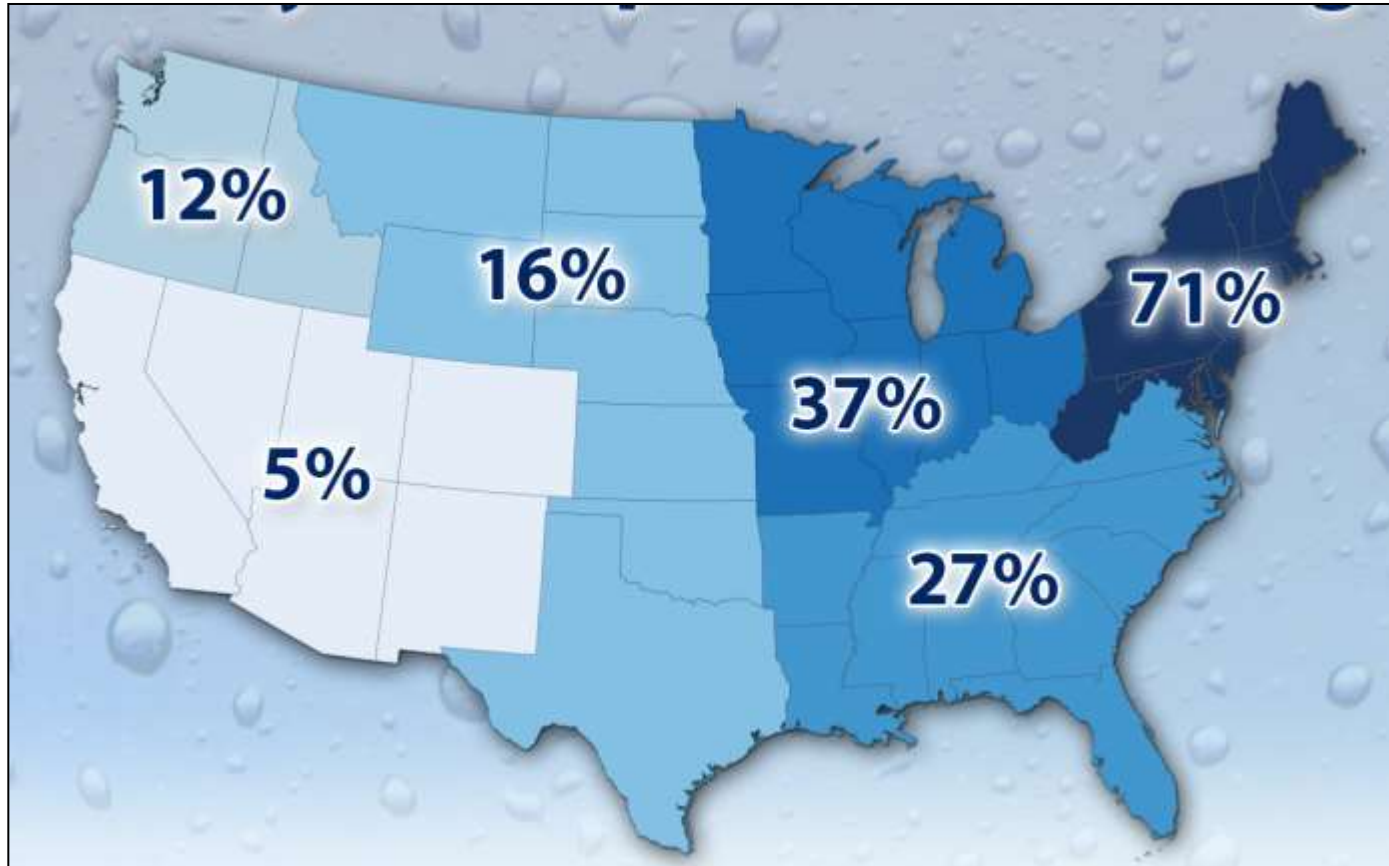


Alabama Probable Sources Contributing to Impairments for Reporting Year 2014

[Description of this table](#)

NOTE: Click on the underlined Probable Source Group to see a list of specific state Probable Sources making up the Probable Source Group.				
<u>Probable Source Group</u>	Size of Assessed Waters with Probable Sources of Impairments			
	<u>Rivers and Streams (Miles)</u>	<u>Lakes, Reservoirs, and Ponds (Acres)</u>	<u>Bays and Estuaries (Square Miles)</u>	<u>Ocean and Near Coastal (Square Miles)</u>
Agriculture	1,393.4	93,606.1		
Aquaculture	9.0			
Atmospheric Deposition ★	894.7	40,891.2	.7	201.0
Construction	352.4			
Habitat Alterations (Not Directly Related To Hydromodification)	56.4			
Hydromodification	39.4	58,712.6		
Industrial	265.7	32,909.9	94.6	
Land Application/Waste Sites/Tanks	44.8			
Legacy/Historical Pollutants	69.0	32,281.9		
Municipal Discharges/Sewage	563.4	12,276.8	7.7	
Natural/Wildlife	12.4			
Other	30.8	50,019.3		
Resource Extraction	351.2	412.5		
Silviculture (Forestry)	4.2			
Spills/Dumping		412.5		
Unknown	91.4	1,435.1		
Unspecified Nonpoint Source		62.6		
Urban-Related Runoff/Stormwater	757.7	22,499.2	426.2	

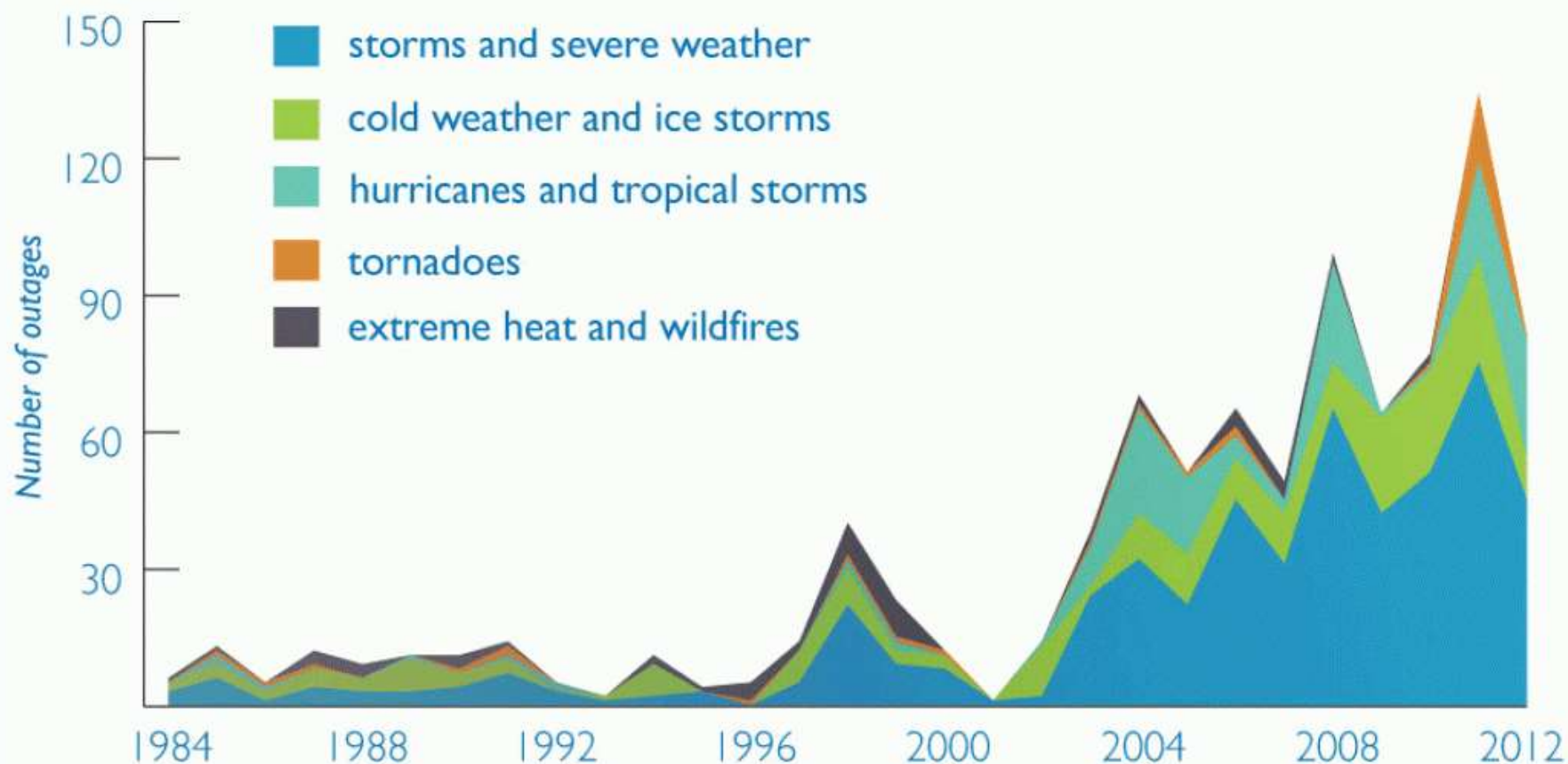
Trends in Extreme Precipitation



Increase in the number of 2" rainfalls per year from 1958 to 2011

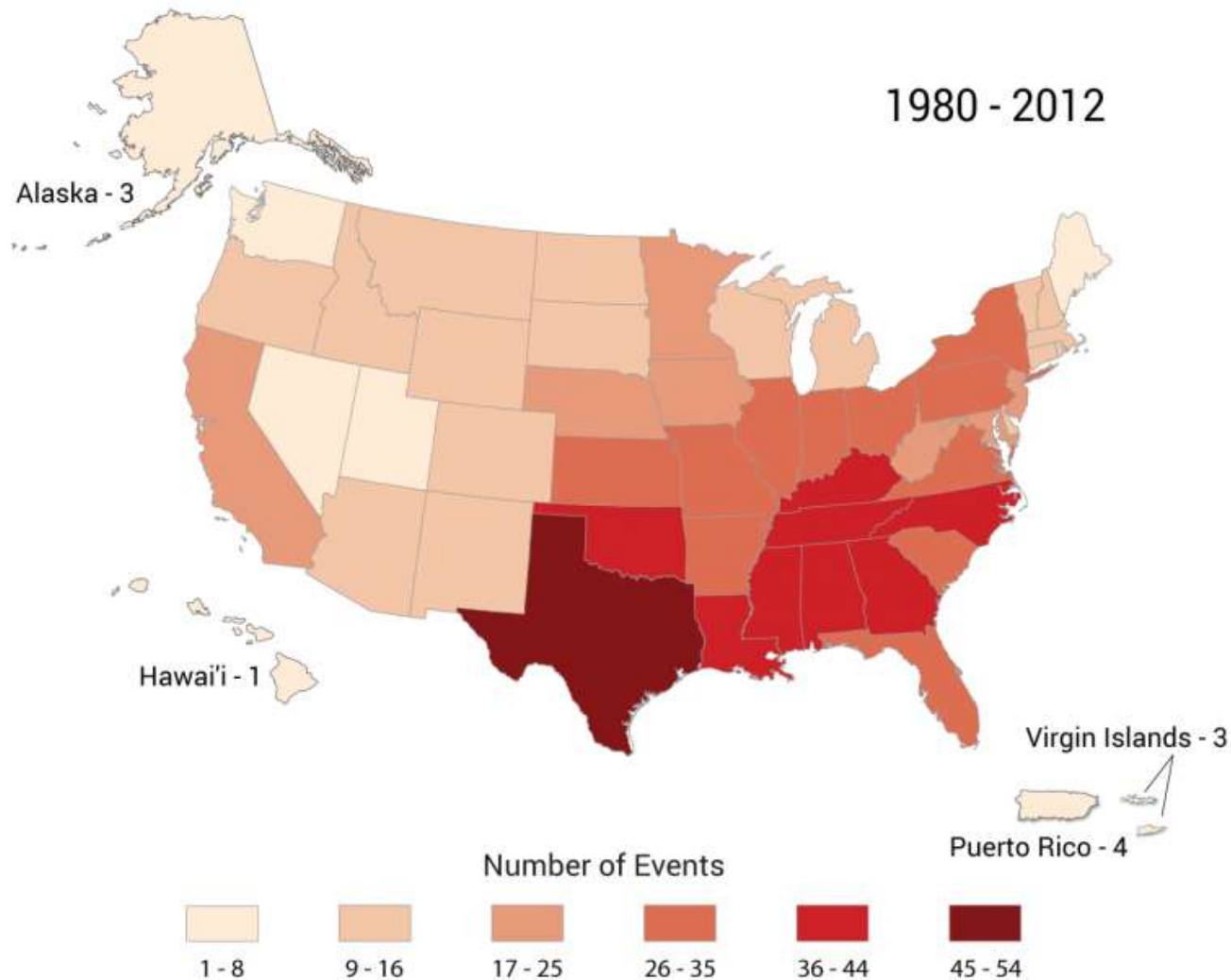
Extreme Weather Is Causing More Major Power Outages

(major = at least 50,000 customers affected)



You don't need warming to have major disasters

Billion Dollar Weather/Climate Disasters



ENSO and greenhouse warming

Wenju Cai, Agus Santoso, Guojian Wang, Sang-Wook Yeh, Soon-Il An, Kim M. Cobb, Mat Collins, Eric Guilyardi, Fei-Fei Jin, Jong-Seong Kug, Matthieu Lengaigne, Michael J. McPhaden, Ken Takahashi, Axel Timmermann, Gabriel Vecchi, Masahiro Watanabe & Lixin Wu

[Affiliations](#) | [Contributions](#) | [Corresponding author](#)

Nature Climate Change (2015) | doi:10.1038/nclimate2743

Received 30 March 2015 | Accepted 01 July 2015 | Published online 17 August 2015

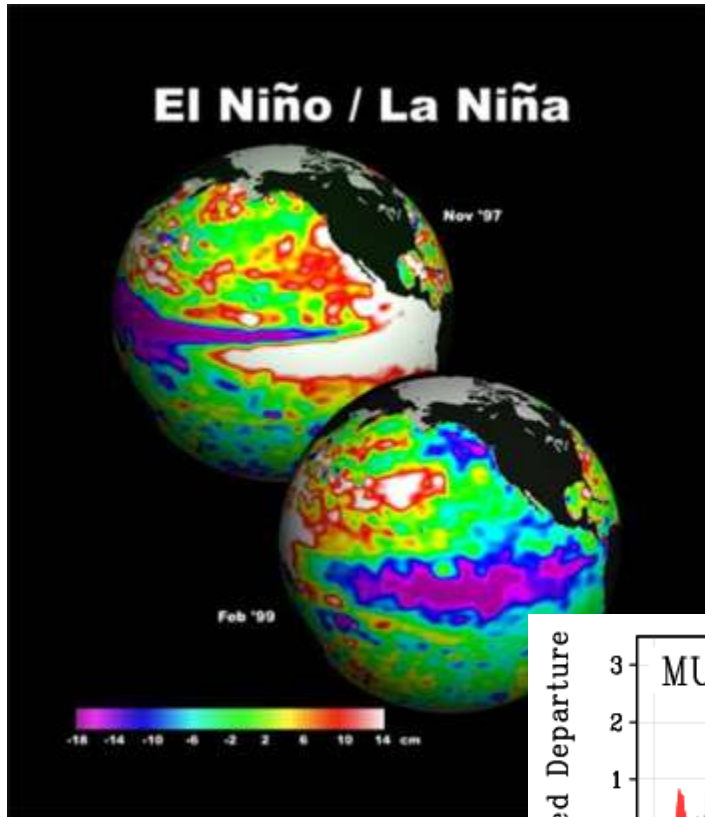
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Abstract

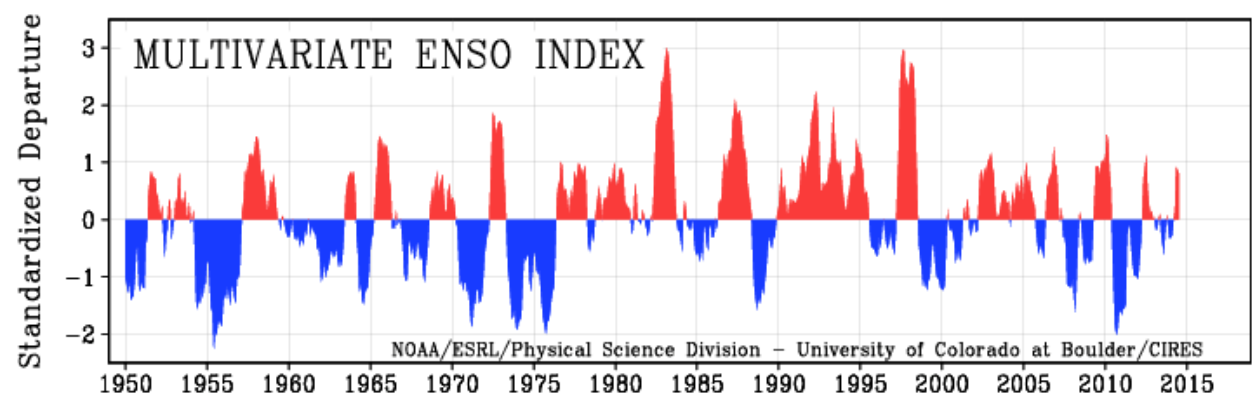
[Abstract](#) • [Introduction](#) • [Changes in the mean state](#) • [ENSO asymmetry and extremes](#) • [Projected changes in extreme ENSO events](#) • [ENSO teleconnection under greenhouse warming](#) • [Summary, uncertainties and future research](#) • [References](#) • [Acknowledgements](#) • [Author information](#)

The El Niño/Southern Oscillation (ENSO) is the dominant climate phenomenon affecting extreme weather conditions worldwide. Its response to greenhouse warming has challenged scientists for decades, despite model agreement on projected changes in mean state. Recent studies have provided new insights into the elusive links between changes in ENSO and in the mean state of the Pacific climate. The projected slow-down in Walker circulation is expected to weaken equatorial Pacific Ocean currents, boosting the occurrences of eastward-propagating warm surface

El Niño and La Niña

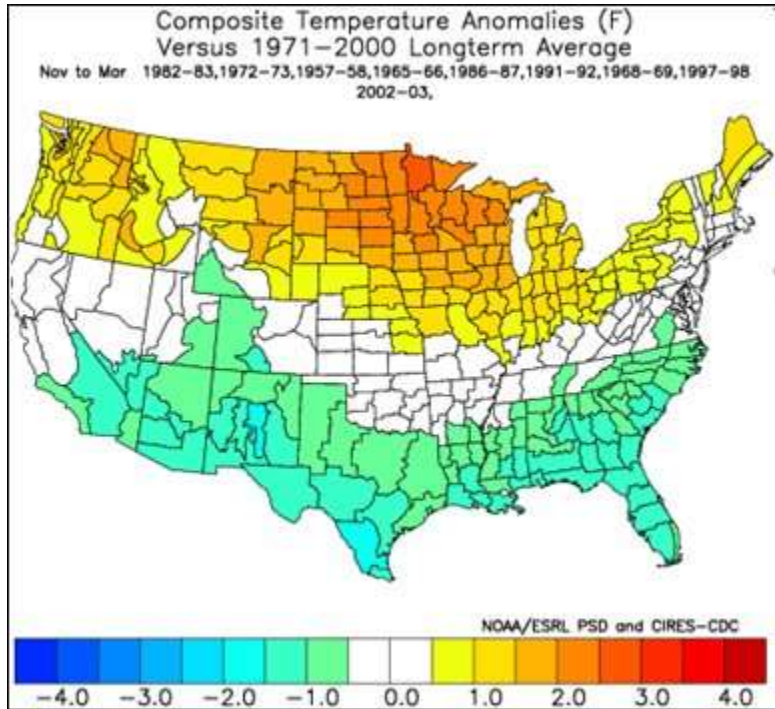


El Niño is associated with unusually warm water in the eastern Pacific Ocean, usually observed near Christmas (so associated with the coming of "The Child"). La Niña is the opposite phase of El Niño, with unusually cool water in the eastern Pacific Ocean.

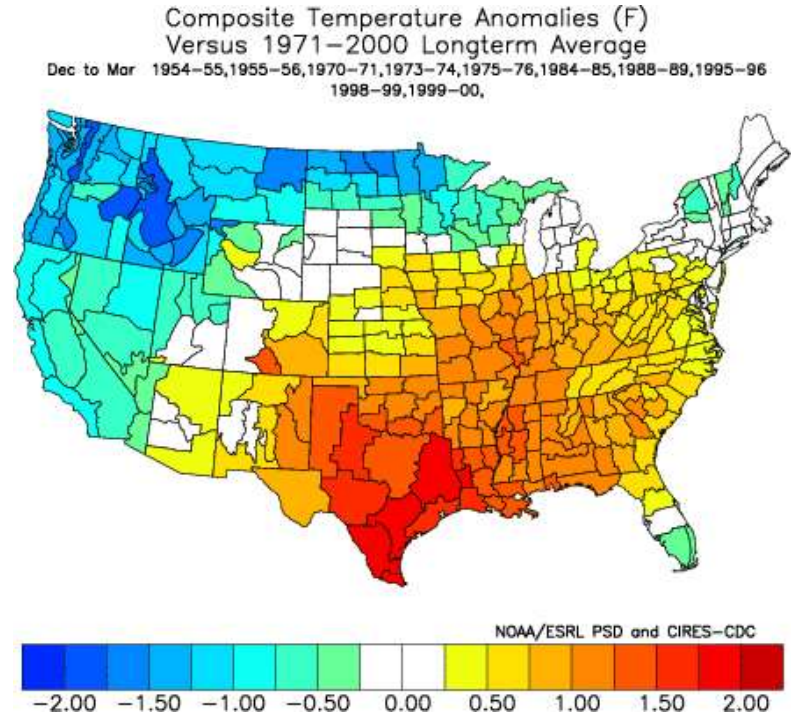


El Niño and La Niña

Temperature



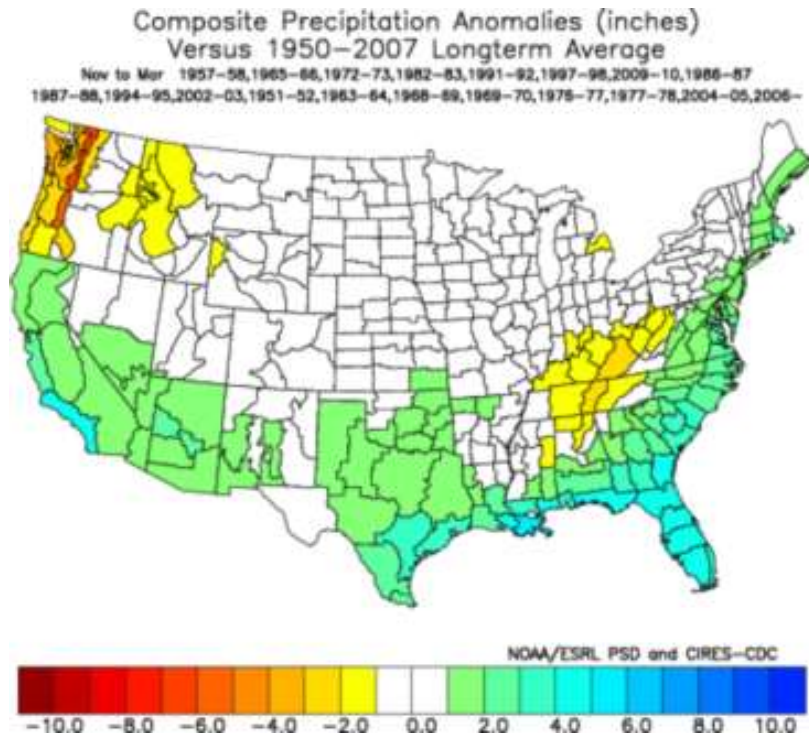
El Niño



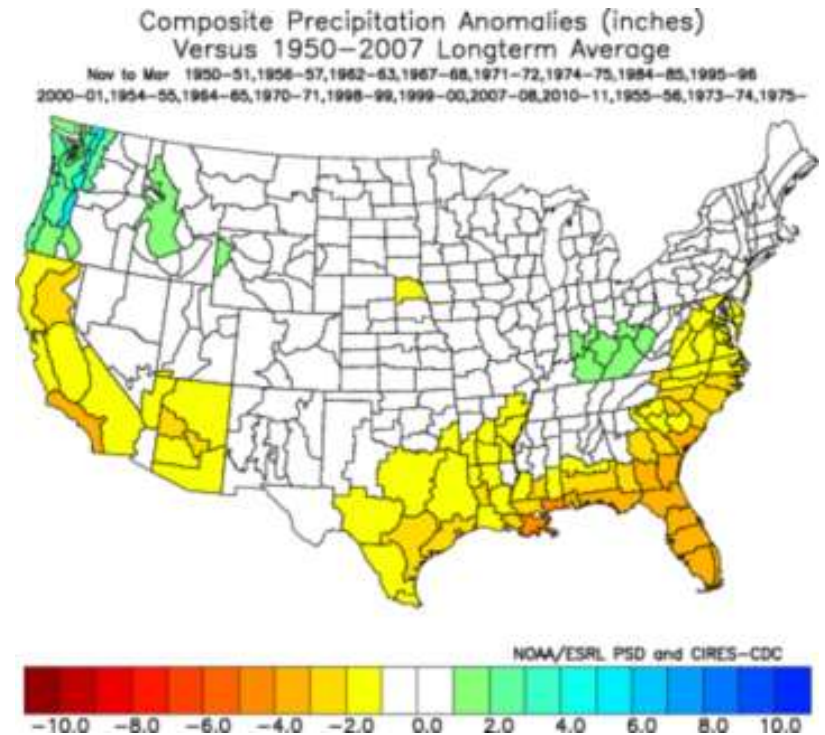
La Niña

El Niño and La Niña

Precipitation



El Niño



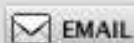
La Niña

A big 'boy' is coming. Don't delay harvest or planting cover crops.

by Brad Haire in Farm Press Blog

Sep 6, 2015

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COMMENTS 

- If what they say comes true about the potential of the current El Niño, Southeast farmers need to plant cover crops as soon as possible after harvest.

RELATED MEDIA



Carl Coleman plants cover behind corn to stop pigweed, boost next crop

Good cover crop mix essential for animal and soil health

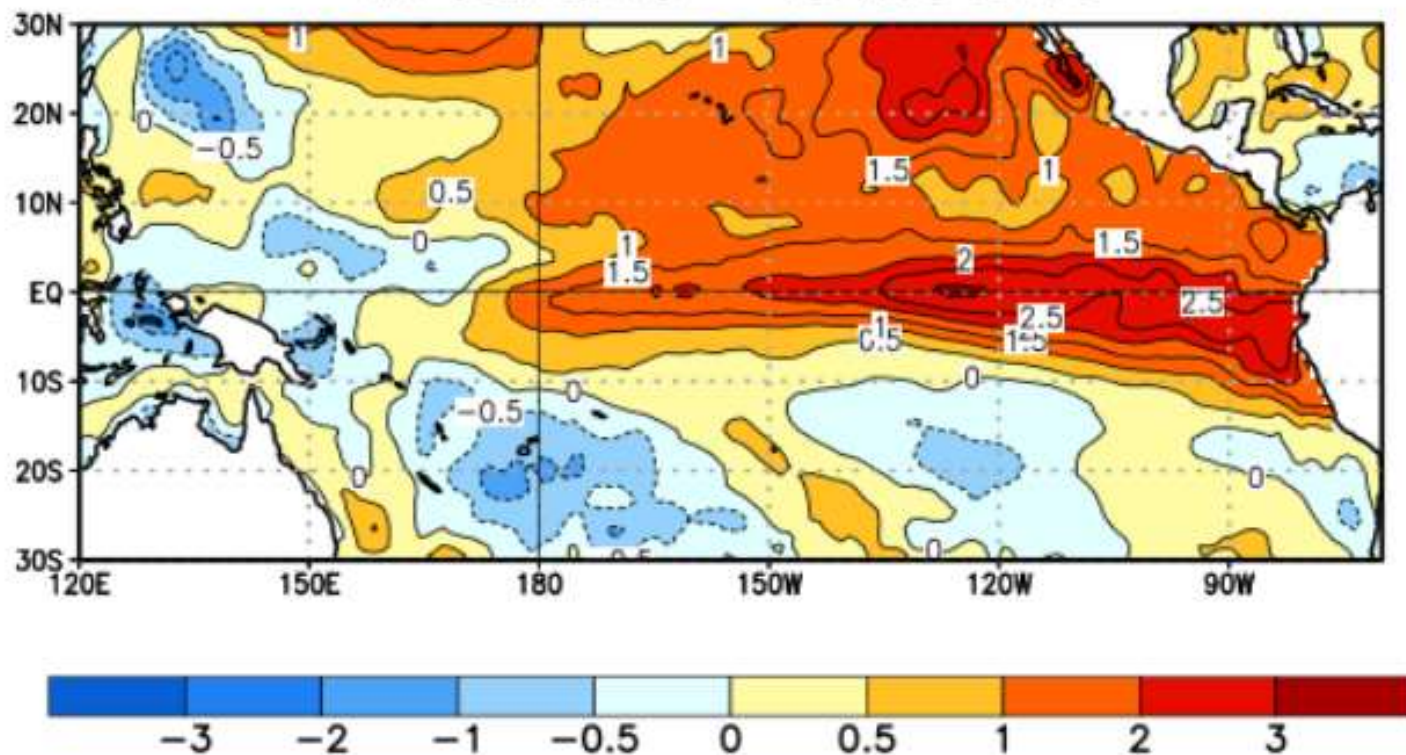
Peanut Profitability winners discuss strip tillage benefits, fungicides

If what they say comes true about the potential of the current El Niño, Southeast farmers need to plant cover crops as soon as possible after harvest, or they may be chasing after their topsoil come spring.

I've attended a half dozen farm meetings over the last month. At each one, the looming weather phenomenon known as El Niño was a topic discussed openly or in private asides.

Over the past several months, water temperatures in the central and eastern Pacific Ocean have been warming at an alarming rate, building one of the strongest El Niño's in

Average SST Anomalies
19 JUL 2015 – 15 AUG 2015

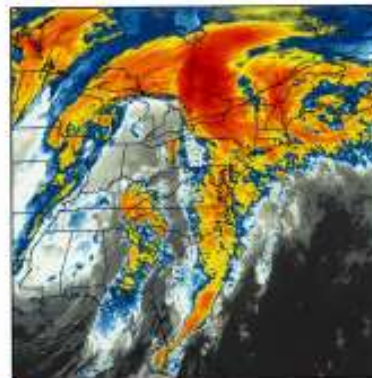


Technical Report 98-02

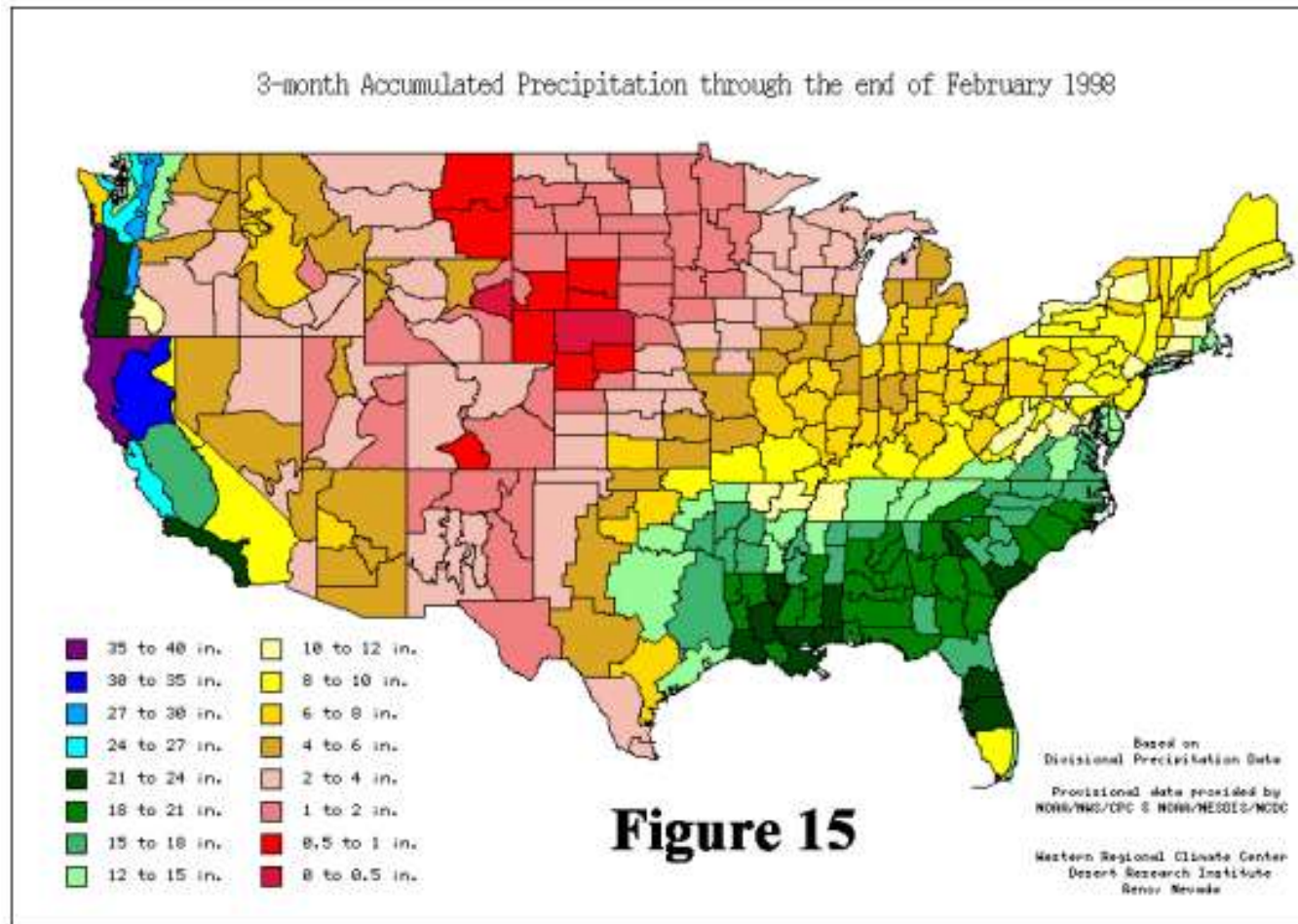
April 1998

NATIONAL CLIMATIC DATA CENTER

The El Nino Winter of '97-'98

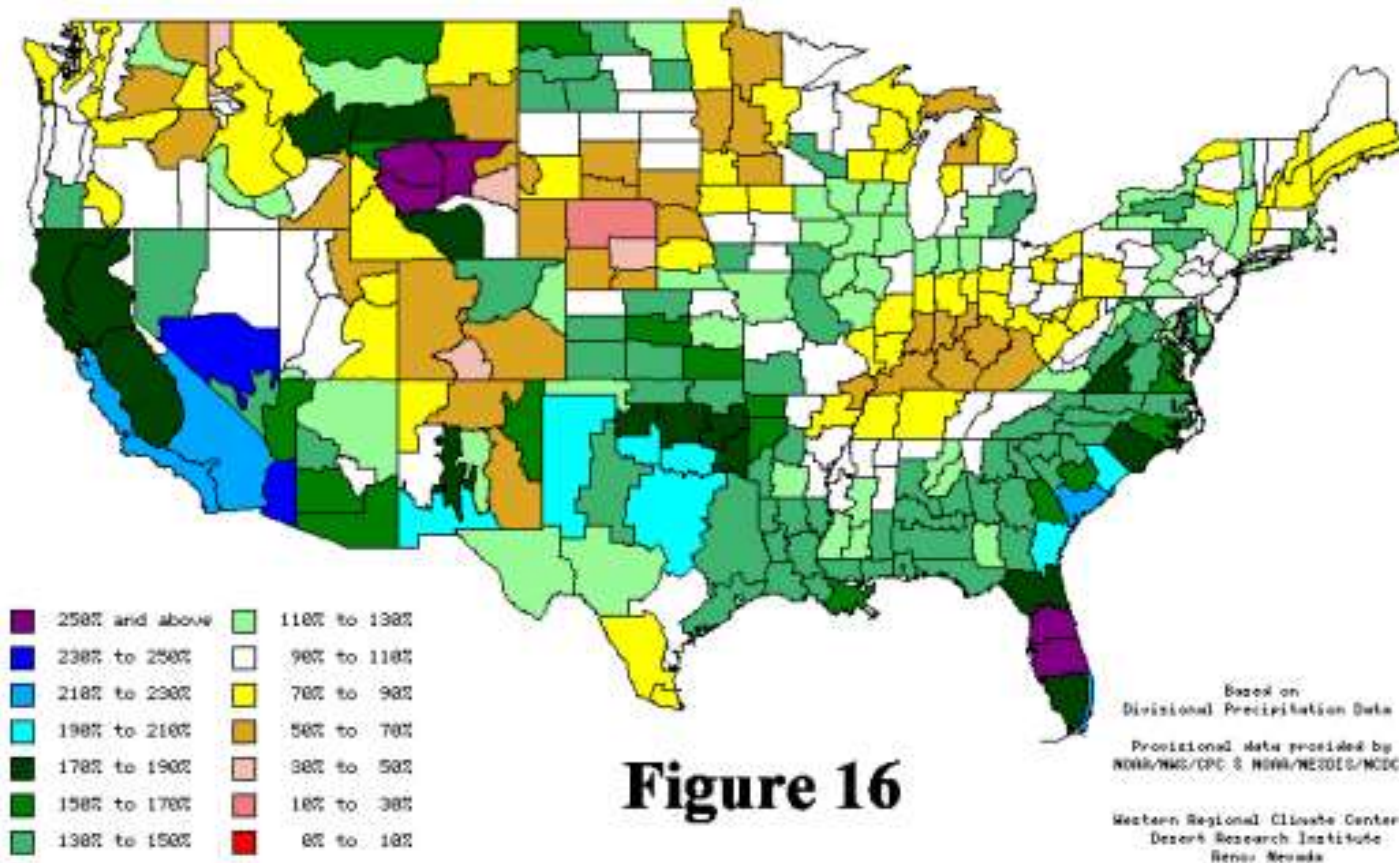


El Nino 1998

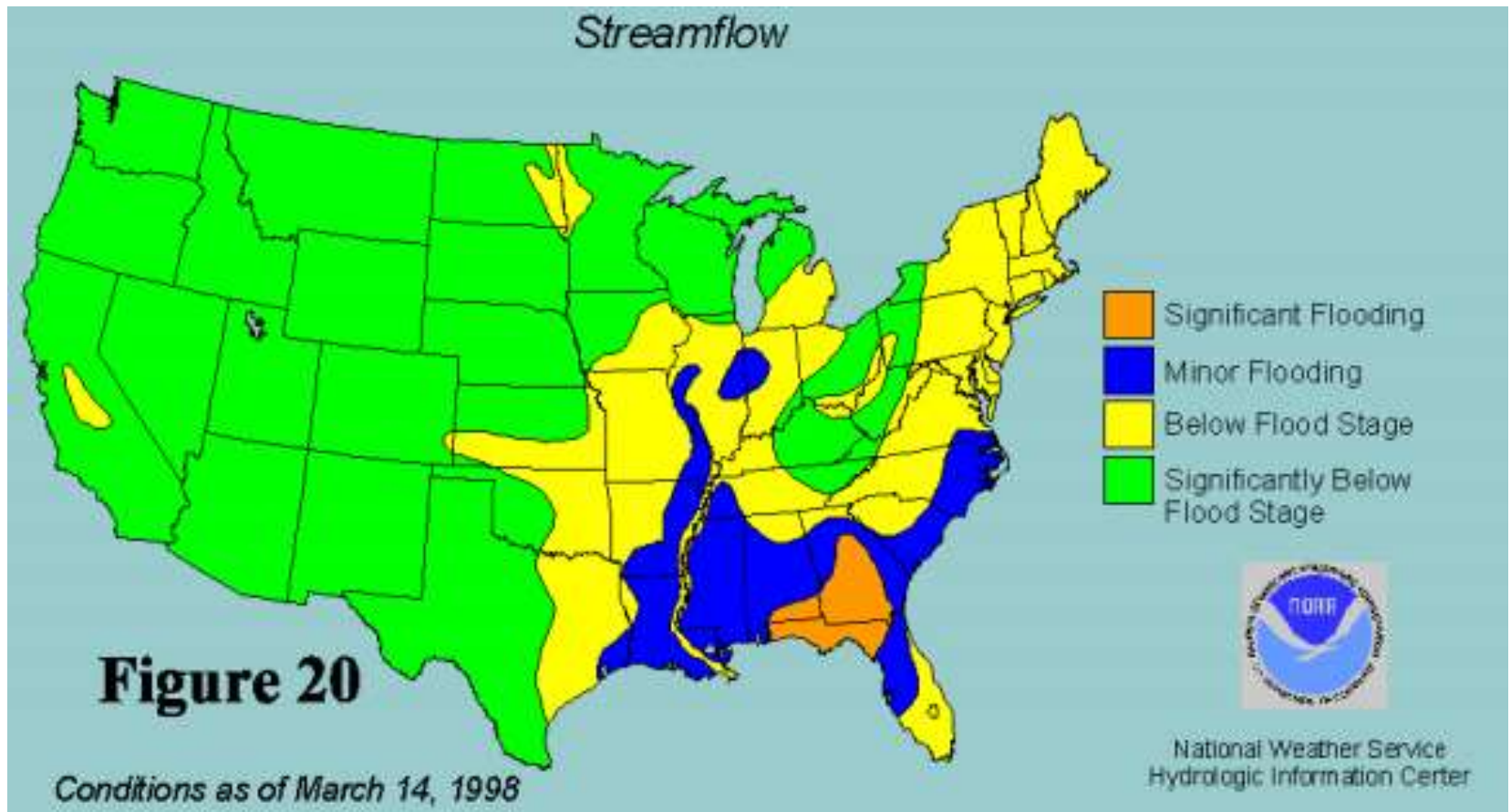


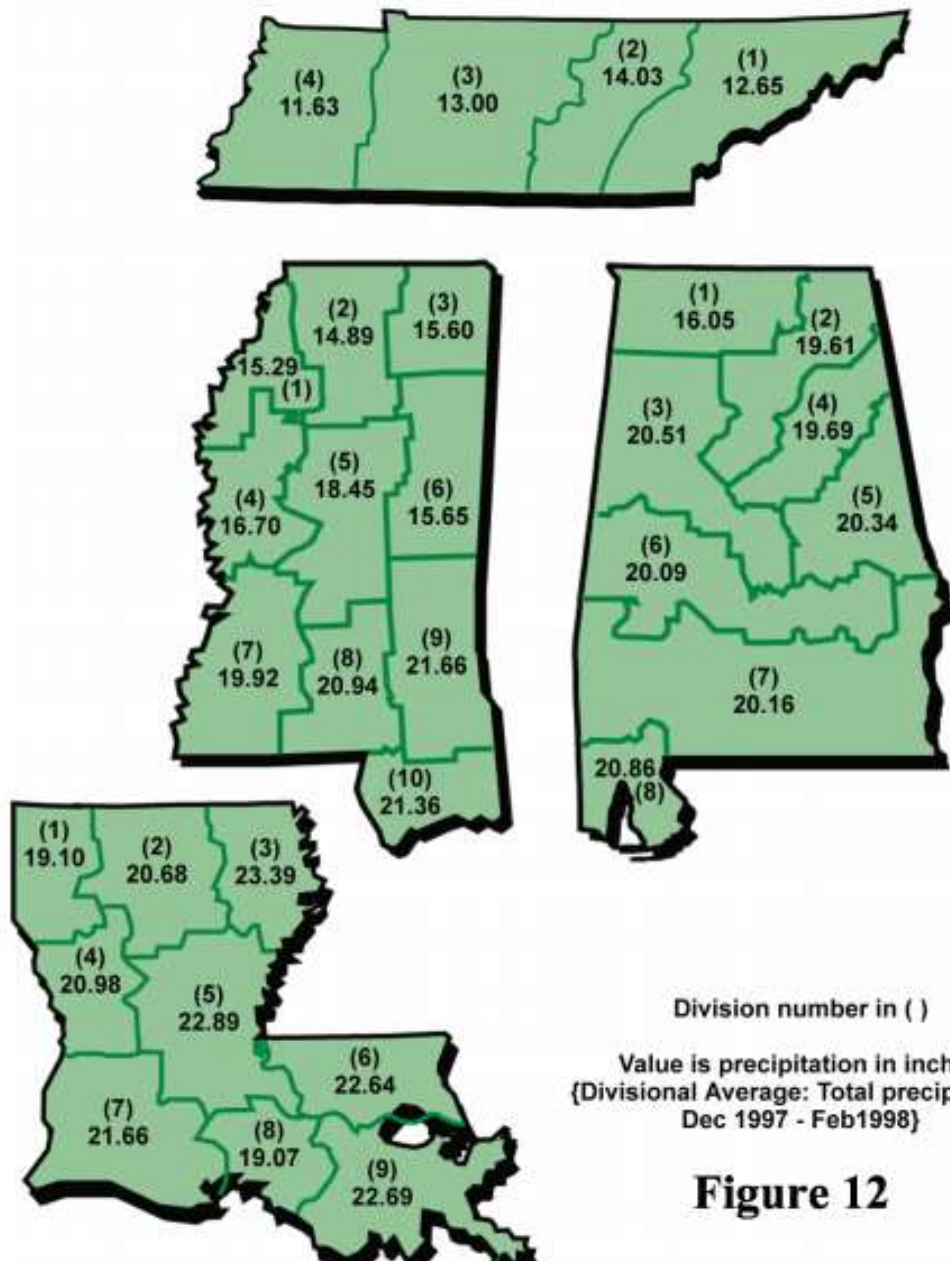
El Nino 1998

3-month Percent of Average Precipitation through the end of February 1998



El Nino 1998





Division number in ()

Value is precipitation in inches
{Divisional Average: Total precipitation
Dec 1997 - Feb1998}

Figure 12



El Nino issues

- flooding
- erosion control
- road
- sewer
- farm lagoons
- cover crops
- controlled burning
- planting and harvesting

La Nina

- irrigation
- wildfire risk
- water restrictions
- aquatic biodiversity

Opportunities made easier through new technology, data and information exchange

Opportunities

"In the middle of **difficulty** lies **opportunity**"

Albert Einstein

"Fortune favors the **prepared** mind"

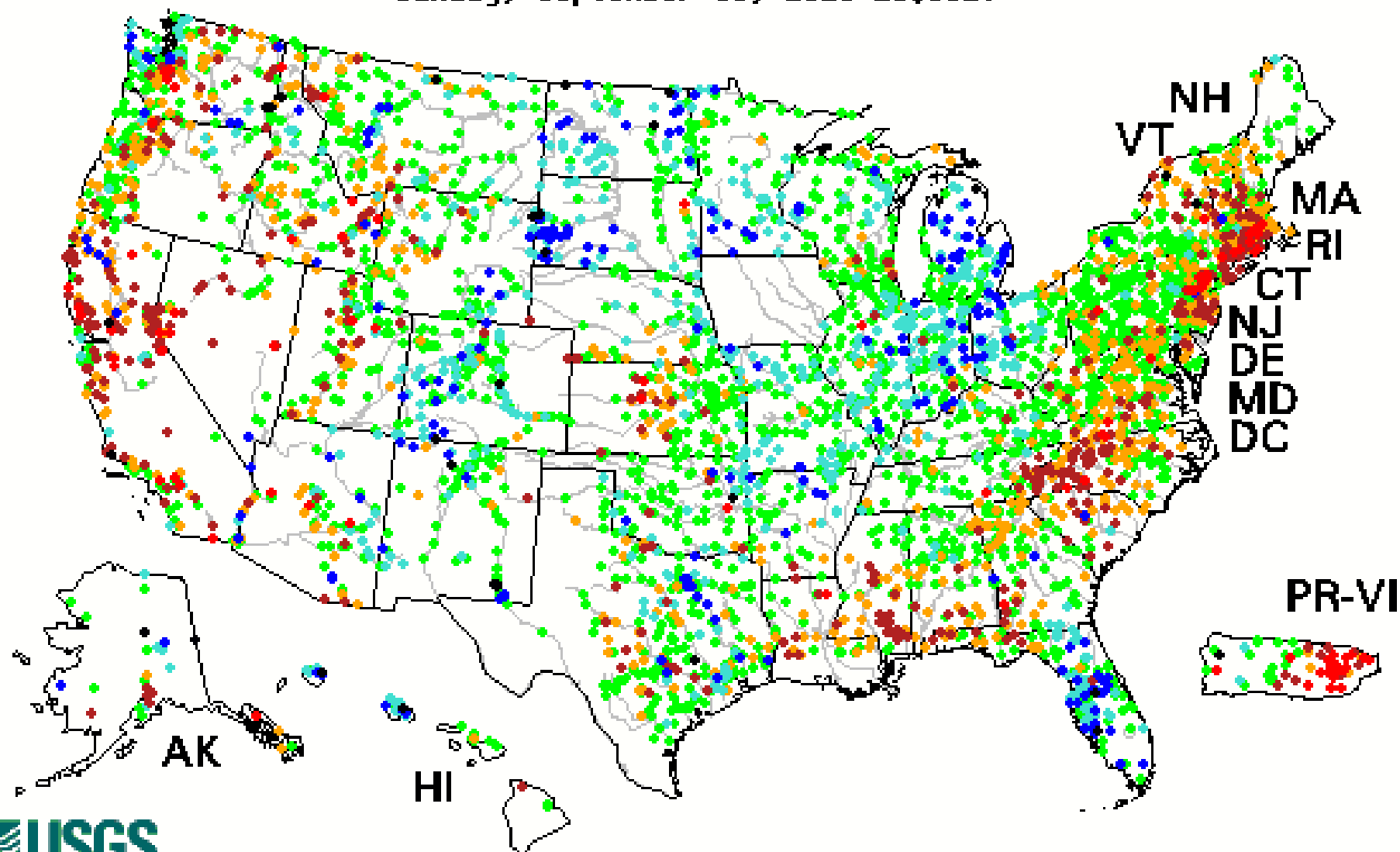
Louis Pasteur

"The reason a lot of people do not recognize opportunity is because it usually goes around wearing overalls looking like **hard work**"

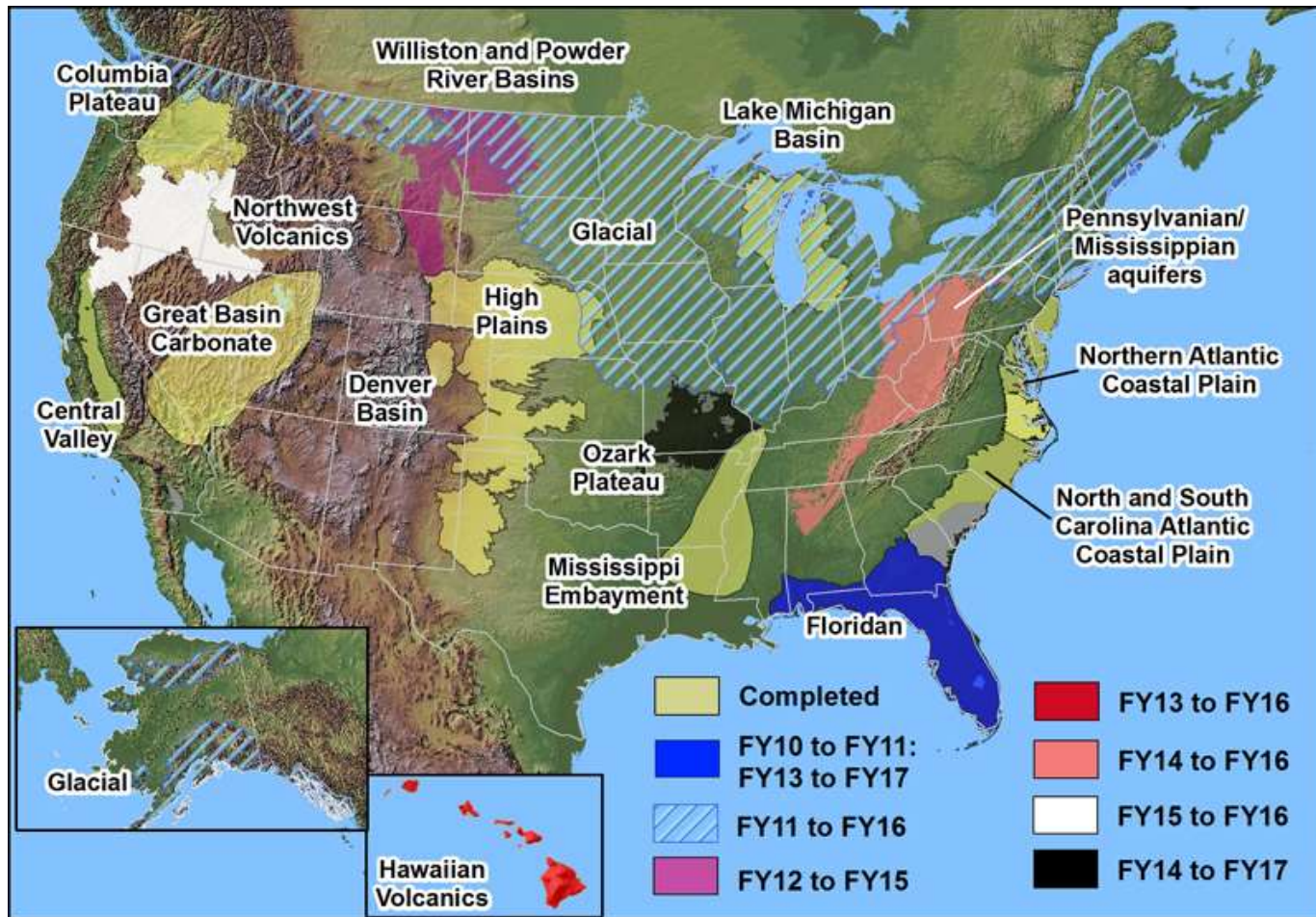
Thomas A. Edison

Real Time Streamflow

Sunday, September 06, 2015 19:00ET



USGS Groundwater Studies



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Coleman Lake, Cleburne County - Bill Wilson

Water Programs

[Water Division Organizational Chart](#)

Water Division Staff Assignment Maps

Industrial/Municipal Branch

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[Industrial General Permit Section](#)

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Lower High Falls, Talladega Forest - Bill Wilson

Forestry BMP Program

Best Management Practices for Forestry (Timber Harvesting)

The Department has a long-standing and continuing compliance program relative to the implementation of effective best management practices (BMPs) associated with timber harvesting forestry activities, including road construction associated with these harvesting operations.

The Department's Field Operations Division staff and Alabama Forestry Commission staff work cooperatively to promote forestry (silviculture) BMP implementation, conduct compliance assistance for forestry operators, perform routine evaluations of forestry activities statewide, respond to citizen complaints in a timely manner, achieve voluntary implementation of BMPs where possible, and the Department requires implementation of BMPs through compliance assurance activities, as necessary. In addition, Field Operations Division staff independently perform compliance inspections of forestry operations and initiate appropriate compliance activities as needed in order to ensure that effective forestry BMPs are implemented and maintained to ensure the protection of water quality.

[Alabama's Best Management Practices for Forestry](#)

[Alabama Forestry Commission](#)

[Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction](#)

Training and Guidance



Mississippi-Alabama Sea Grant Consortium



About

Research

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Event Details

Urban Planning for Headwater Wetlands and Coastal Water Quality

October 17, 2014 from 8:30 am - 4:30 pm

Land planners and municipal leaders play important roles in promoting low impact designs that sustain wetlands for societal benefits, such as good water quality, water storage and critical habitats.

This free workshop is for land planners, city/county officials, and others interested in learning about the importance of headwaters for local water quality. Urban development can have direct and indirect impacts on wetlands, and attendees will learn about urban planning measures that can help sustain wetlands and their benefits.

Learn from university scientists and extension specialists about:

- What headwater wetlands and streams are
- Important features and benefits headwater wetlands provide
- How headwater wetlands benefit local water quality and how urban development may compromise this benefit
- How modeling may be used to assess watershed-level benefits that headwater wetlands provide
- How modeling can be used to project changes in water quality based on land use change and wetland condition

A field trip will take you to Spanish Fort and Bay Minette area headwater wetlands. Lunch will be provided. Registration is free and required by Oct. 14.

Location: 5 Rivers Delta Resource Center, 30945 Five Rivers Blvd., Spanish Fort, Alabama

Contact

Christian Miller
christian@auburn.edu

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EROSION AND SEDIMENT CONTROL PROGRAM

September 2-3, 2015

Clear Water Alabama Seminar and Field Day

[Brochure](#)

[Online Registration](#)

Clear
Water
Alabama
Seminar
& Field
Days

Tuscaloosa,
AL

Publications

AL Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Area

2014 Handbook two volume set (complete)

[2014 Handbook Appendix](#)

[2014 Handbook Vol 1](#)

[2014 Handbook Vol 2](#)

[2014 Electronic File, section by section \(click here\)](#)

[CAD Drawings](#) (available with AutoCAD 2013 or earlier version)

[Hardcopy and CD - Order Form to purchase hardcopy \(click here\)](#)

The Clear Water Alabama Seminars and Field Day are offered by the Alabama Erosion and Sediment Control Partnership to help planners, designers, contractors, inspectors, and others learn more about erosion and sediment control practices and products.

Partnership Members

- AL Soil and Water Conservation Committee
- AL Associated General Contractors
- AL Association of Conservation Districts
- AL Chapter Soil and Water Conservation Society
- AL Department of Environmental Management
- AL Department of Transportation
- Auburn University
- Alabama Cooperative Extension System
- Home Builders Association of AL
- Natural Resources Conservation Service

Industry Sponsors (Tentative)

- Alabama Power Company
- American Excelsior Company
- Erosion Pros, L.L.C.
- Hanes Geo Components
- J.W. Faircloth & Son, Inc.
- Motz Enterprises, Inc.
- Pennington Seed Inc.
- Southeast Environmental Consultants
- Southern Pipe and Supply Company
- Sunshine Supplies, Inc.
- Thompson Engineering, Inc.



Who Should Attend

- Representatives from construction firms that utilize/install BMPs on their sites
- Road builders and engineers
- Representatives from firms that prepare erosion control/stormwater plans
- County and city engineers and/or their staff
- Representatives of local Home Builders Association and Associated General Contractors
- Representatives from the Alabama Department of Transportation
- Inspectors from the Alabama Department of Environmental Management
- Soil and Water Conservation District Boards and their field employees
- City and county officials (county commissioners, city council, and planners)
- Staff of Natural Resources Conservation Service field offices

For more information contact:

Earl Norton
Erosion & Sediment Control
Program Coordinator
334 728-4107

**The Alabama Erosion and
Sediment Control Partnership
Presents**



**2015 Clear Water
Alabama Seminar
and Field Day**



Tuscaloosa AL
September 2-3
Tuscaloosa River Market

This smart irrigation and water management system is controlled by your smartphone



Derek Markham (@derekmarkham)
Technology / Gadgets
July 19, 2013

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news:

AgSense and Valley Irrigation Launch New Remote Monitoring and Control Solution

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Improving Agriculture

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What Is Monsanto Doing to Help?

Producing More

Conserving More

Improving Lives

Monsanto and Water

▫ Water Research at Gothenburg

▫ Hydroefficiency at Work

▫ **Improving Irrigation Efficiency in Italy**

▫ Making Every Drop Count

▫ Reducing Runoff

How We're Making a Difference

Partnerships & Projects

How Are We Doing It?

Features

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AquaTEK

Improving Irrigation Efficiency in Italy



Article Highlights:

- As costs rise and Italy continues to experience variations in climate, irrigation management and efficiency becomes more important for Italian farmers.
- Monsanto in Italy brought AquaTEKSM –formerly “Efficienza Irrigua”—to farmers in 2013 to collaborate on a systems approach to water management.
- The project is part of a public-private partnership.



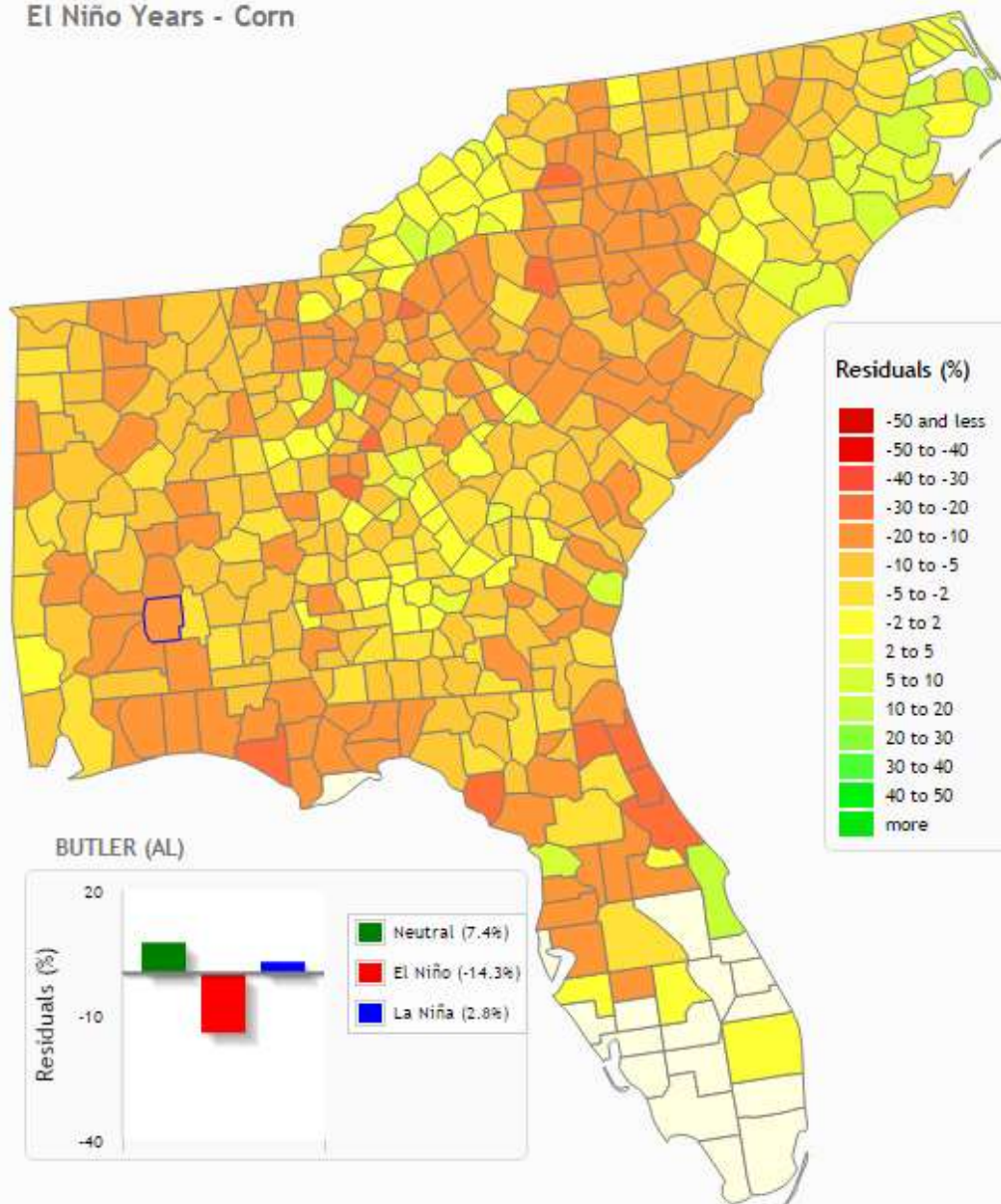
El Niño Years - Corn

▼ Select crop

- ☒ Corn
- ☐ Cotton
- ☐ Hay
- ☐ Oat
- ☐ Peanut
- ☐ Potato
- ☐ Rye
- ☐ Soybean
- ☐ Sorghum
- ☐ Sugarcane
- ☐ Tobacco
- ☐ Wheat

▶ Select ENSO phase

▶ About





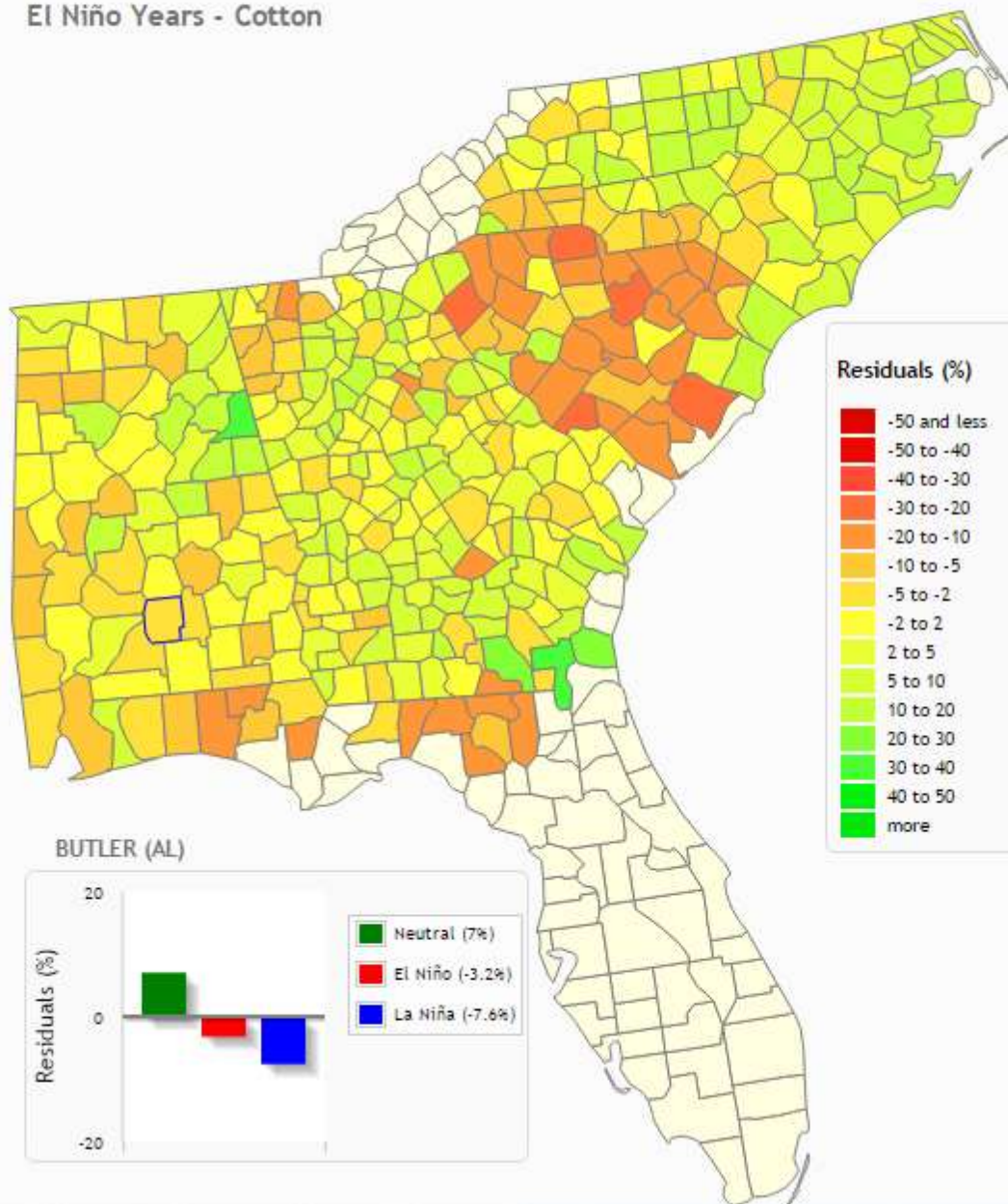
El Niño Years - Cotton

Select crop

- ☐ Corn
- ☒ Cotton
- ☐ Hay
- ☐ Oat
- ☐ Peanut
- ☐ Potato
- ☐ Rye
- ☐ Soybean
- ☐ Sorghum
- ☐ Sugarcane
- ☐ Tobacco
- ☐ Wheat

Select ENSO phase

About





Randy Dowdy, the Georgia producer who grew 503.79 bushels per acre for the National Corn Growers Association yield contest in 2014, talks to members of the ag media at an event sponsored by BASF at the Memphis, Tenn., Agricenter.

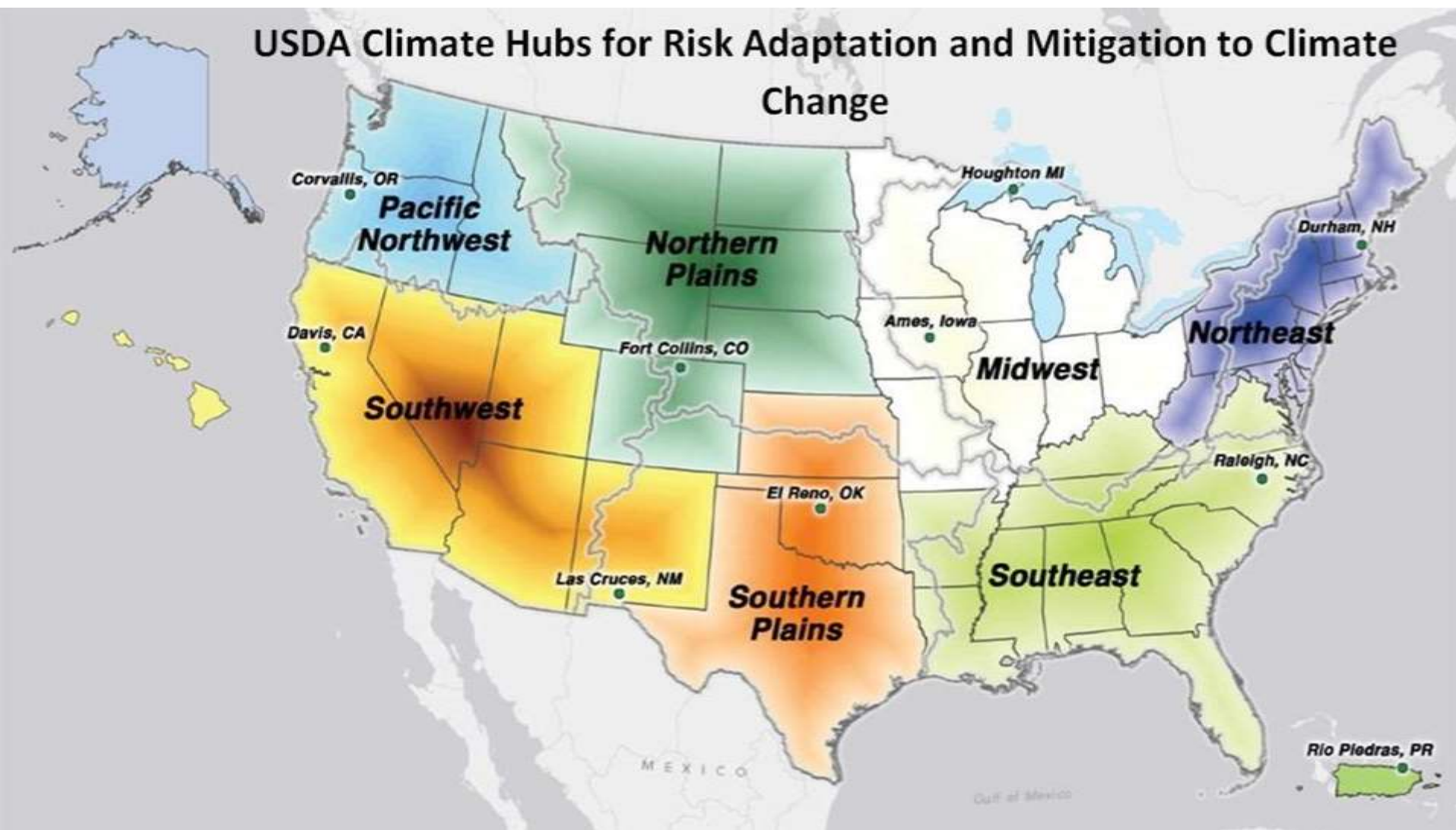
Randy Dowdy

- Dowdy describes himself as a “first-generation” farmer. “I learned real quick you have to surround yourself with people who are smarter than yourself, and you don’t always have to reinvent the wheel,” he noted. “We’ve reached out to university, to industry professionals, and then we do a lot of on-farm trial work ourselves.”
- “ When I’m giving these talks, I feel like about 10 percent might be listening to try something different. That 10 percent is where change comes from. Imagine if we still drove horse and buggies?”

To Address the issue of disaster impacts to working land sustainability USDA Secretary of Agriculture Vilsack established a series of climate hubs with the following mission

To develop and deliver science-based, region-specific information and technologies for agricultural and natural resource managers that enable climate-smart decision-making and provide assistance to enable land managers to implement those decisions.

USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change



USDA Regional Climate Hubs

- **Translate science into USEFUL tools and information**
- **Work with extension to give them the tools and information to pass along to land managers**
- **LISTEN to feedback from land managers and extension regarding what does and does not work, and what new information is needed**
- **Provide this information to funding agencies to support future work**

*Life is about not knowing, having to change,
taking the moment and making the best of it,
without knowing what's going to happen next.*

Gilda Radner

