

# Winter Fire Weather Webinar

Dec. 11, 2015  
10 a.m.

# Weather & Wildfire:

What you should know.

What your audience should know.

- ★ Juan Acuna
- ★ Tom Spencer
- ★ Stuart Coombs



# Winter Fire Weather Webinar:

## 2016 Winter Fire Weather Outlook

# AGENDA

- Introductions
- Winter fire weather outlook
- Wildland fire fuels
- Wildfire prevention
- Working with Texas A&M Forest Service
- Live Q&A

Organizer: Jessica Jackson, Communications Specialist

# Winter Fire Weather Webinar:

## 2016 Winter Fire Weather Outlook

# FEATURED SPEAKERS



**Juan Acuna**  
Fire Weather Analyst



**Tom Spencer**  
Predictive Services  
Department Head



**Stuart Coombs**  
Wildland Urban Interface  
Specialist



# Who we are

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**CONSERVE**

**PROTECT**

**LEAD**

## **Texas A&M Forest Service**

- State agency under the Texas Legislature
  - ▣ conserve forests and natural resources
  - ▣ protect lives and property
- Member of the Texas A&M University System



# What we do

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**CONSERVE**

**PROTECT**

**LEAD**

## **Predictive Services Department**

We study

- ▣ weather patterns
- ▣ drought cycles
- ▣ wildfire occurrence
- ▣ the status of vegetation statewide

To predict when and where dangerous fire conditions may occur



# Why we do what we do

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**CONSERVE**

**PROTECT**

**LEAD**

## **Predictive Services Department**

- We develop daily and seasonal forecasts to assist the state and local governments prevent, prepare for and respond to wildfire.



# How we do what we do

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**CONSERVE**

**PROTECT**

**LEAD**

## **Predictive Services Department**

- Maintain online resources in partnership with the Texas A&M University AgriLife Spatial Sciences Laboratory.
- Use technology to make information, tools and resources readily-available, easily-accessible and science-based.
- Use remote-automated weather stations across the state to gather information.

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**Juan Acuna**

Fire Weather Analyst





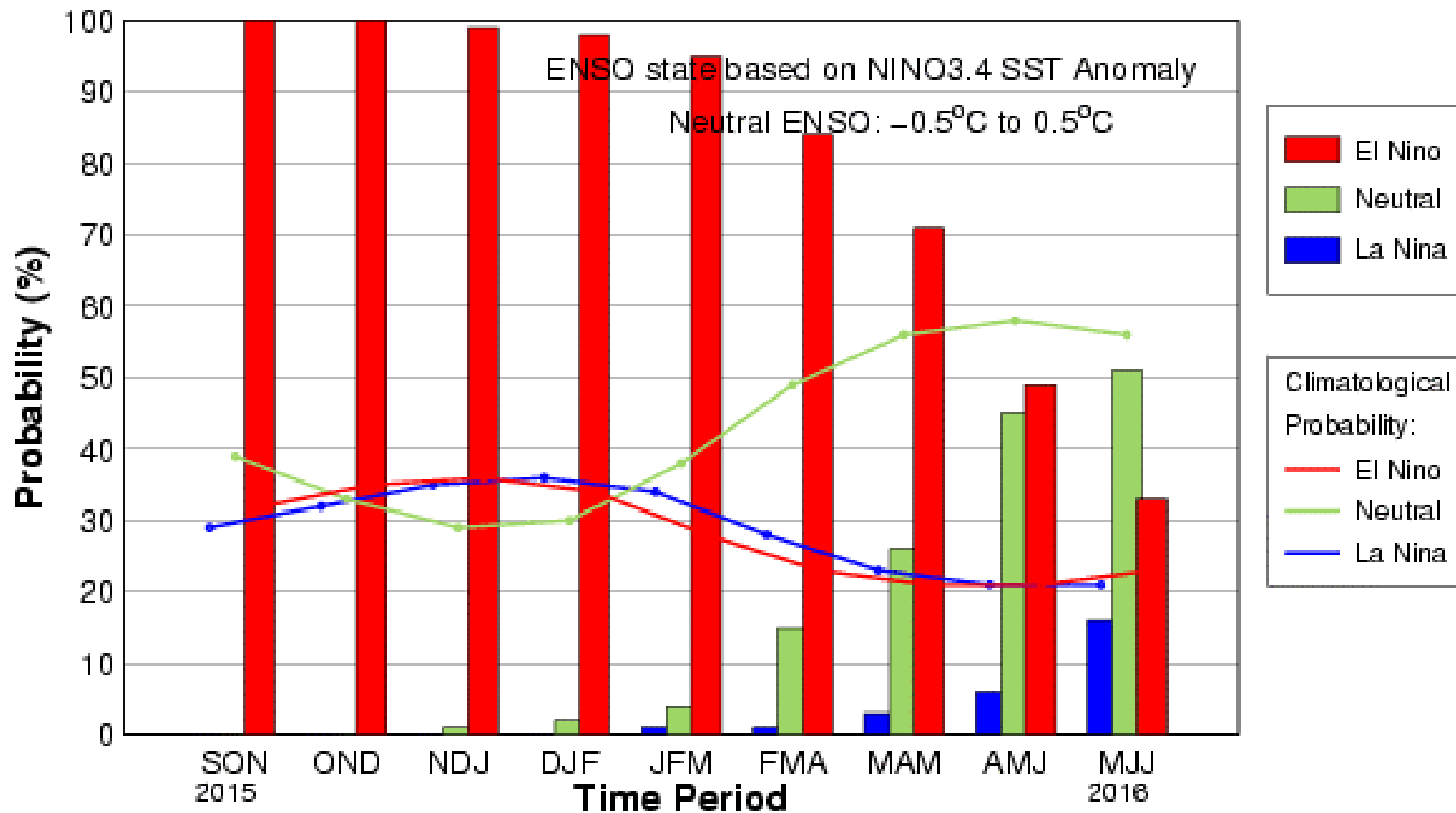
# 2016 Winter/Spring Weather Outlook

- ENSO Alert System Status: El Niño Advisory
  - ▣ El Niño conditions are present.\*
- Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean.
- There is an approximately 95% chance that El Niño will continue through Northern Hemisphere winter 2015-16, gradually weakening through spring 2016.\*



# El Nino Probability

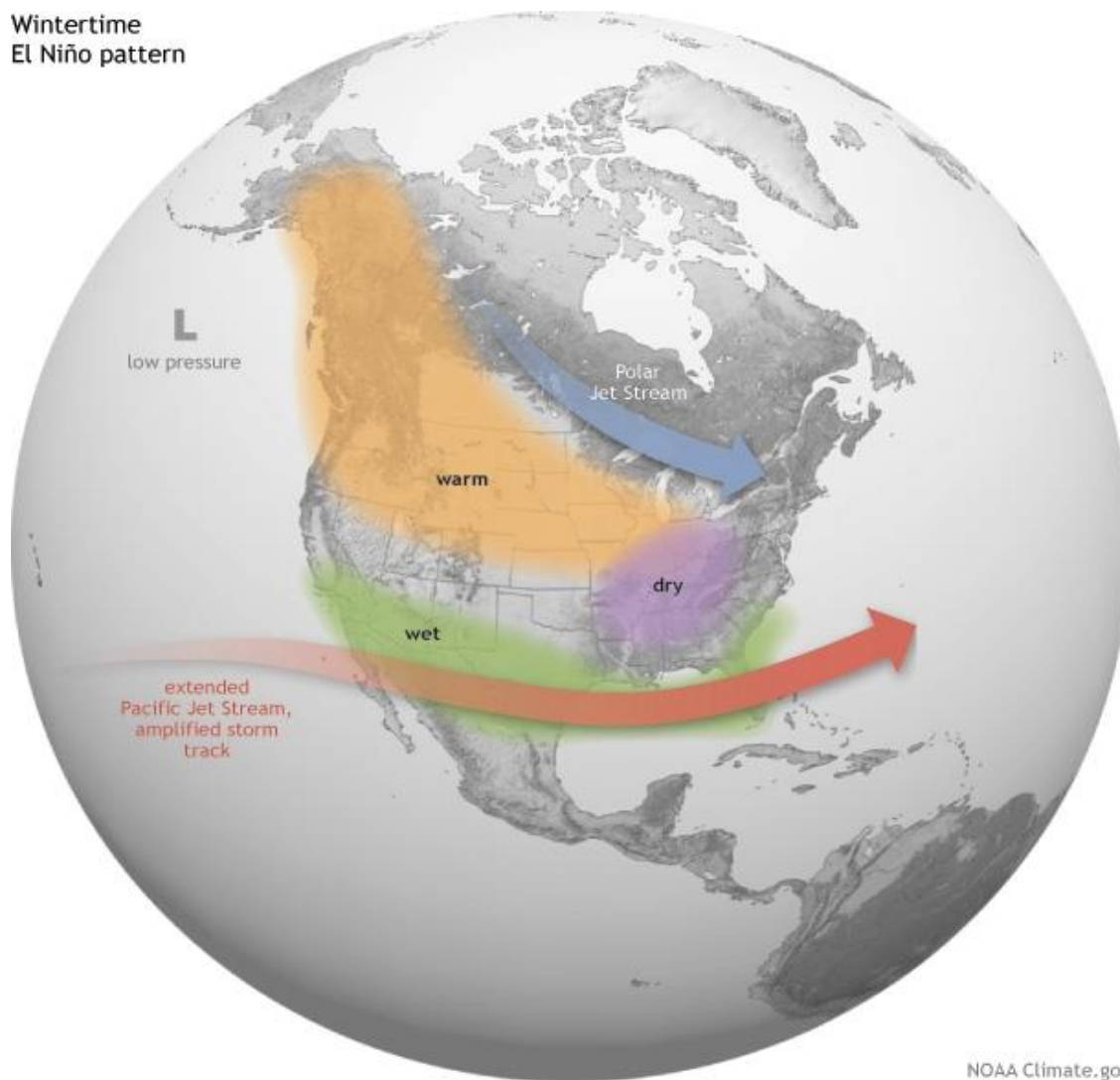
## Early-Oct CPC/IRI Consensus Probabilistic ENSO Forecast





# Typical El Niño Winter Effects

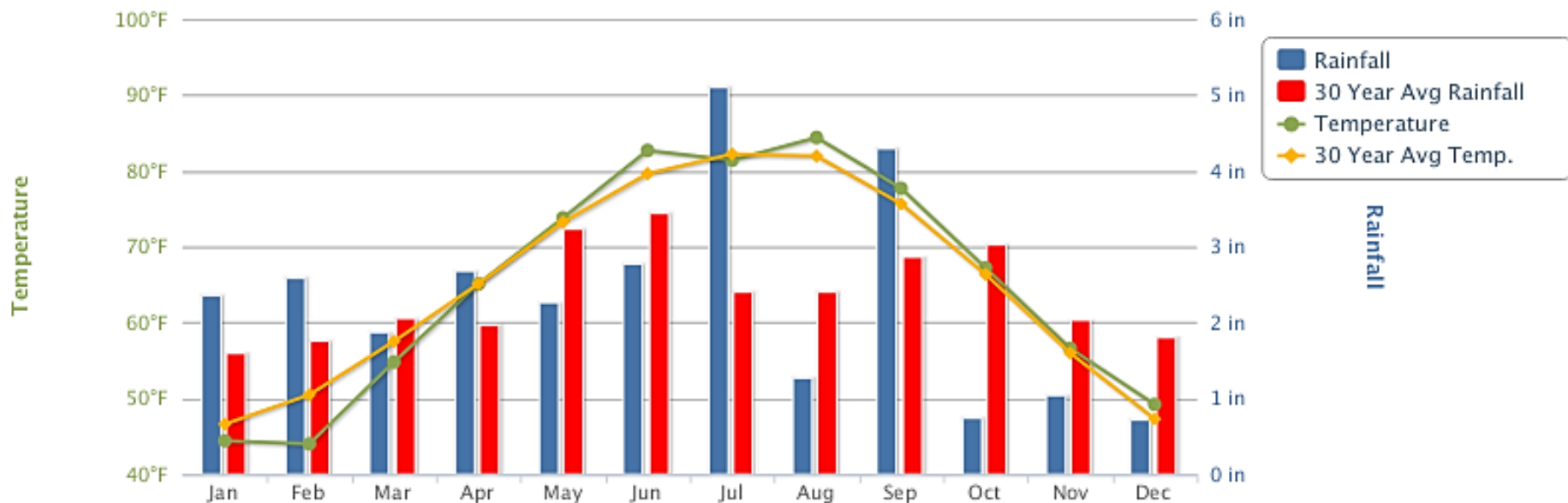
Wintertime  
El Niño pattern





# 2010 El Nino

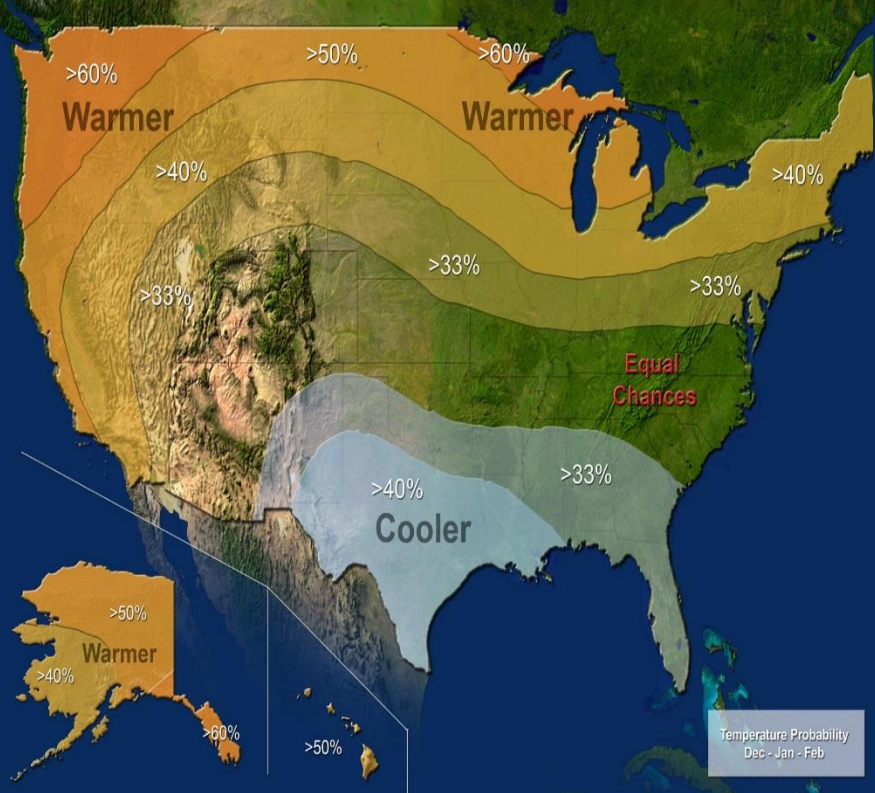
Average Monthly Temperature and Rainfall  
Year = 2010 State = TX



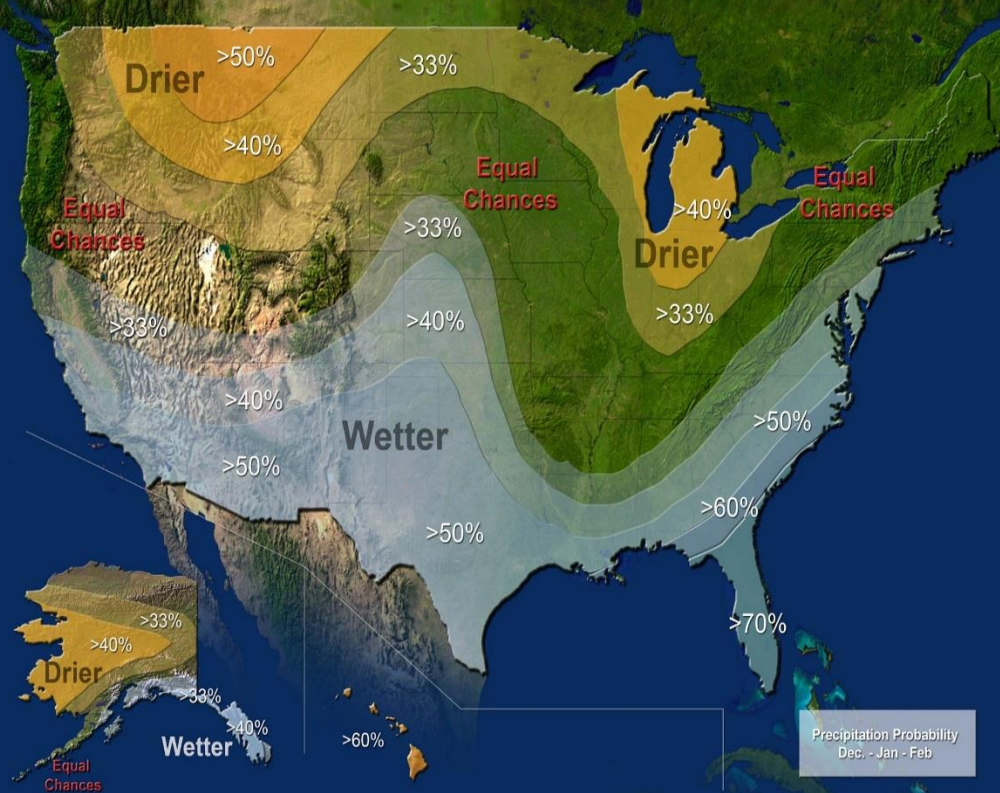


# Winter Forecast

## U.S. Winter Outlook Temperature



## U.S. Winter Outlook Precipitation



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**Tom Spencer**

Predictive Services  
Department Head



# Winter/Spring 2016

## “Setting the Stage”

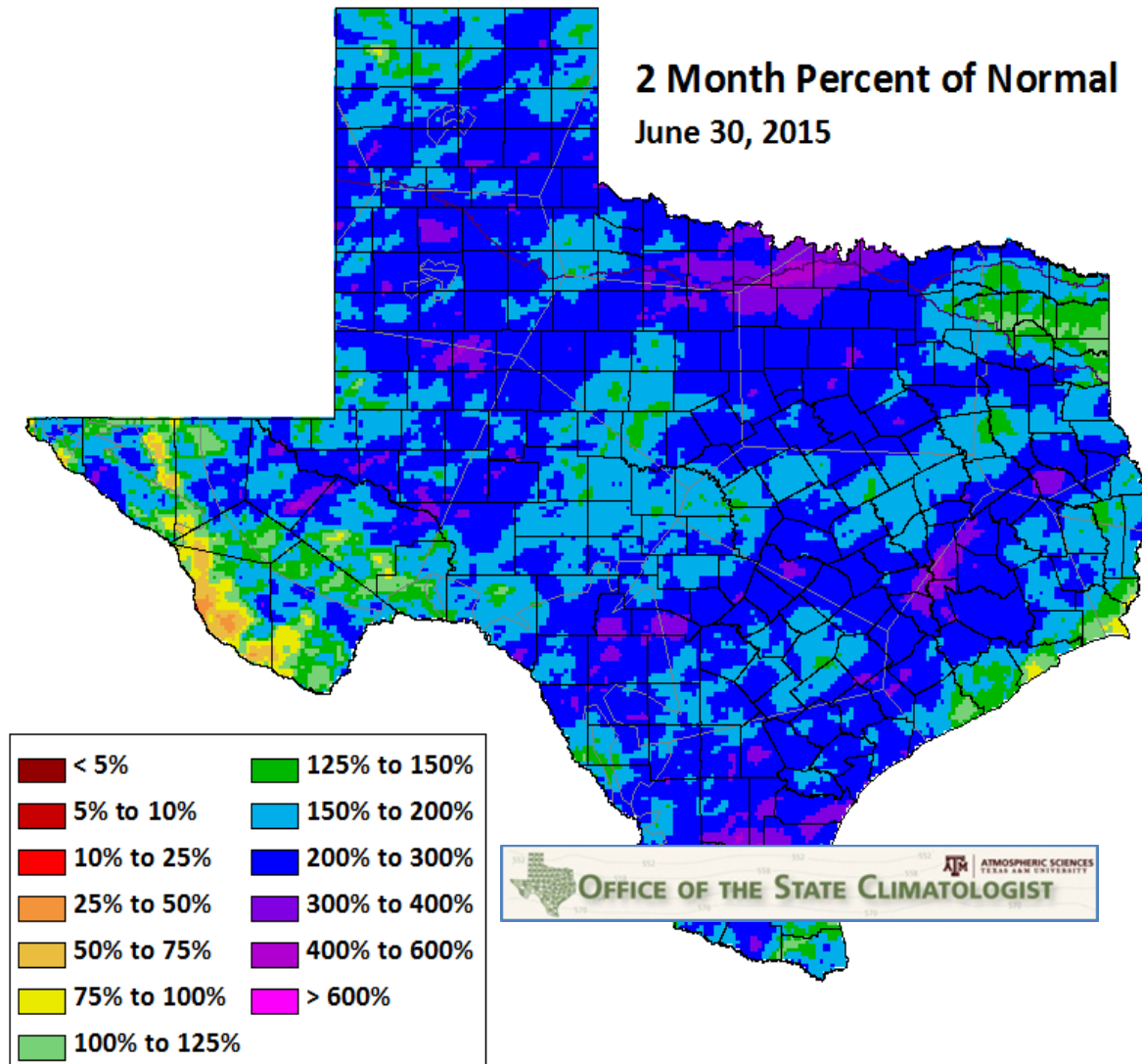
- El Nino influenced weather forecast
  - Above normal precip
  - Below normal temps
- Above normal grass fuel loading in the plains regions
- Grass fuels are generally the fuel type of concern during winter/spring fire seasons
- Fires are usually wind driven





# Spring & Early Summer Rains

## Grows Bumper Crop of Grass







# Hardeman County







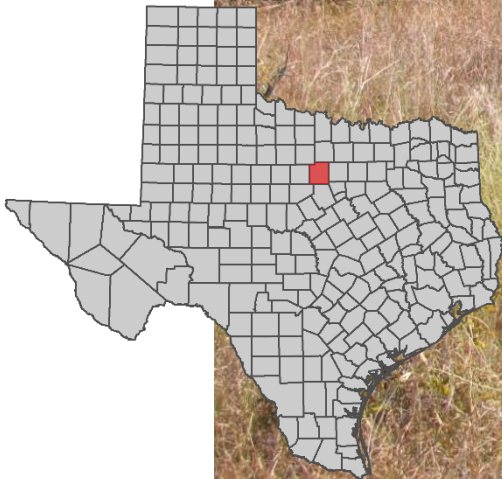
# Taylor County







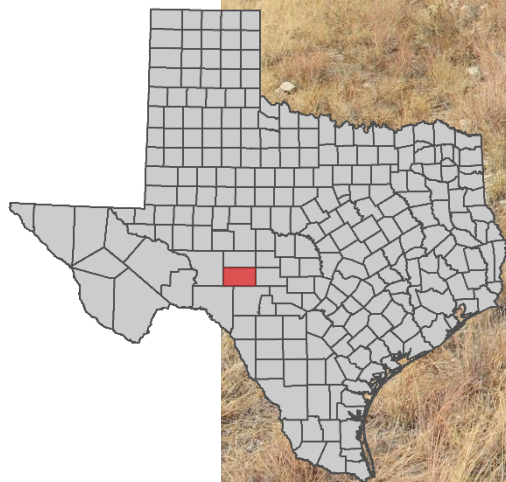
# Post Oak and Grass Palo Pinto County







# Sutton County Hill Top Grasses







# Edwards County Grasses







# Dimmit County Grass and Shrub







# Grass Fires (Heavy Loading)

## Increased intensities



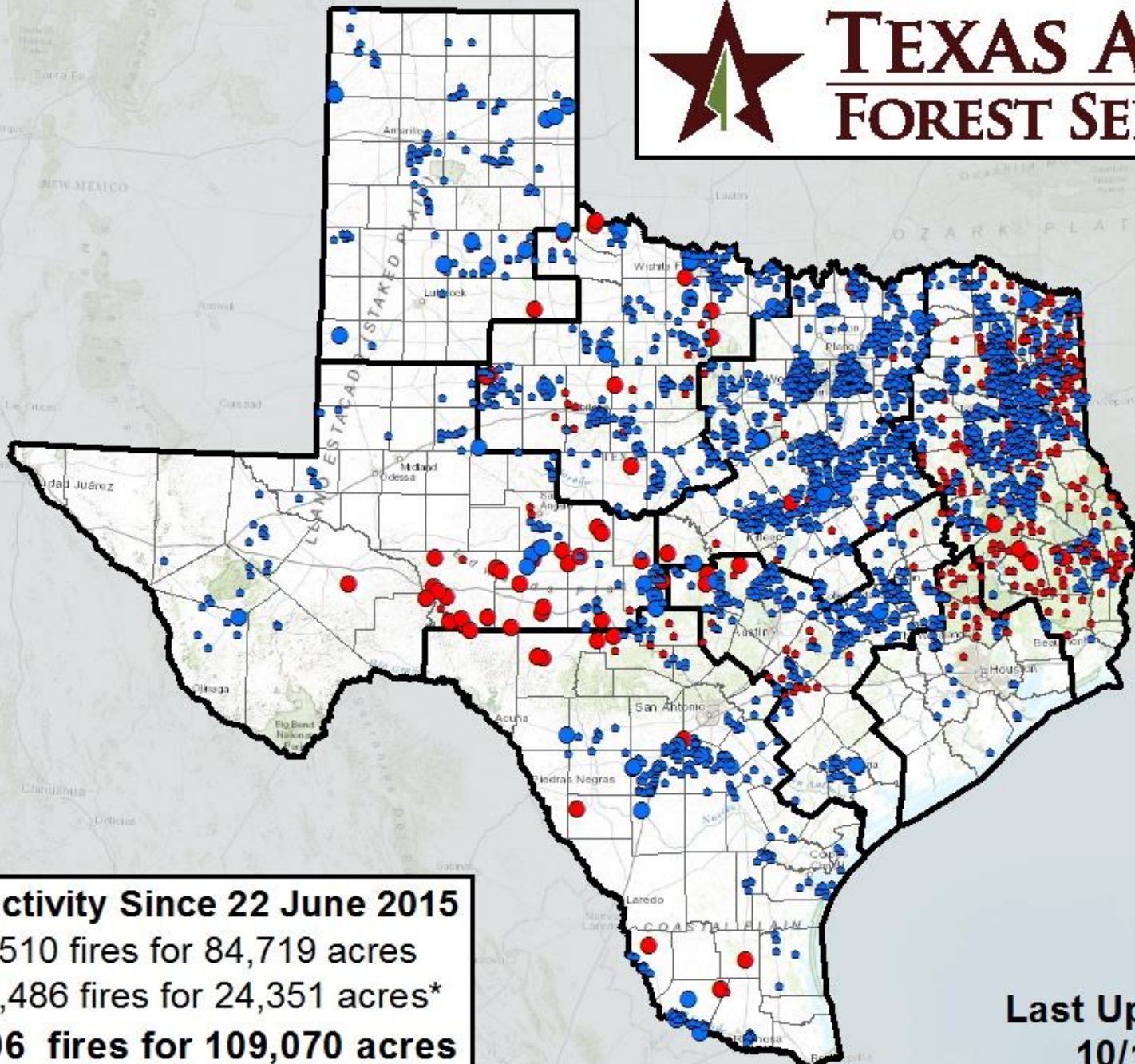
## Increased difficulty of control







# TEXAS A&M FOREST SERVICE



### Wildfire Activity Since 22 June 2015

- TFS - 510 fires for 84,719 acres
- FD - 3,486 fires for 24,351 acres\*

**Total 3,996 fires for 109,070 acres**

\* - Wildfires reported by Fire Departments through Fire Department Directory ( fdd.tamu.edu )  
Updated By: Texas A&M Forest Service

**Last Updated On:  
10/13/2015**

Sources : Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swis stopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community





# Outlook Summary Winter/Spring 2016

- With El Nino moisture:
  - Expect fuel dryness to stay below critical levels
  - Green-up to occur on time
- Fire occurrence with El Nino is usually below normal; but this year could be different
  - Heavy grass fuel loading could increase fire intensities
    - Increased fire size
    - Increased difficulty of control
  - Fires could burn in dry grass on top of wet ground
  - Awareness of grass loading is key safety concern for this winter/spring fire season

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**Stuart Coombs**

Wildland Urban Interface  
Specialist



# Being “FIREWISE”

## Firewise Landscaping in Texas



“ Fire resistant does not mean fire proof. Homeowners should maintain a healthy landscape with proper cleaning, pruning and watering. Put the right plant in the right place. ”



### THE RIGHT PLANT FOR THE RIGHT PLACE

The purpose of this guide is to provide basic information about Firewise landscaping. It will help Texas landowners choose the “right plant for the right place” by explaining fire-resistant plant characteristics. The first 30 feet from your home in all directions is called your defensible space. Maintaining defensible space around your home is key to improving your home’s chance of surviving a wildfire.

The following landscape elements apply across Texas and at all scales. Larger properties should incorporate the entire ignition zone, which is 200 feet from their home. Owners of smaller properties also need to evaluate what is within their defensible space and ignition zone and make needed adjustments. Property owners also may want to consider working with adjacent landowners.

Portions of the guide are adapted from the “Fire in the Wildland-Urban Interface” series produced as a joint product of the University of Florida, Institute of Food and Agricultural Sciences (IFAS) and the USDA Forest Service, Southern Research Station, Southern Center for Wildland-Urban Interface Research and Information.



Bluebonnets

## Fire Resistant Materials

FOR HOME REPAIR AND CONSTRUCTION



“ You don’t have to live in a concrete block home with stainless steel doors and a metal deck all the way around it. You just have to remember – it’s the little things that count. ”

Jack Cohen,  
Research Physical Scientist,  
U.S. Forest Service



A home located within the Wildland Urban Interface (WUI) may be at risk in the event of a wildfire. Lands and communities adjacent to and surrounded by wildlands are part of the WUI. However, there are precautions that a homeowner can take to reduce a home’s risk. It begins by learning what parts of your home might burn if exposed to direct flame contact, radiant heat or embers.

Several sections of a home are vulnerable to a wildfire because of their size or placement. For example, the roof is a large surface, capable of catching burning embers. The embers may get lodged between the shingles or ignite leaf or pine litter on a roof. Other sections that are vulnerable to wildfires are windows, decks, fencing, vents and eaves.

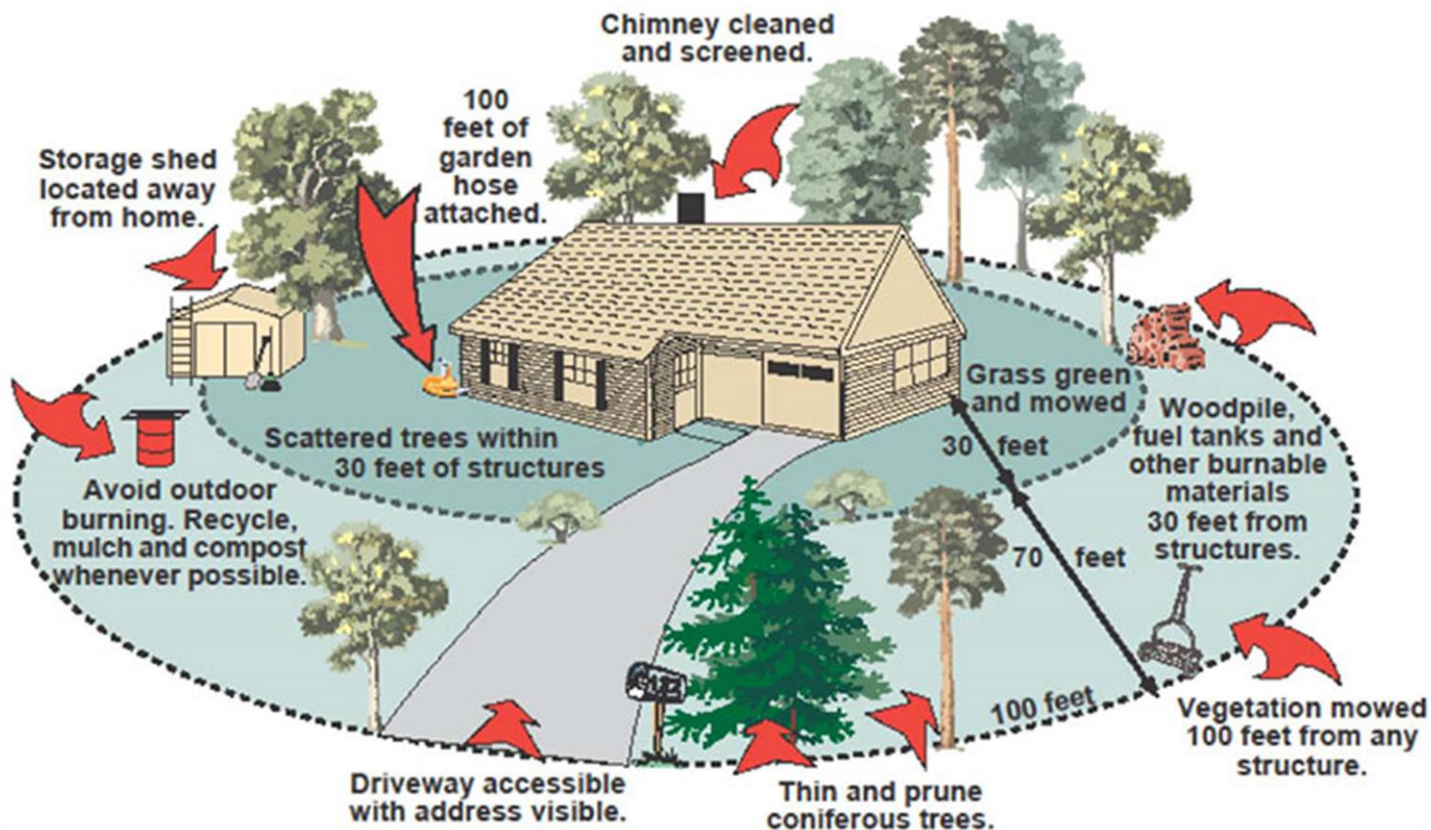
“Hardening a home” is a term used to describe the retrofitting process that reduces a home’s risk to wildfire. This involves using non-combustible building materials and keeping the area around your home free of debris. The following pages will describe each section and offer alternative building materials that will reduce a home’s risk to wildfire.



Firewise construction and landscaping helped protect this home from wildfire.



# Home Ignition Zone/ Defensible Space







# Being “Embers Aware”

## Be Embers Aware

IT'S THE LITTLE THINGS THAT COUNT



Overhanging branches can drop embers onto a roof.

**“** You don't have to live in a concrete block home with stainless steel doors and a metal deck all the way around it. You just have to remember – **it's the little things that count.** **”**

Jack Cohen,  
Research Physical Scientist,  
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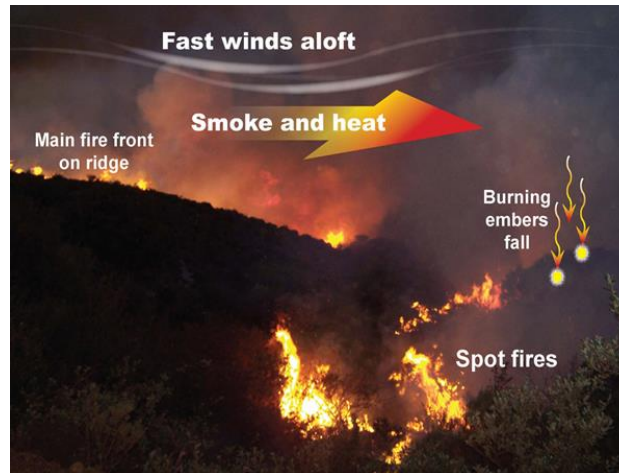
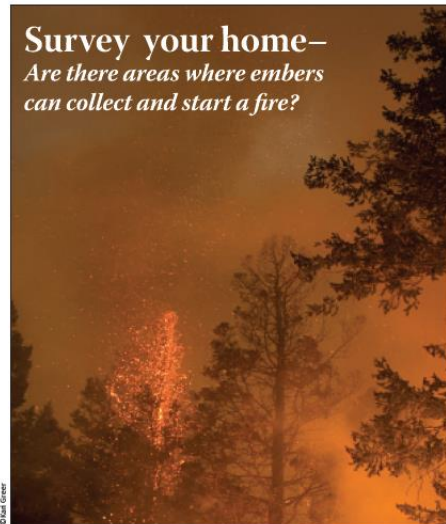


### What is the greatest threat to homes?

Embers, also known as firebrands, pose the greatest threat to a home. These fiery little pieces of wood shoot off from the main fire and get carried to other areas by fast-moving air currents.

A high-intensity fire can produce a virtual blizzard of embers. Some can travel more than a mile before landing. They can get into the smallest places and easily start a fire that can burn down an entire home.

**Survey your home—  
Are there areas where embers  
can collect and start a fire?**





# Please Visit

To learn more, request one of these brochures.

- Plan and Prepare: Is Your Home Ready?
- Fire Resistant Materials for Home Repair and Construction
- Vegetation Management in the Wildland Urban Interface
- Be Embers Aware



<http://tfsweb.tamu.edu/ProtectYourHome/>



# Ready, Set, Go Basics

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- **Ready:** Mitigate long before a fire occurs
- **Set:** Situational awareness when fire occurs
- **Go!:** Evacuate early

- **READY-**Assemble emergency supplies, plan escape routes and make sure the plan is known.
- **SET-** Stay aware of the latest news and information on the fire from local media, fire departments and public safety.
- **GO-** Follow your personal wildland fire action plan.



# Fireworks Safety

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- ❑ Follow all manufacture's warnings
- ❑ Use outside
- ❑ Obey burn bans and local ordinances
- ❑ Ignite in an area free of vegetation (mineral soil, cement)
- ❑ Keep a hose or fire extinguisher nearby
- ❑ Avoid sending fireworks into others' homes and property
- ❑ Adults only





# Thank you for attending

### Resources:

- <http://ticc.tamu.edu>
- <http://tfsweb.tamu.edu/currentsituation>
- <http://dispatchtracker.tamu.edu>
- <http://tfsweb.tamu.edu/firedanger>
- <http://tfsweb.tamu.edu/mediaresources>

### Stay in contact

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