Weather & Wildfire: What you should know. What your audience should know.

Juan Acuna
Tom Spencer
Stuart Coombs

Dec. 11, 2015
10 a.m.
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

Texas A&M Forest Service
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

Texas A&M Forest Service
Who we are

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

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

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

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

Texas A&M Forest Service
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

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: −0.5°C to 0.5°C

Probability (%)

Time Period
SON 2015
OND
NDJ
DJF
JFM
FMA
MAM
AMJ
MJJ 2016

Climatological Probability:
- Red: El Nino
- Green: Neutral
- Blue: La Nina

SON 2015: El Nino
OND: El Nino
NDJ: Neutral
DJF: Neutral
JFM: Neutral
FMA: Neutral
MAM: Neutral
AMJ: Neutral
MJJ 2016: Neutral
Typical El Niño Winter Effects

Wintertime
El Niño pattern

- Low pressure
- Polar Jet Stream
- Warm
- Wet
- Dry

Extended Pacific Jet Stream, amplified storm track

NOAA Climate.gov
2010 El Nino

Average Monthly Temperature and Rainfall
Year = 2010 State = TX

Temperature

Rainfall

30 Year Avg Rainfall
Temperature
30 Year Avg Temp.

SCIPP (www.southernclimate.org)
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Tom Spencer
Predictive Services
Department Head

Texas A&M Forest Service
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
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
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

Texas A&M Forest Service
Being “FIREWISE”

**Firewise Landscaping in Texas**

**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 of 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 all states.

Larger properties should incorporate the entire ignition zone, which is 200 feet from their homes. 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.

*Texas A&M Forest Service*

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**Fire Resistant Materials**

**For Home Repair and Construction**

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.

*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

*Texas A&M Forest Service*
Home Ignition Zone / Defensible Space

- Storage shed located away from home.
- 100 feet of garden hose attached.
- Chimney cleaned and screened.
- Scattered trees within 30 feet of structures.
- Avoid outdoor burning. Recycle, mulch and compost whenever possible.
- Grass green and mowed 30 feet.
- Woodpile, fuel tanks and other burnable materials 30 feet from structures.
- Vegetation mowed 100 feet from any structure.
- Driveway accessible with address visible.
- Thin and prune coniferous trees.
**Being “Embers Aware”**

**Be Embers Aware**

IT’S THE LITTLE THINGS THAT COUNT

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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.

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

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*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*

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*Texas A&M Forest Service*
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

- **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

- Follow all manufacturer’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

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- For questions email: newsmedia@tfs.tamu.edu