Santa Ana Wildfire Threat Index

PREDICTIVE SERVICES

SDGE connected

A Sempra Energy utility℠

FOREST SERVICE U S DEPARTMENT OF AGRICULTURE

Introduction

Santa Ana Classification Project

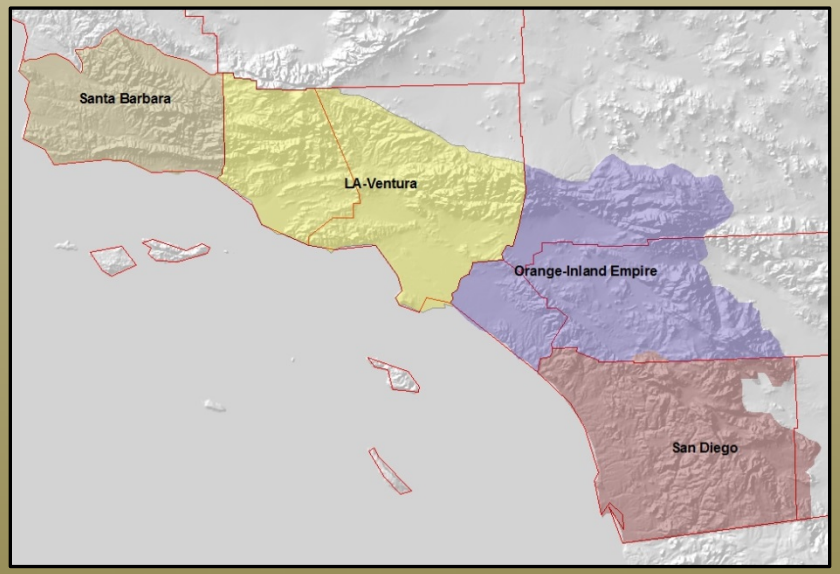
Definition

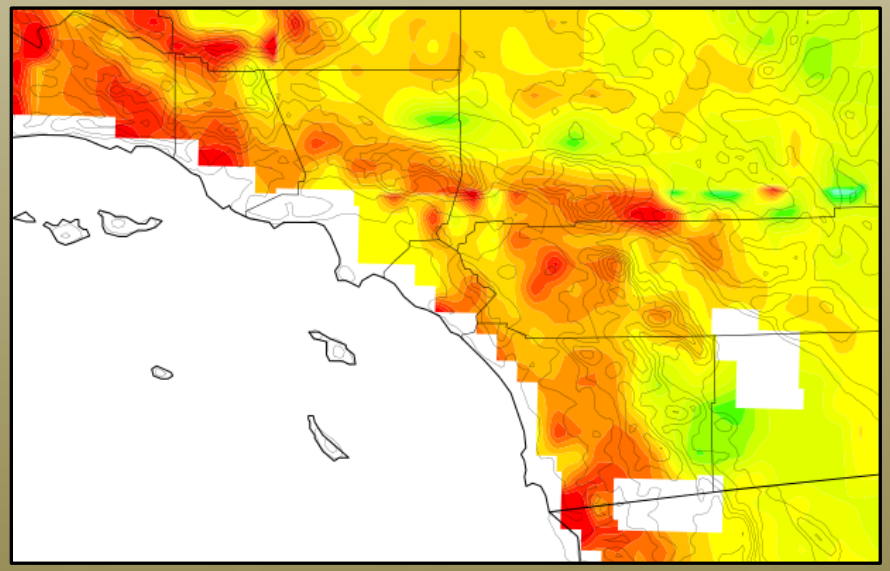
The Santa Ana Wildfire Threat (SAWT) index categorizes Santa Ana winds with respect to anticipated fire activity. Wind, low level dryness, and fuel conditions are the determining factors for how severe the Santa Ana event will be in terms of its impact upon the fire environment.

SAWTi Zones

Why are the zones so large?

- The zones are designed to accommodate multiple user groups
- The zones coincide with the major media markets
- Data is more reliable when averaged over large areas





SAWT Methodology

1. Start by assessing fire potential.
2. The potential for a new fire to become large depends on the weather and fuel conditions.
3. Assuming fuels are dry and continuous, **L**arge **F**ire **P**otential will be greatest based on existing weather conditions. We call this **LFP weather**.
4. Fuels (whether dry or wet) modify **LFP weather**.

Large fire potential (LFP) expressed as a function of wind, moisture, and fuel conditions

$$LFP = (WC)(FMC)$$

$$LFP = W_s^2 D_d \underbrace{\left\{\left(\frac{DL}{LFM} - 1\right) + G\right\}^{1.7}}_{\text{Ranges from 0 to 1}}$$

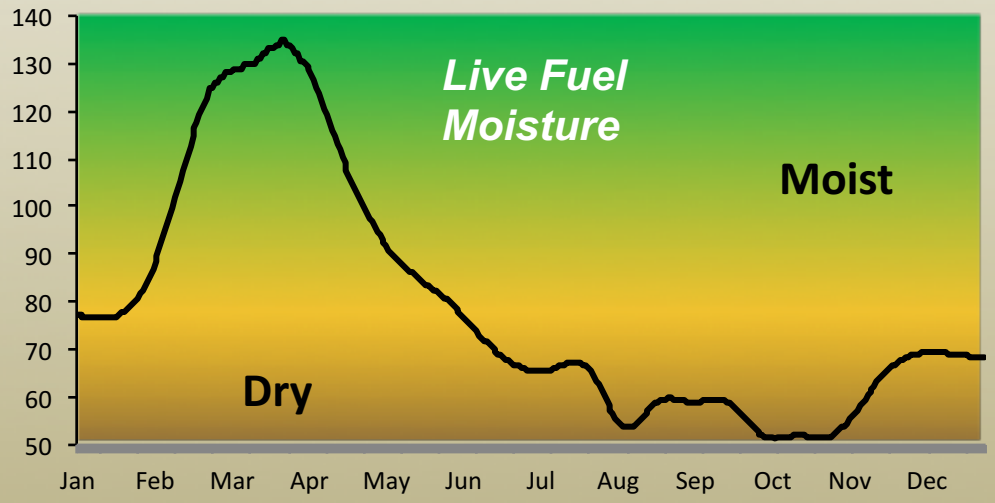
Methodology

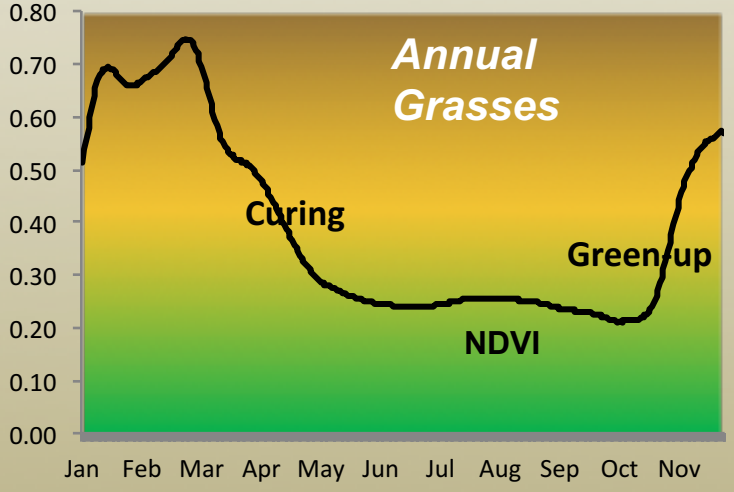
$$LFP = W_s^2 D_d \left\{ \left(\frac{DL}{LFM} - 1 \right) + G \right\}^{1.7}$$

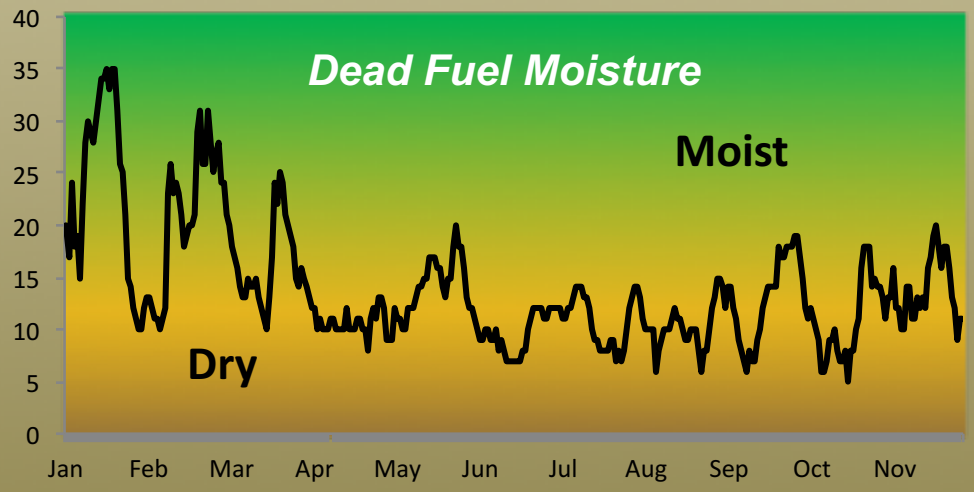
Where:

W_S = Wind Speed
D_d = Dew point Depression
DL = Dryness Level (Dead fuel moisture)
LFM = Live Fuel Moisture
G = Green-up state of the annual grasses

Fuel Moisture





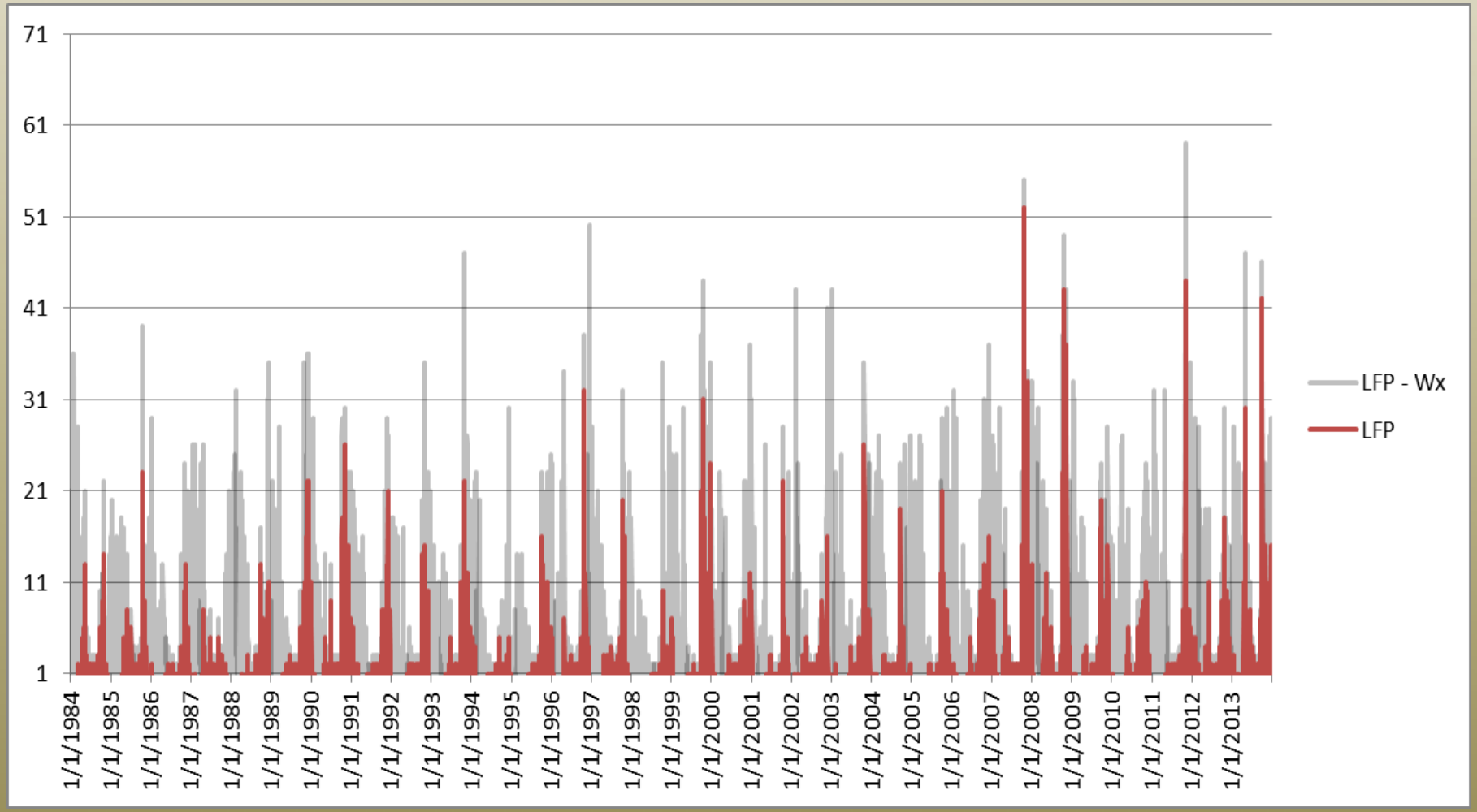


Fuel Moisture Component has 3 inputs:

- Live Fuel Moisture (LFM) – Chamise
- Dead Fuel Moisture (DL) – A combination of ERC and either F10 or F100
- Green-up and Curing of the Annual Grasses (G)

Each moisture variable differs in it's annual cycle and can be in phase or out of phase with the other variables.

Zone 1 – LA/Ventura



Threat Levels

No Rating - Santa Ana winds are either not expected, ***or*** will not contribute to significant fire activity

Marginal Threat - Upon ignition, fires ***may*** grow rapidly.

Moderate Threat - Upon ignition, fires will grow rapidly and will be difficult to control.

High Threat - Upon ignition, fires will grow very rapidly, will burn intensely, and will be very difficult to control.

Extreme Threat - Upon ignition, fires will have extreme growth, will burn very intensely, and will be uncontrollable.

Recommended Actions

- Make sure that your emergency preparedness kit is in order and closely monitor fire conditions
- Review your evacuation plan and meeting points with your family
- Be prepared to move livestock, pets or family members with special needs
- Move all flammable objects off your patio, deck or porch
- Close windows, doors and vents on all structures and vehicles
- Clean debris away from your house, charge your cell phone and make sure you have plenty of gas
- Register all cell phones in your household to receive reverse-911 warnings for the latest information

santaanawildfirethreat.com

FORECAST REPORT

Area	Threat Level
Zone 1: LA-Ventura	NO RATING

Event Description
The fire potential with this Santa Ana event is not expected to support large fires, winds are light and The air is dry. Green-up has yet to occur, Fuels are moist and large fire activity is unlikely.

Recommended Action(s)
Make sure that your emergency preparedness kit is in order. An emergency can happen at any time. For additional preparedness recommendations in San Diego, visit www.ReadySanDiego.org and in the LA area visit www.AlertLA.county.gov.For additional information visit http://alert.lacounty.gov www.readyventuracounty.org www.preventwildfireca.org

LEGEND

- **NO-RATING** Santa Ana winds are either not expected, *or* will not contribute to significant fire activity.
- **MARGINAL** Marginal - Upon ignition, fires *may* grow rapidly.
- **MODERATE** Upon ignition, fires *will* grow rapidly and *will* be difficult to control.
- **HIGH** Upon ignition, fires will grow *very* rapidly, will burn intensely, and will be *very* difficult to control.
- **EXTREME** Upon ignition, fires will have explosive growth, will burn *very* intensely, and will be uncontrollable.

ZONES	MON / SEP 15	TUE / SEP 16	WED / SEP 17	THU / SEP 18	FRI / SEP 19	SAT / SEP 20
ZONE 1: LA-VENTURA						
ZONE 2: ORANGE-INLAND EMPIRE						
ZONE 3: SAN DIEGO						
ZONE 4: SANTA BARBARA						

Selecting Zones

FORECAST REPORT

Area	Threat Level
Zone 3: San Diego	NO RATING

Event Description
The fire potential with this Santa Ana event is not expected to support large fires, winds are light and The air is moist. Green-up has yet to occur, Fuels are moist and large fire activity is unlikely.

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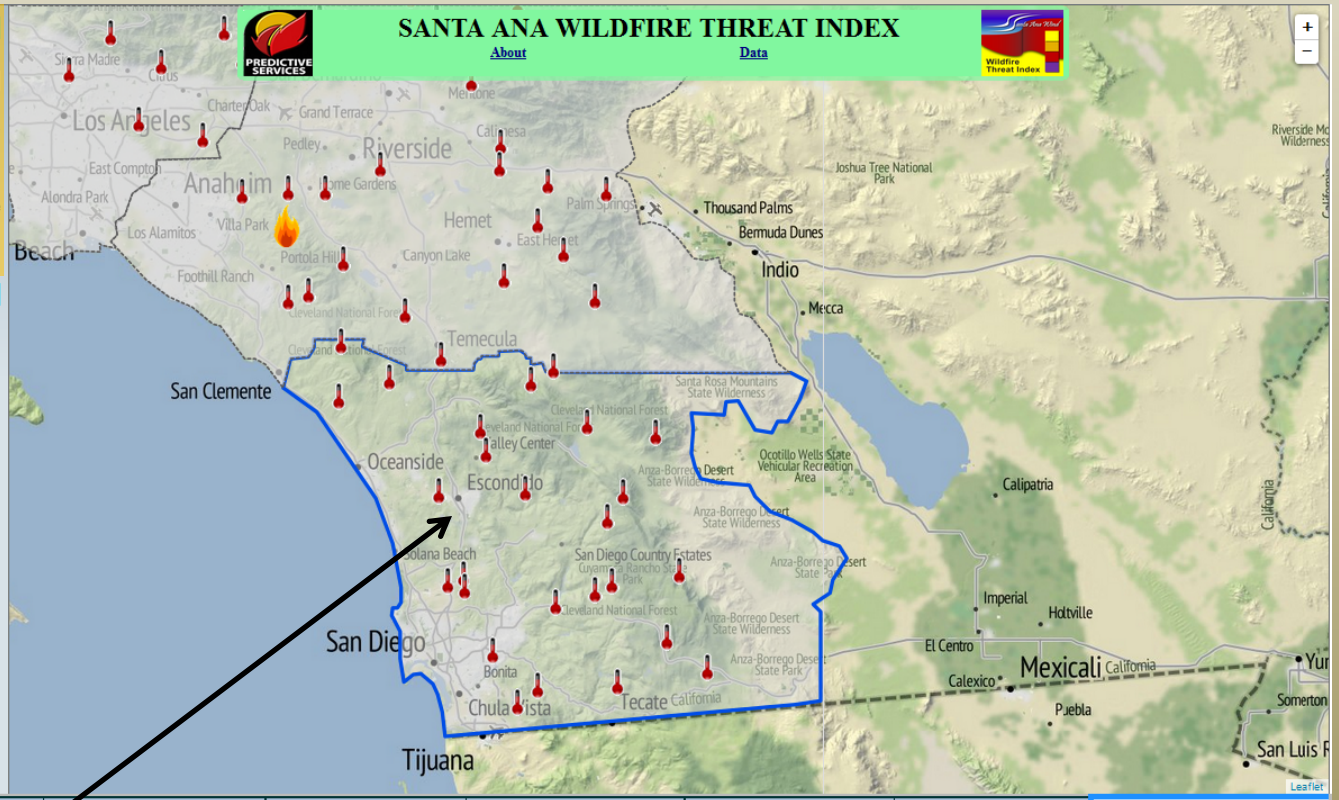

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Selecting Days

FORECAST REPORT

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Zone 3: San Diego	NO RATING

Event Description
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ZONE 1: LA-VENTURA						
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ZONE 3: SAN DIEGO						
ZONE 4: SANTA BARBARA						

Selecting Fires

FORECAST REPORT

Area	Threat Level
Zone 2: Orange-Inland Empire	NO RATING

Event Description
Santa Ana winds are not expected.

Recommended Action(s)
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ZONE 3: SAN DIEGO						
ZONE 4: SANTA BARBARA						

Selecting Weather

FORECAST REPORT

Area	Threat Level
Zone 2: Orange-Inland Empire	NO RATING

Event Description
Santa Ana winds are not expected.

Recommended Action(s)
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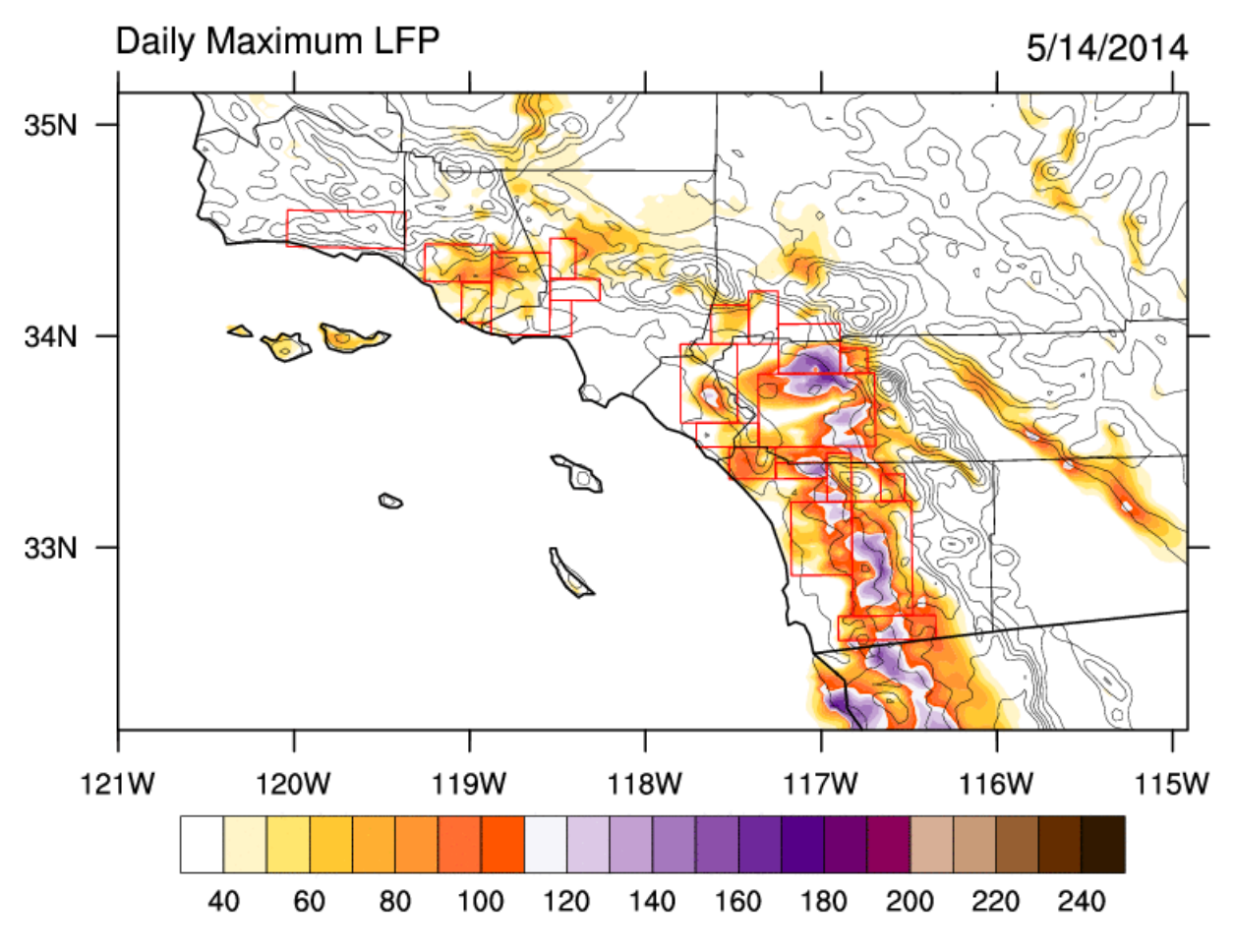
Santa Ana Event
May 11-14, 2014



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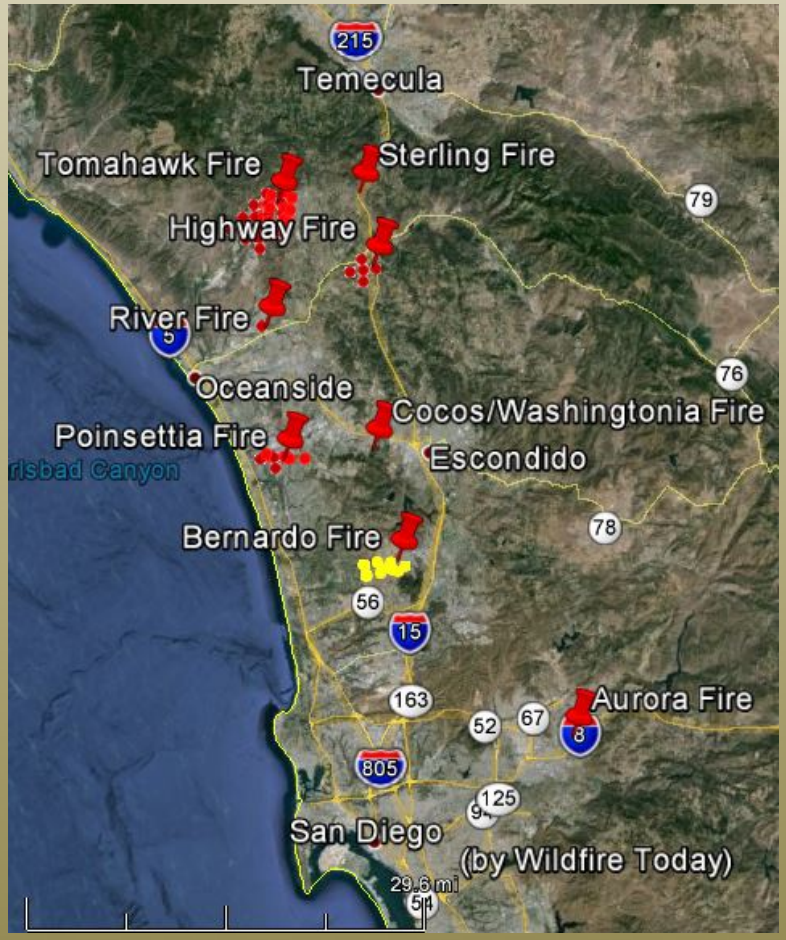

May 13-14, 2014

FORECAST REPORT

Area	Threat Level
Zone 3: San Diego	HIGH

Event Description

Recommended Action(s)

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ZONE 1: LA-VENTURA						
ZONE 2: ORANGE-INLAND EMPIRE						
ZONE 3: SAN DIEGO						
ZONE 4: SANTA BARBARA						