

# **Introduction**

**Ruben Grijalva**

**FireChiefs.com LLC, Owner**

**Former Executive Director  
California Fire & Rescue Training Authority**

**Retired Director  
Cal Fire**

**Former State Fire Marshal  
State of California**

**Former Fire Chief  
Palo Alto, CA**

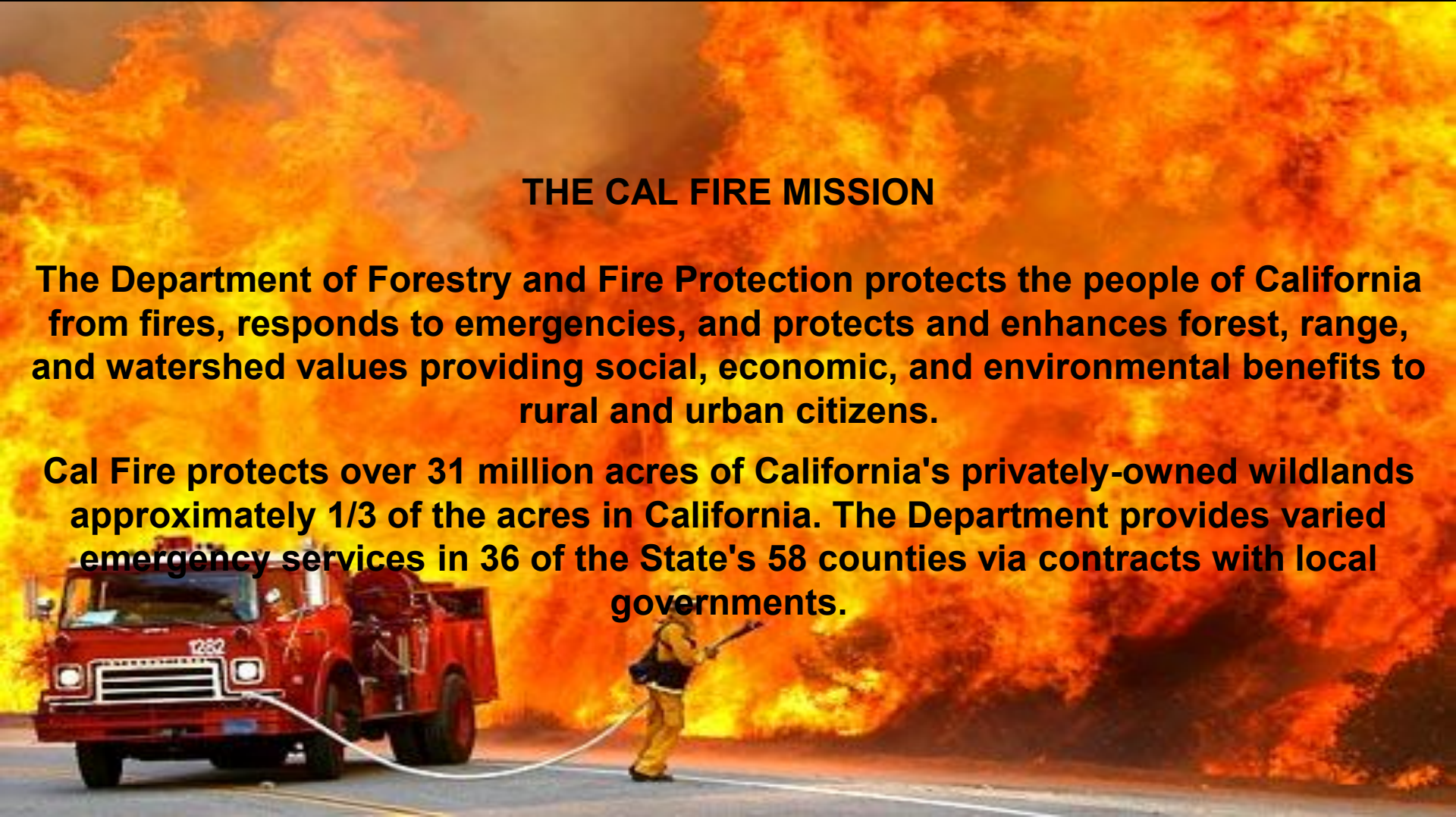
**Former Public Safety Lieutenant  
City of Sunnyvale, CA**

# California Fire Siege

## THE CAL FIRE MISSION

**The Department of Forestry and Fire Protection protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens.**

**Cal Fire protects over 31 million acres of California's privately-owned wildlands approximately 1/3 of the acres in California. The Department provides varied emergency services in 36 of the State's 58 counties via contracts with local governments.**



# California Fire Siege

## Direct Protection Area



Of California's 100 million acres:

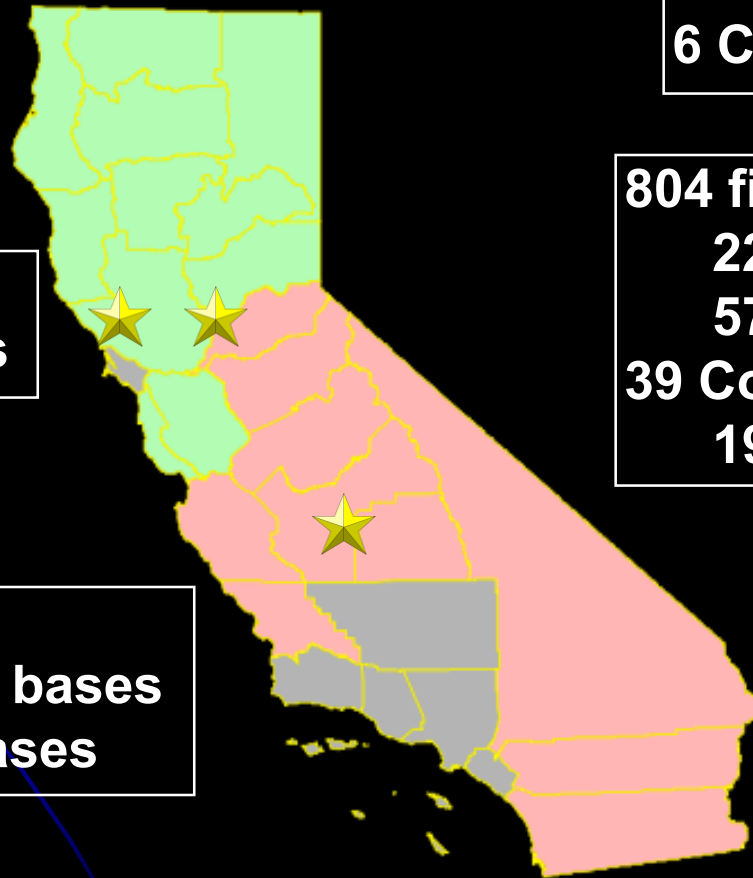
- 1/3 is CAL FIRE protection
- 1/3 is federal protection
- 1/3 is local protection

# ***CAL FIRE*** Resources

## Northern Region

**Sacramento  
Headquarters**

**Air Attack**  
13 air attack bases  
9 helitack bases



**21 Units**  
**6 Contract Counties**

**804 fire stations**  
**227 state**  
**577 local government**  
**39 Conservation Camps**  
**198 fire crews**

## Southern Region



# California Fire Siege

## Initial Attack Philosophy

***Fire Protection Objective: Suppress 95% of all wildfires to 10 acres or less***



# California Fire Siege

## Pre-Season Preparation

### Governor's Executive Order



# California Fire Siege

## Pre-Season Preparation

**2,000 More Firefighters**





# California Fire Siege

## Pre-Season Preparation

**Increased Staffing  
on State Engines**





# California Fire Siege

## Pre-Season Preparation

Contract with VLAT - DC-10



# California Fire Siege

## Pre-Season Preparation

### Coordination w/Other Agencies



# California Fire Siege

## Pre-Season Preparation

A large air tanker aircraft is shown in flight, dropping a massive cloud of red fire retardant over a wildfire. The retardant is being released in a long, dense stream that fills the upper half of the frame. Below the retardant, the dark, silhouetted ridges of a mountain range are visible against a clear blue sky. The text is overlaid on the lower half of the image.

**Hit fires fast, hit them with lots of resources, large air tanker assets to backup boots on the ground**

# California Fire Siege

## Fire Conditions

### Perfect Fire Storm Conditions

- Wind driven
- Fuel driven
- Topography driven
- Structure to structure driven
- Direct flame, radiant heat, ember driven

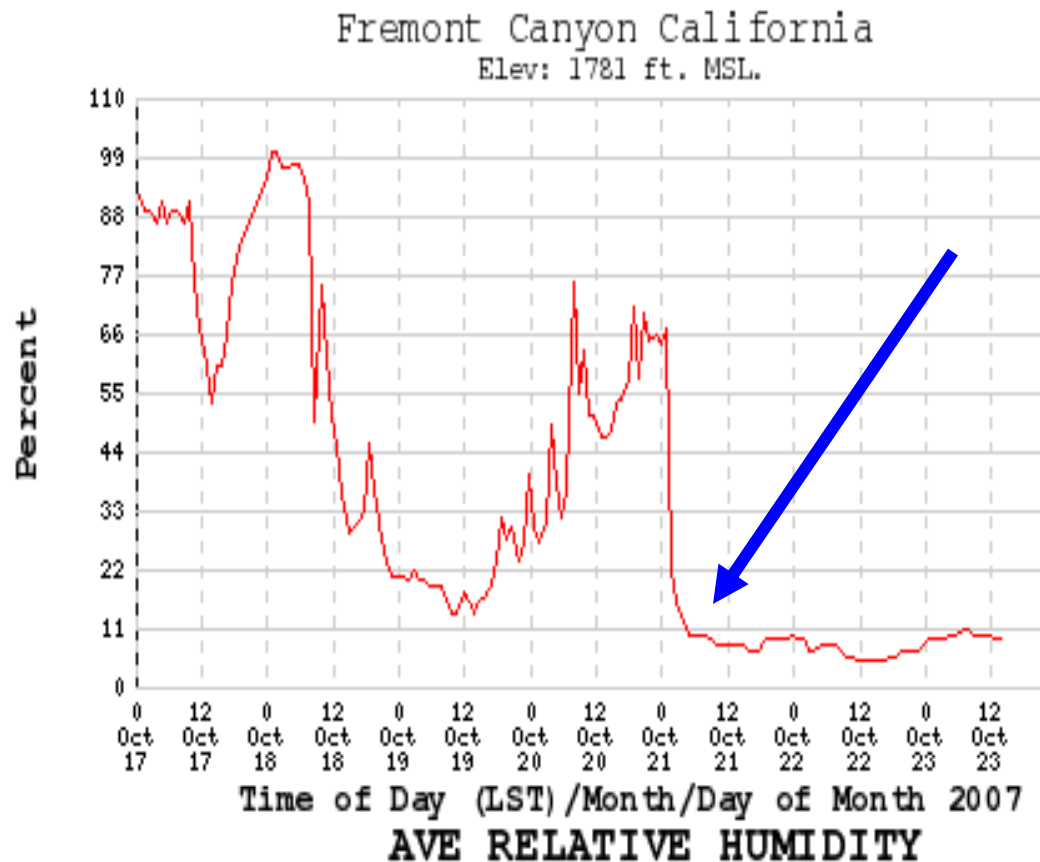




# California Fire Siege

## Fire Conditions

- CA has various micro climates throughout CA
- Wind Events
- Sustained wind speeds – 40-60 MPH
- Wind gusts – up to 100 MPH
- Fuel moistures drops to single digits – 9%-12%
- Conditions following years of low precipitation
- Dead and dying trees and brush from freeze, disease, and infestation



Western  
Regional  
Climate  
Center

### Statistics

#### Begin Date/Time

Oct. 17, 2007  
:00 LST

#### End Date/Time

Oct. 23, 2007  
23:00 LST

#### AVE RELATIVE HUMIDITY

Percent

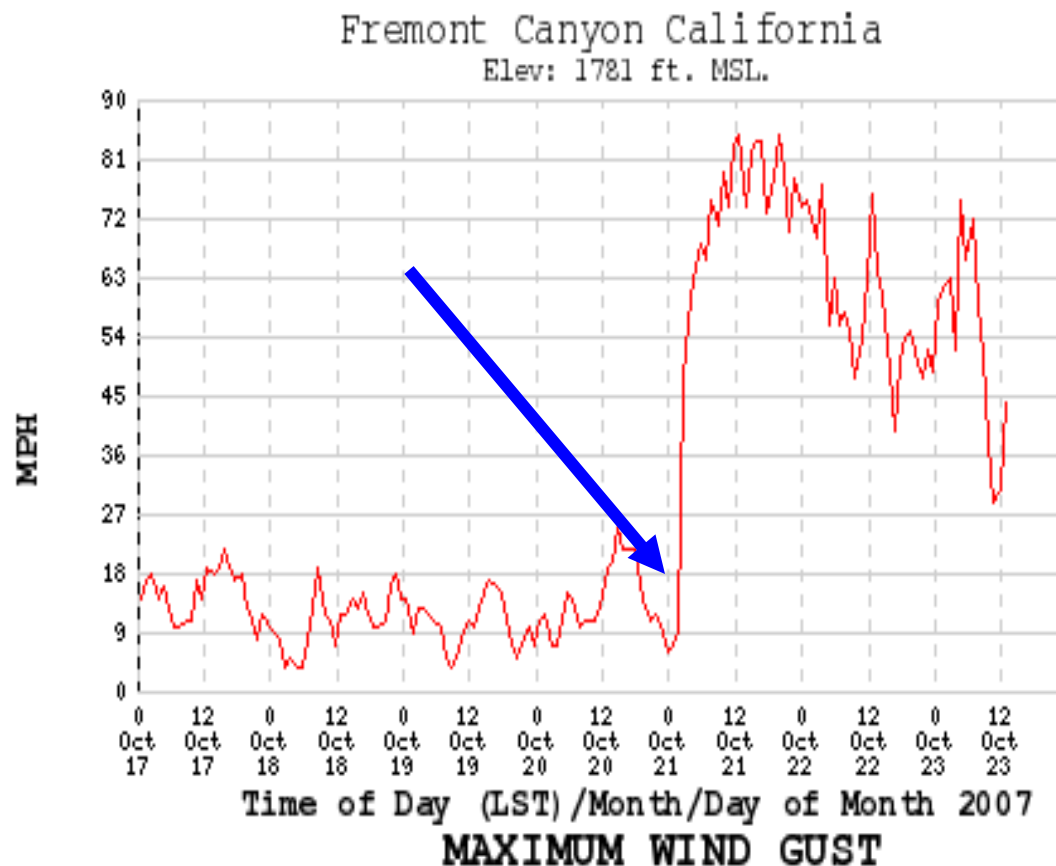
#### Average

35

#### Max. | Min.

100 | 5

A 7-Day graph of average Relative Humidity at Fremont Canyon RAWS  
RH fell sharply early on the 21<sup>st</sup>, and has now been <12% for 2 ½ days.



Western  
Regional  
Climate  
Center

### Statistics

**Begin Date/Time**

Oct. 17, 2007

:00 LST

**End Date/Time**

Oct. 23, 2007

23:00 LST

**MAXIMUM WIND GUST**

MPH

**Average**

31.4

**Max. | Min.**

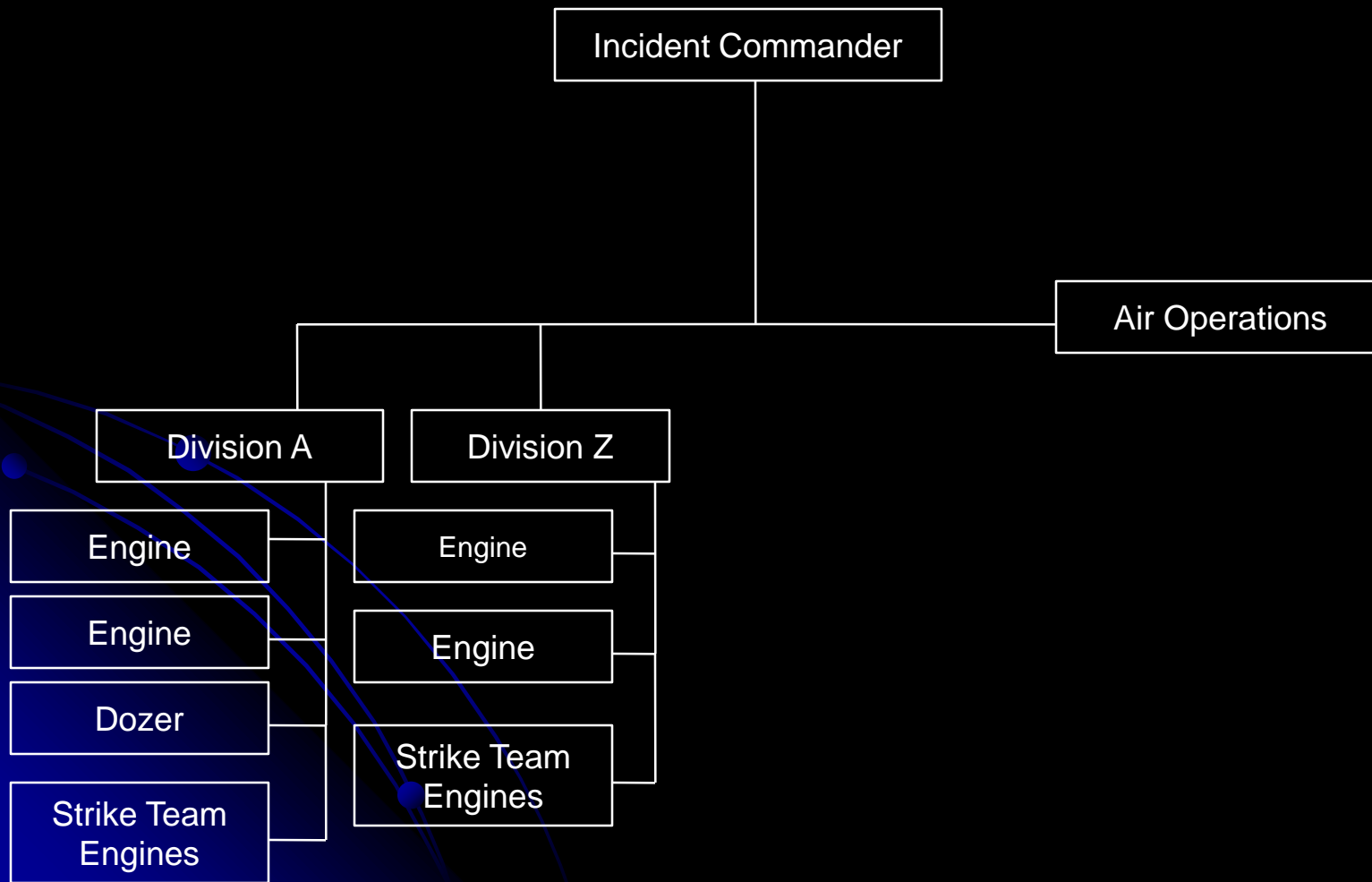
85 | 4

A 7-Day graph of maximum wind gusts at Fremont Canyon RAWS  
The sharp spike seen early on Sunday Oct. 21 is the Santa Ana onset

# California Fire Siege

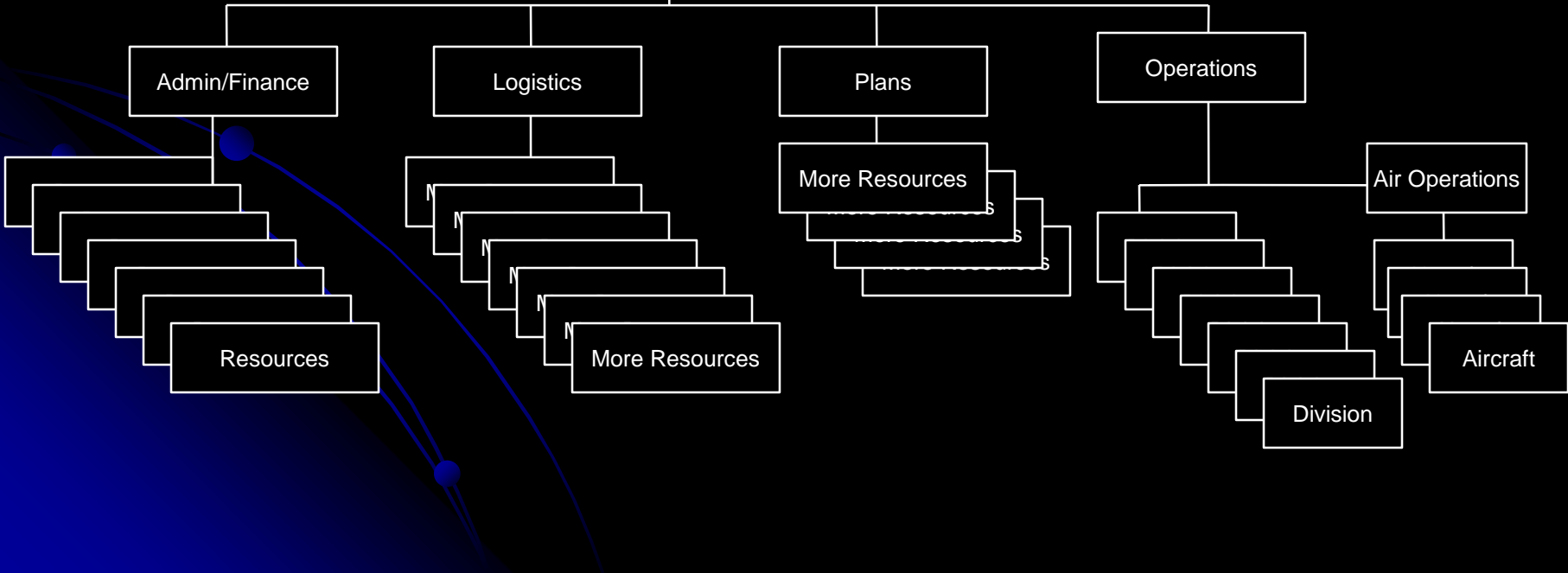
## Fire Organization

### Beginning of Incident





# Expands as Fire Becomes Larger and More Complex



# **California Fire Siege**

**Where does help come from?**

**Total firefighters: 15,616**

**Engines: 2,585**

**Strike Teams/Task Forces: 263**

**Dozers: 225**

**Handcrews: 298**

**Watertenders: 284**

**Overhead personnel: 1,707**

# California Fire Siege

## California Mutual Aid System



# California Fire Siege

**Law Enforcement, National Guard,  
Volunteer Organizations**





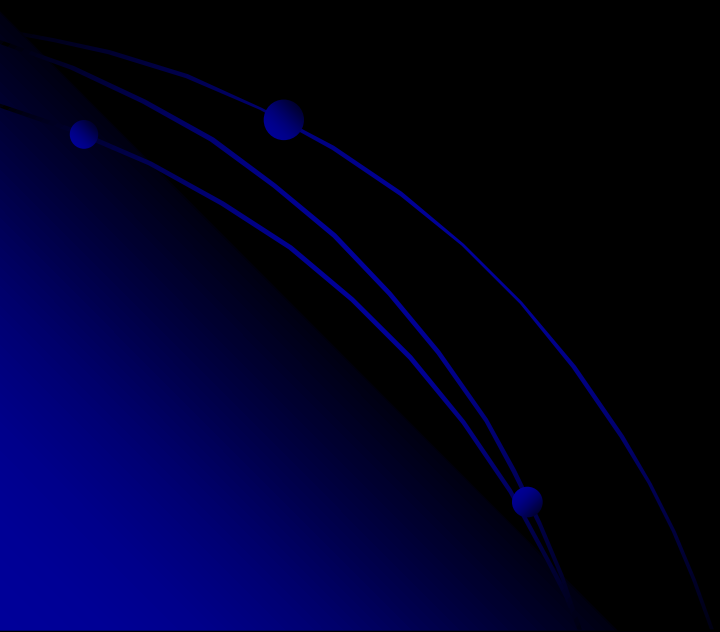
# California Fire Siege

## Large scale evacuations



# California Fire Siege

**Use of Military Resources for  
Gathering Real-Time Intelligence**



# California Fire Siege

## Preventing the Next Firestorm

**Better Land Use / Planning**





# California Fire Siege

## Preventing the Next Firestorm

**More Fuels Treatment**





# **California Fire Siege**

## **Preventing the Next Firestorm**

**Building Construction with Ignition  
Resistant Materials**



# California Fire Siege

## Preventing the Next Firestorm

**Adequate Local Emergency  
Response Resources**



# California Fire Siege

## Preventing the Next Firestorm

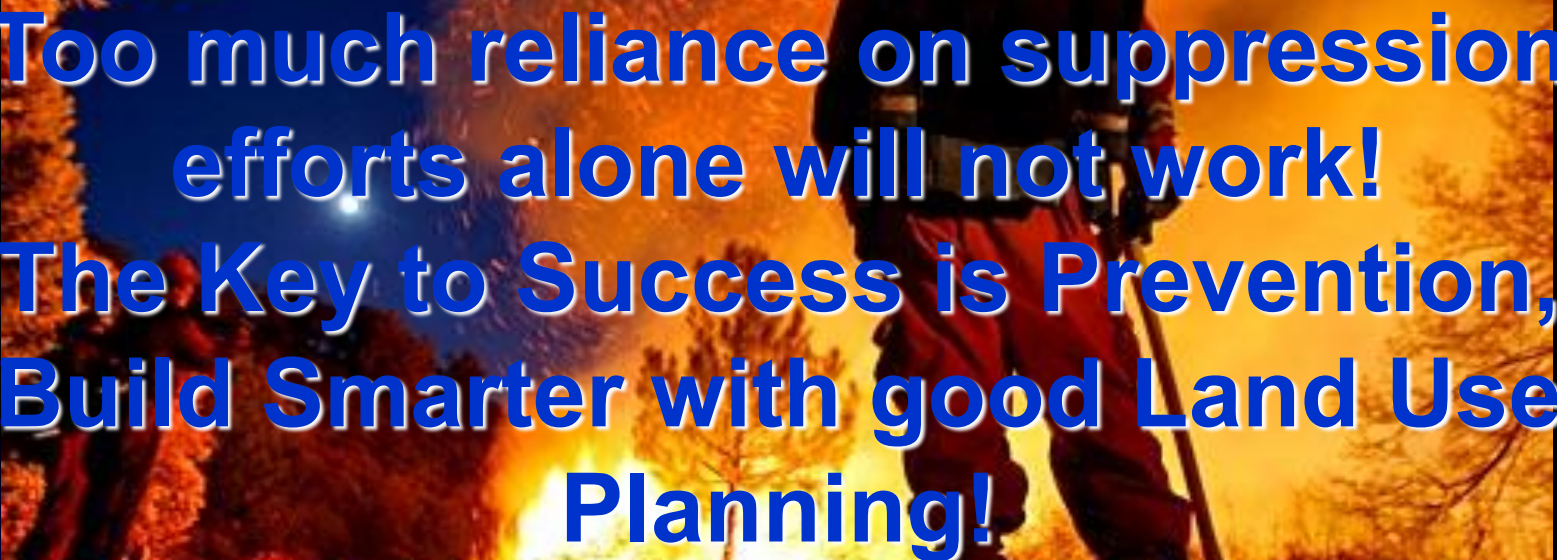
**Increase Surge Capacity**





# California Fire Siege

## Preventing the Next Firestorm

A firefighter in full protective gear, including a helmet and a large air tank on their back, is seen from behind, standing in a field and facing a massive fire. The fire is intense, with bright orange and yellow flames reaching high into the dark night sky. The firefighter is holding a tool, possibly a pike pole, and appears to be working to contain the fire. The scene is dramatic and highlights the scale of the fire compared to the individual firefighter.

**Too much reliance on suppression efforts alone will not work!**  
**The Key to Success is Prevention, Build Smarter with good Land Use Planning!**

# **California Fire Siege**

## **Preventing the Next Firestorm**





# California Fire Siege

State Government

## Who Should Pay For California's Wildfire Damages? Gov. Jerry Brown, Lawmakers Debate Multibillion-Dollar Liabilities.

👤 Ben Adler

Tuesday, July 24, 2018 | Sacramento, CA | [Permalink](#)



LISTEN

1:52



# California Fire Siege

## Who's to Blame?

Is it the developers who build homes in harm's way?

Is it the cities and counties who approve construction in high fire severity zones without adequate emergency response resources to quickly mitigate a fast-moving fire?

Is it the residents of California, themselves, who choose to live in high risk areas in homes made of highly combustible materials, and without maintaining adequate defensible space around their homes?

# California Fire Siege

## Who's to Blame?

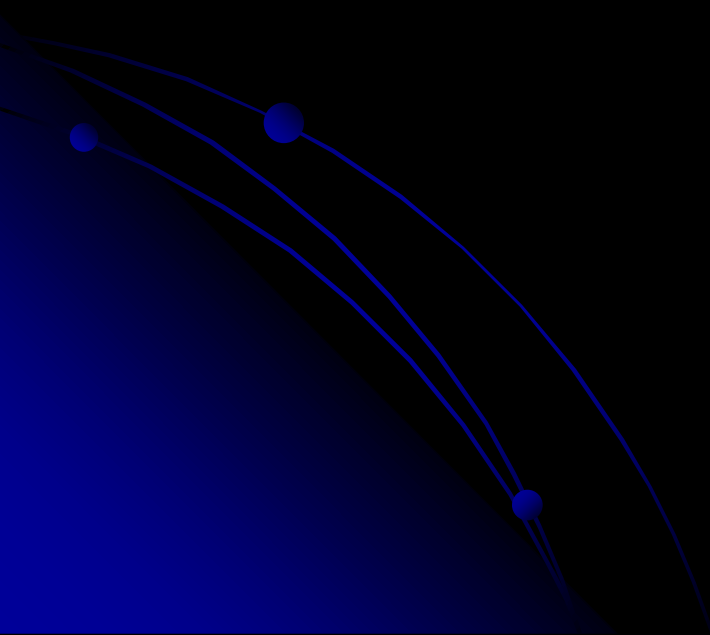
Maybe it's the dead and dying trees in state and federal forests, and on private lands, due to disease, bark beetle infestation, and other maladies that are allowed to remain in a fire's path due to inadequate funding to remove them?

How about the public utilities who fail to maintain adequate clearance around their power lines and poles that transmit electricity to your home?

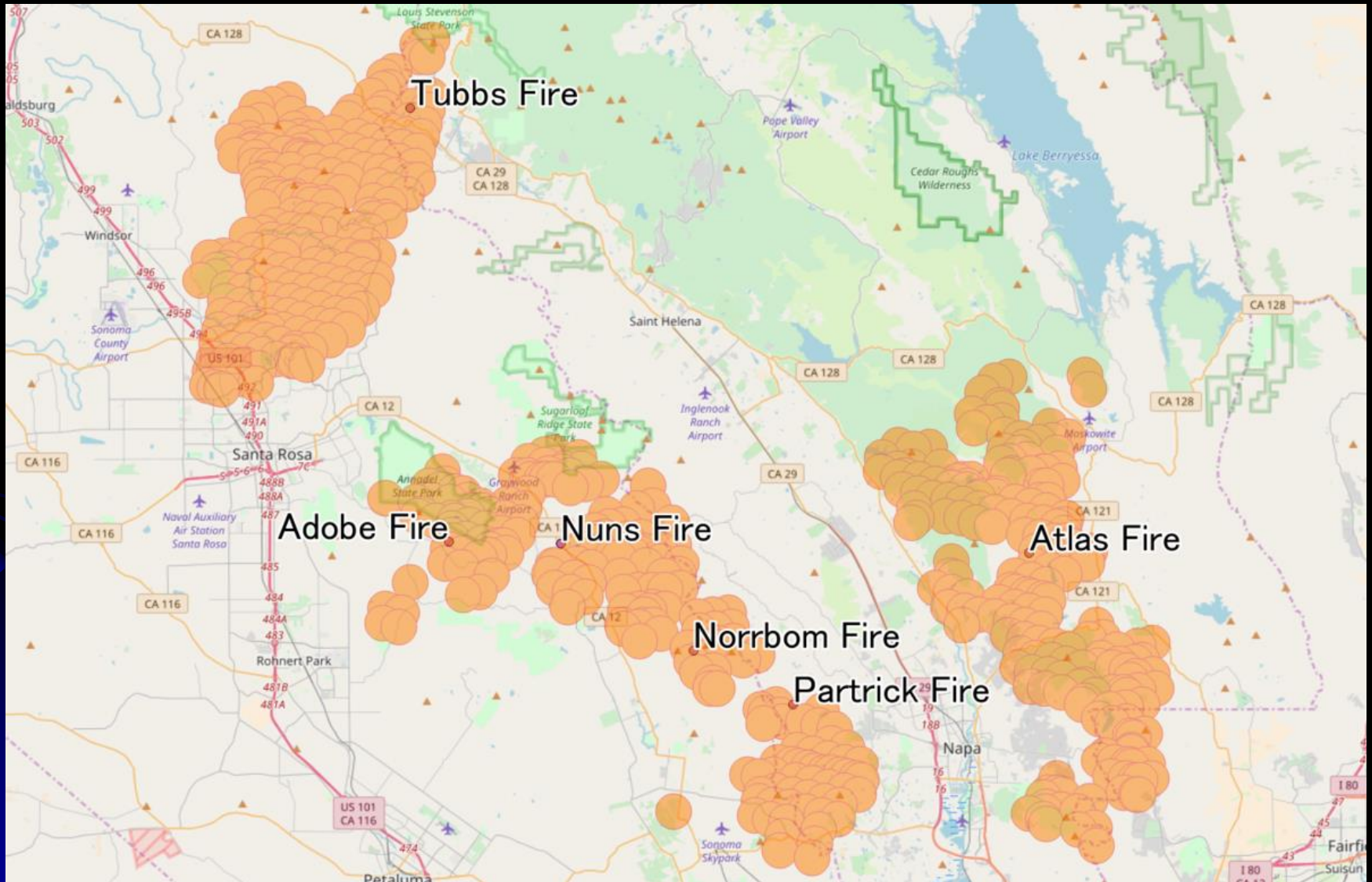
# California Fire Siege

## Who's to Blame?

Or is it the changing climate causing longer, drier, and warmer fire seasons, and increased fuel loads along with Mother Nature who sending us howling Northeast winds, high temperatures, dry fuel and dry lightning?



# California Fire Siege





# California Fire Siege

News > California News

## Brown signs wildfire safety bill blasted as PG&E bailout



# California Fire Siege

[Buy](#)
[Sell](#)
 Price **\$47.97**
 Day's Change **↓ -0.88 (-1.80%)**
 Bid **47.96**
 Ask **47.97**
 B/A Size **400x200**
 Day's High **48.86**
 Day's Low **47.92**
 Volume (Light) **874,906**

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**NEW**

October 22, 2018 11:55am ET

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Prev Close	48.85	Market Cap	24.8B
Today's Open	48.80	Shares Outstanding	517.2M
Day's Range	47.92-48.86	EPS (TTM, GAAP)	0.52
Avg Vol (10-day)	5.0M	P/E Ratio (TTM, GAAP)	93.53x
Last (time)	11:55a ET 10/22/18	Annual Dividend/Yield	No dividend
Last (size)	100	Ex-dividend	No dividend
52-Wk Range	Low 37.30 - 58.38 High	Beta	-0.1
% Below High (10/31/17 - 02/09/18)	17.83%	% Held by Institutions	81.75
Historical Volatility	28.6%	Short Interest (% of float 09/28/18)	1.92



DJIA

S&P 500

NASDAQ

SMA(50)

[Close PredictWallStreet](#)

# California Fire Siege

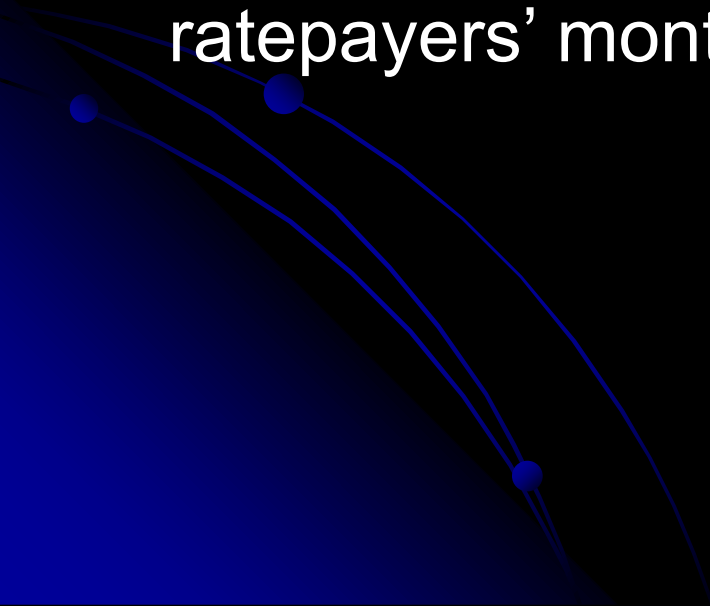
## SB 901

For fires that started in 2017, the California Public Utilities Commission would conduct a “stress test” to determine the maximum amount of damages a utility could sustain without harming ratepayers or going bankrupt. That amount would serve as a “cap” on their fiscal liability.

# California Fire Siege

## SB 901

Also for fires started in 2017, costs passed along to ratepayers could be financed — spread out over several years under a process called “securitization” — to reduce the sticker shock on ratepayers’ monthly utility bills.



# California Fire Siege

## SB 901

For fires caused by electrical infrastructure from next year forward, the CPUC will decide whether a utility acted reasonably, considering factors that include extreme weather conditions. If so, the CPUC could order that the costs be passed along to ratepayers and securitized.