



Fire and Resource Assessment Program  
California Department of Forestry and Fire Protection

# Wildfire Characteristics in California

## Status and Trends

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CAL FIRE

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National Cohesive Wildland Fire Management Strategy Workshop  
Reno, NV

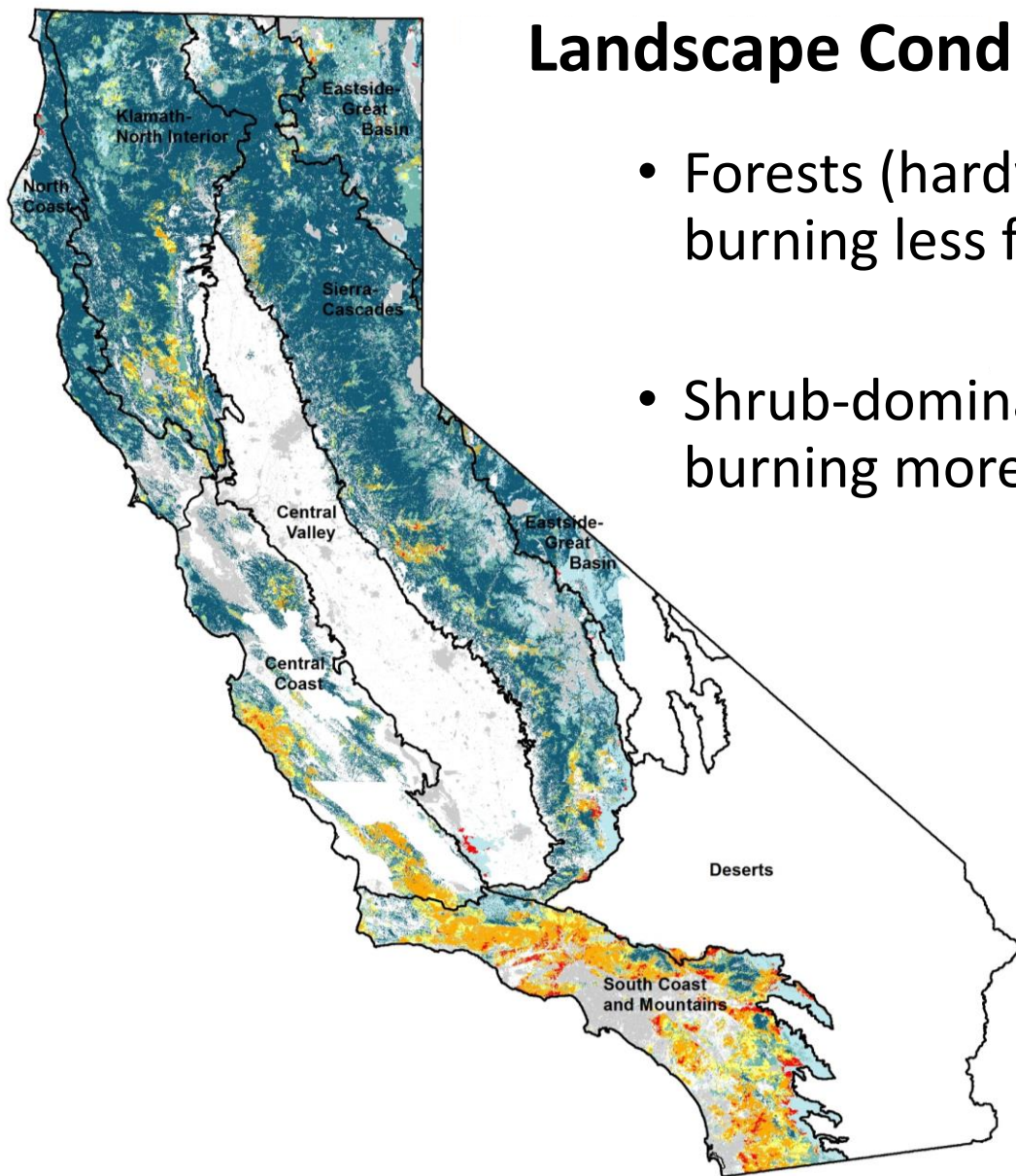
# Wildfire Indicators

- Landscape Condition
  - Fire Return Interval Departure
  - Fire Threat
- Wildfire Activity
  - Area Burned
  - Fire Severity
- Fire and Fuel Management
  - Area Treated



# Landscape Condition: FRID 2016

- Forests (hardwood, conifer, mixed) burning less frequently
- Shrub-dominated areas in South Coast burning more frequently



## Condition Class

Positive Departure (fire less frequent than reference)

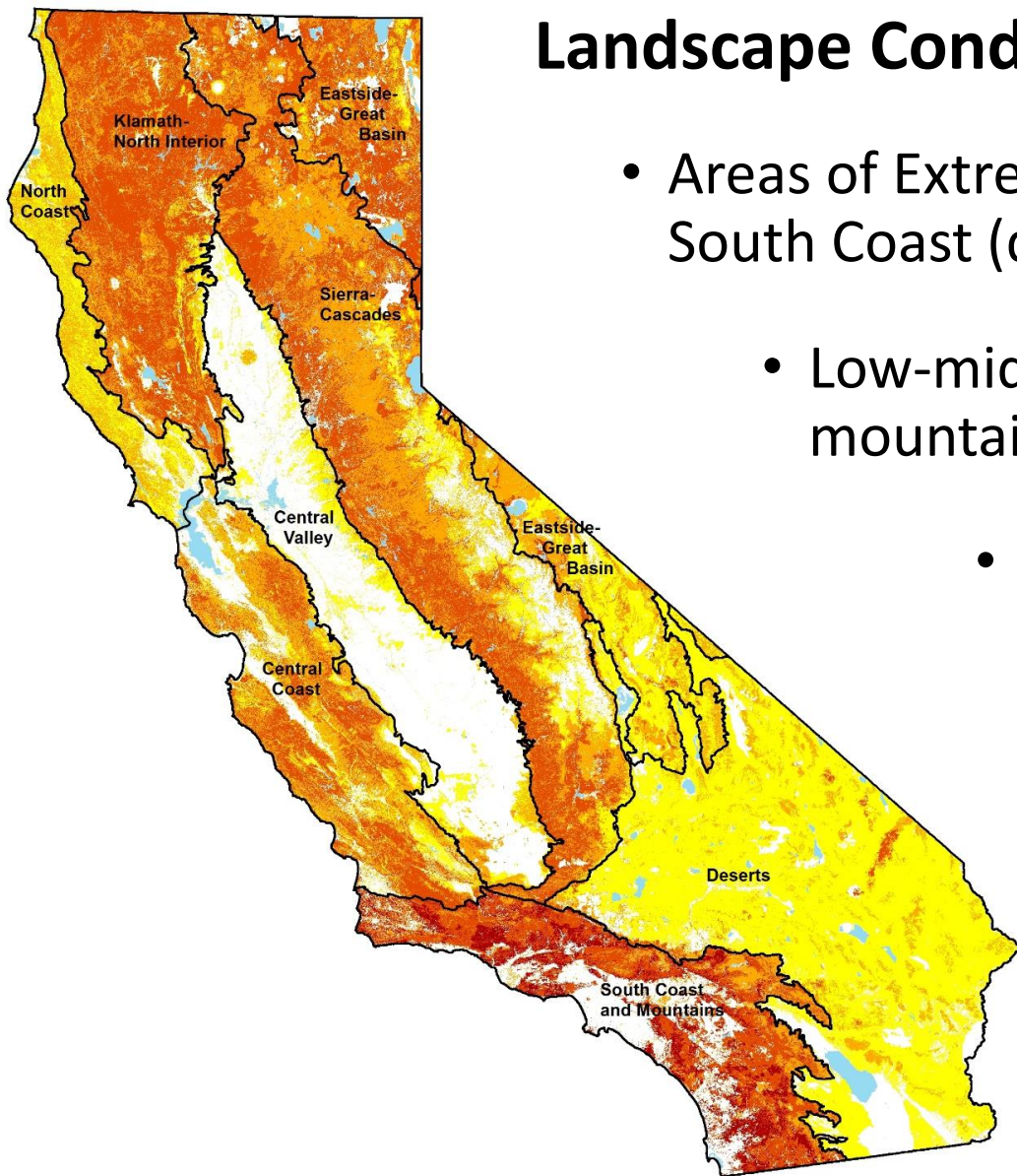


Negative Departure (fire more frequent than reference)

Urban or Non-burnable - Grey

# Landscape Condition: Fire Threat

- Areas of Extreme concentrated in South Coast (due to high frequency)
- Low-mid elevation mountains High/Very High
- North Coast Moderate/High (due to low frequency)



## Threat Class

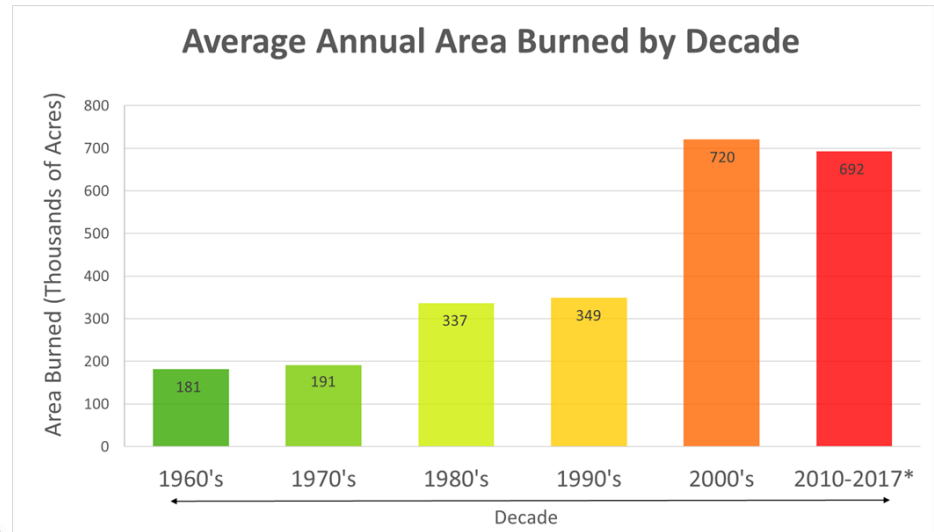
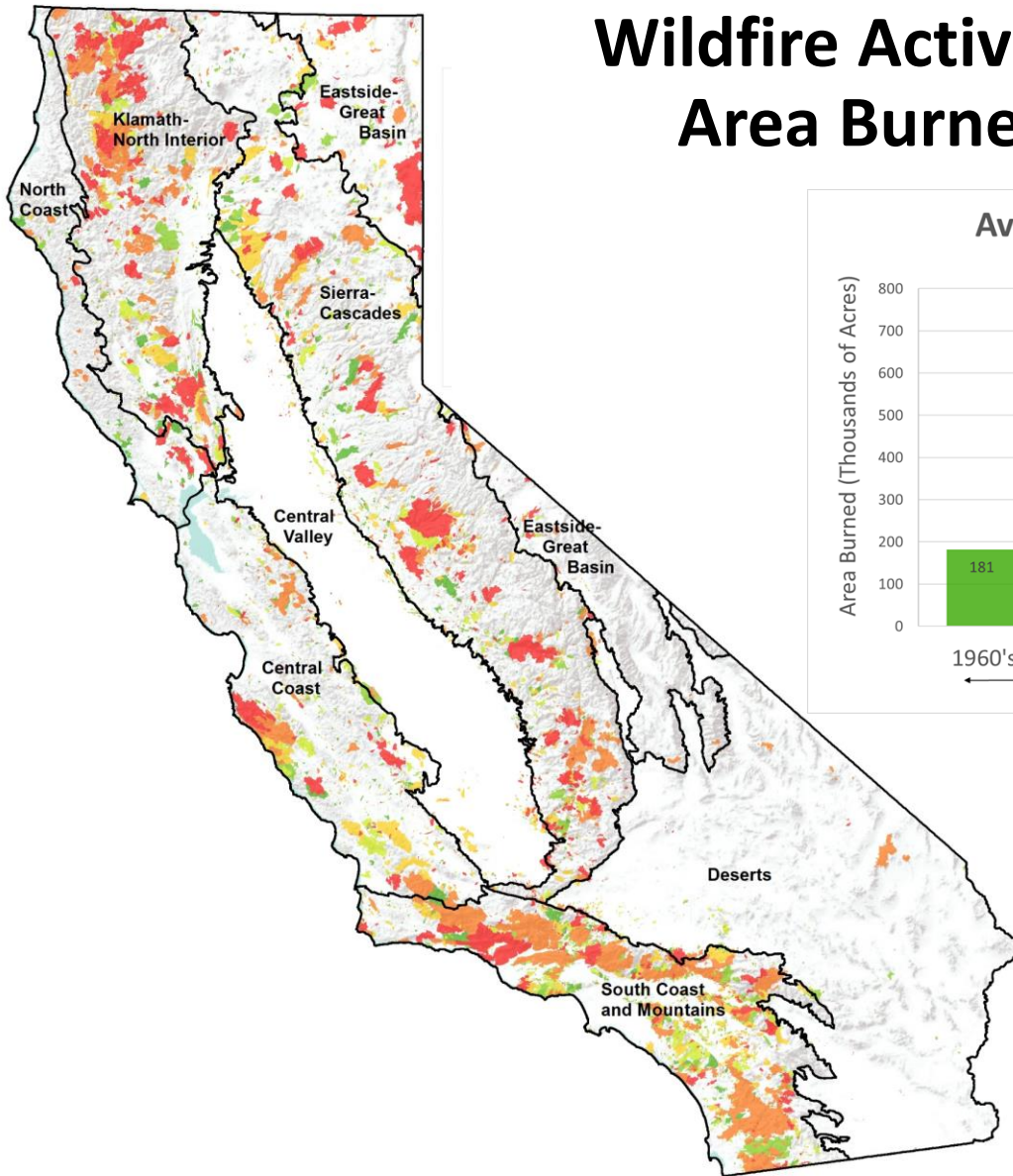
Extreme

Very High

High

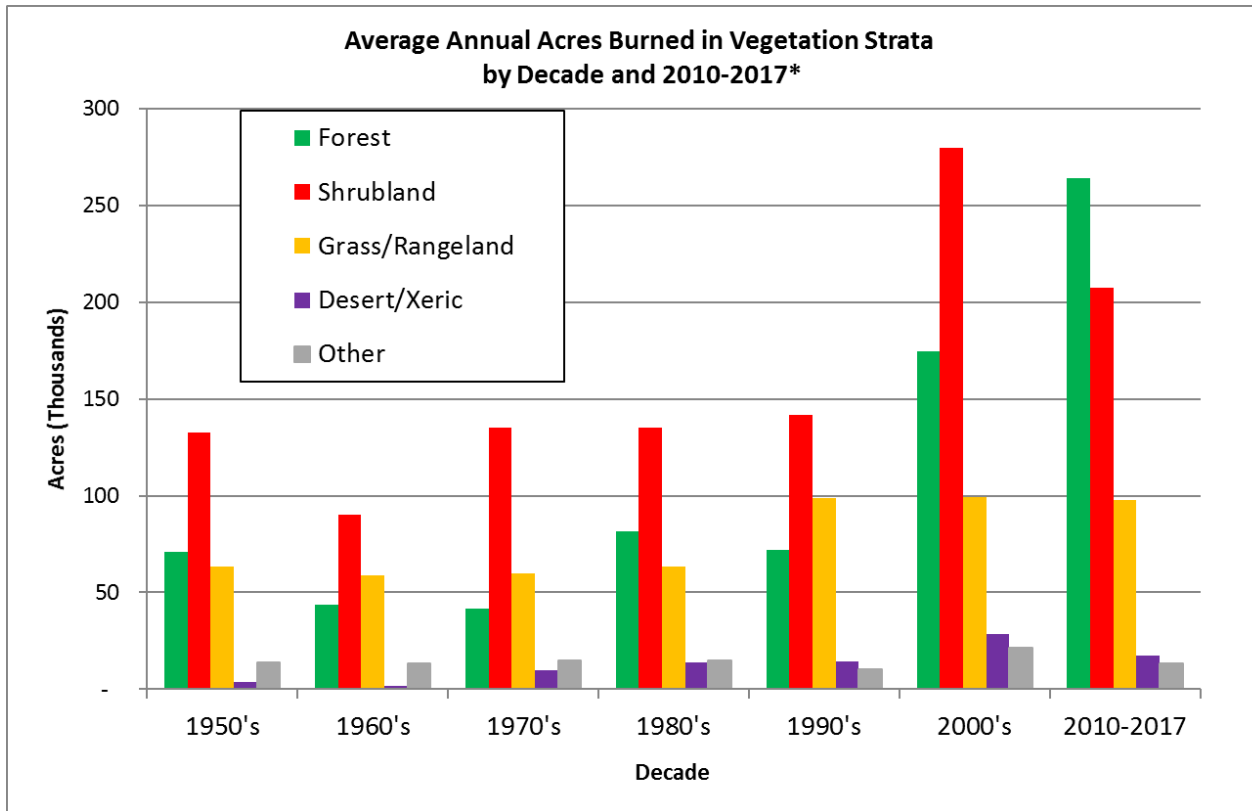
Moderate

# Wildfire Activity: Area Burned 1960-2017



- Average annual area burned has increased significantly since 1960.

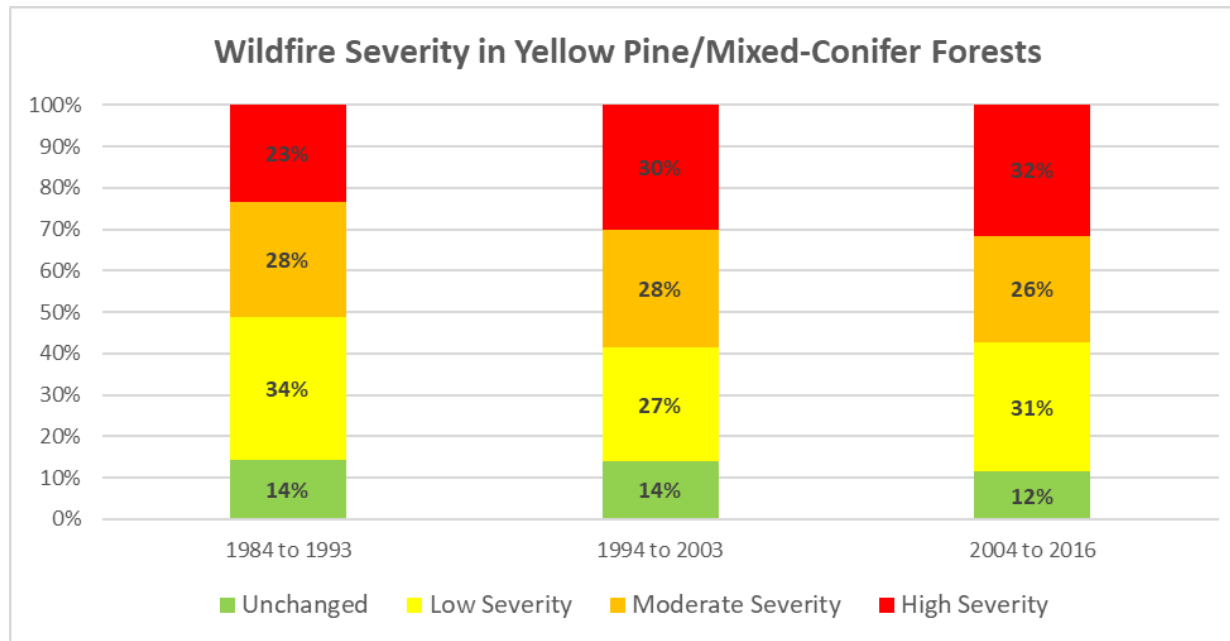
# Wildfire Activity: Area Burned 1960-2017



- Increase in annual area burned in both conifer and shrub over the last two decades
- 2000-2009, more shrub. 2010-2017, more forest.

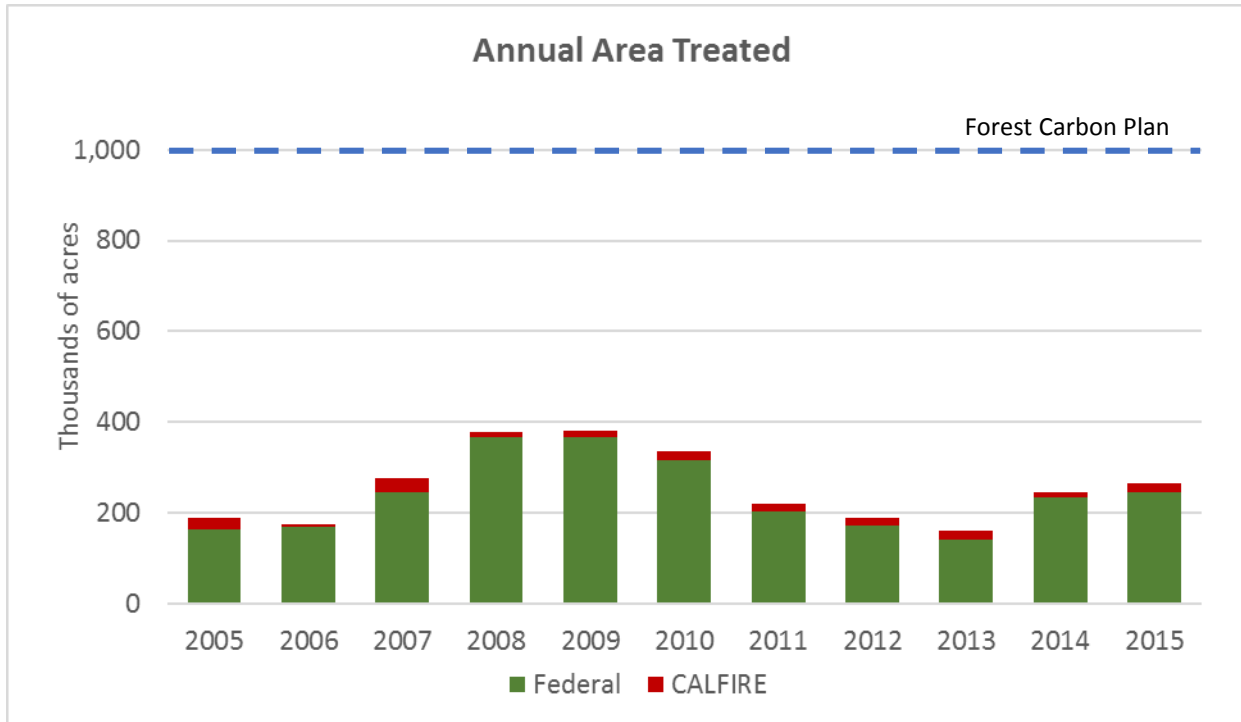


# Wildfire Activity: Fire Severity in Yellow Pine & Mixed-conifer Forests



- Last 3 decades, high severity fire outside NRV (4-13%, Safford and Stevens 2017)
- Evidence for patch size increasing, complexity decreasing (Stevens et al. 2017)

# Fire and Fuel Management: Area Treated



- Average 261,000 ac treated annually 2005-2015
- 93% of treated acres by Federal agencies
- Forest Carbon Plan target – 1,000,000 acres annually



# Wildfire Indicators – The Story

- Altered Fire Regimes
  - Differences by region
  - Differences by vegetation type
- Changing Wildfire Activity
  - Increasing burned area and large fire size
  - Uncharacteristic severity
- Fire and Fuel Management
  - Forest treatments below targets
  - 2.2 million housing units in WUI

# Wildfire Indicators and the Cohesive Strategy

## Landscape Restoration

- Strategically and significantly expand treatment pace and scale
- Restore fire where appropriate
- Recognize and mitigate excessive fire

## CAL FIRE Programs

CCI Forest Health, Cooperative Agreements, Research





# Wildfire Indicators and the Cohesive Strategy

## Fire Adapted Communities

- Engage local land-use planning
- Incentivize individual land and homeowner efforts to mitigate fire risk
- Recognize homeowner and community efforts in policies and programs

## CAL FIRE Programs

CCI Fire Prevention, FHSZ Revision



# Wildfire Indicators and the Cohesive Strategy

## Fire Response

- Promote landscape-level planning for modern-era fire events
- Restructure funding to provide for pre-fire management
- Adapt the fire suppression workforce to changing trends

CAL FIRE Programs

2018 State Fire Plan





# Questions?

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