SOUTHERN CALIFORNIA EDISON

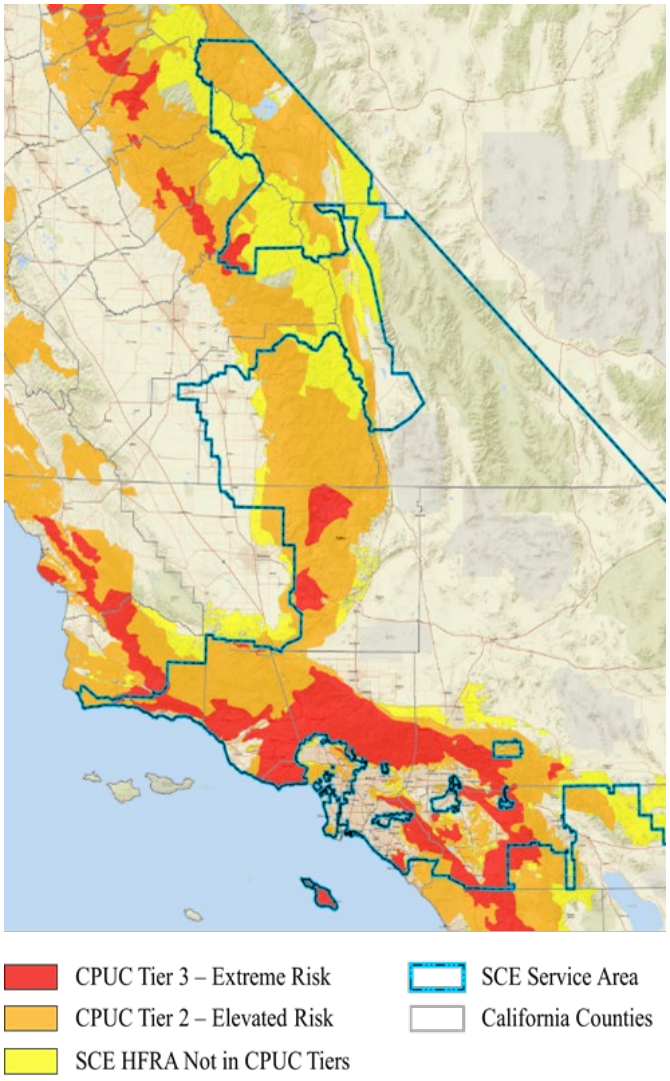
Wildfire Mitigation, Safety & Grid Resiliency

City of Corona

January 16, 2019



SCE Service Territory

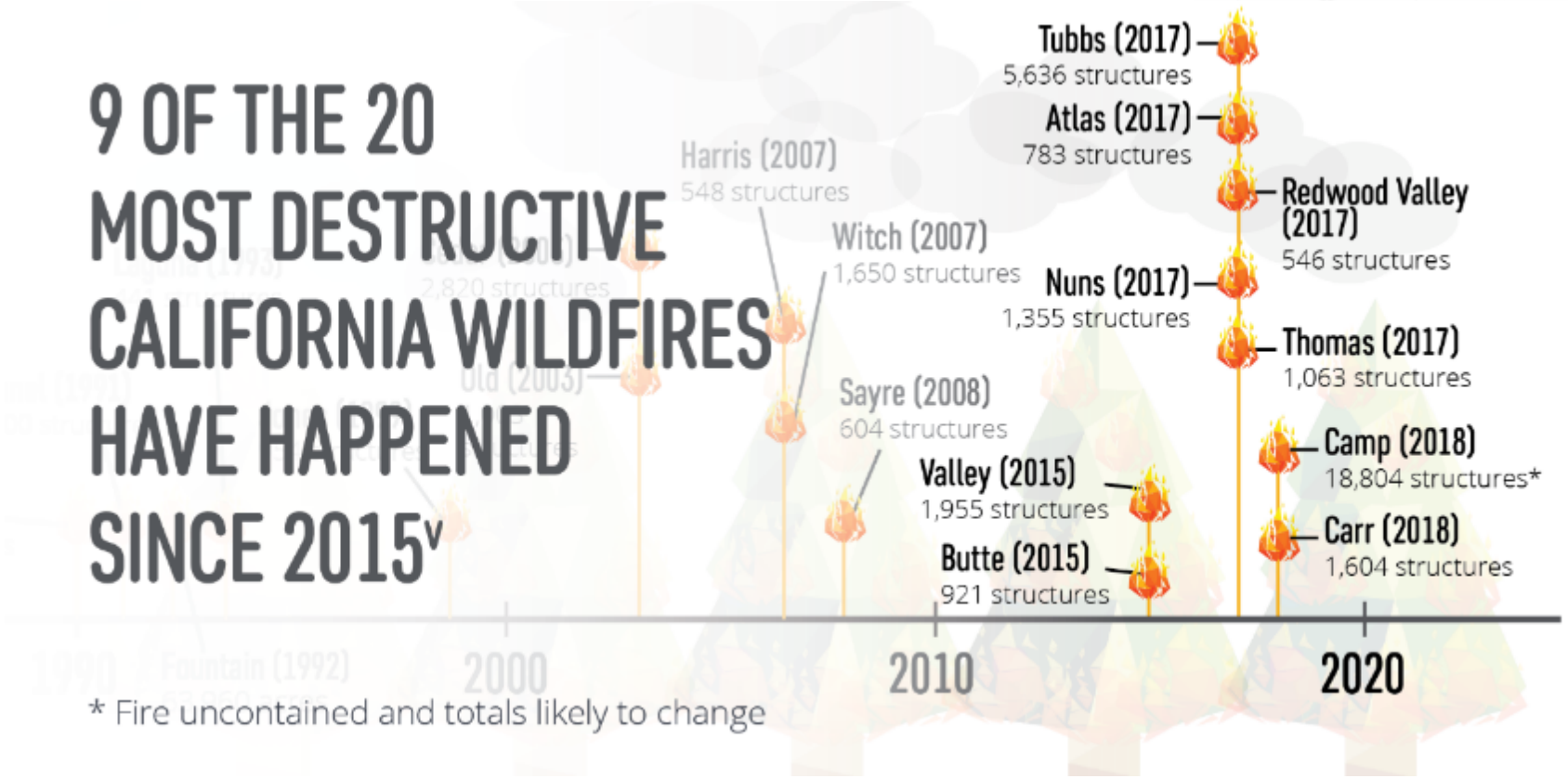


Source: http://www.cpuc.ca.gov/firethreatmaps

California's Wildfire Risk

Year-Round Fire Season: Changes to California's climate means that the traditional notion of a fire "season" no longer exists

Hazardous fuel is building up: 9M acres of land contain ready-to-burn kindling from nearly 129M trees that have been killed or weakened by drought and bark beetle infestation



Source: http://www.fire.ca.gov/communications/downloads/fact_sheets/Top20_Destruction.pdf

SCE's Wildfire Mitigation Strategy

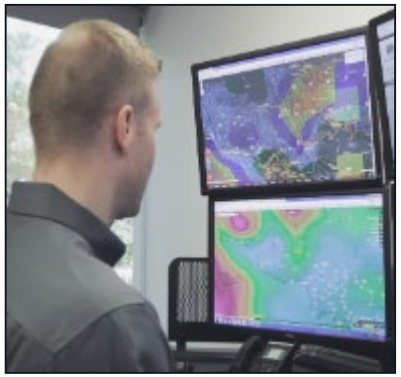
We have long taken substantial steps to reduce the risk of wildfires and are proposing enhancements

Long-Standing Operational Practices

Investing in System Hardening of Electric Grid

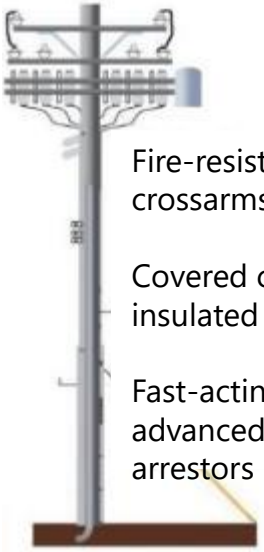
Bolstering Situational Awareness Capabilities

Enhancing Operational Practices



System Hardening Elements

Hardened System

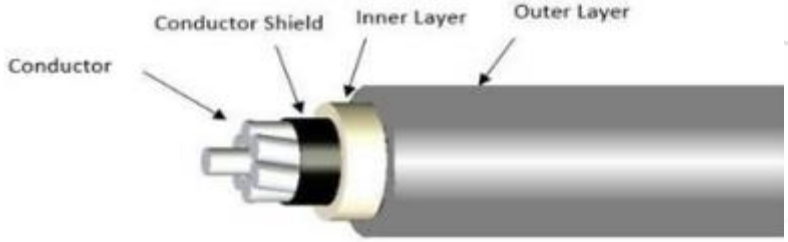


Fire-resistant poles, crossarms and insulators

Covered conductors/ insulated wire wrap

Fast-acting fuses and advanced lightning arrestors

Cross Section of Covered Conductor



SCE crews are installing ~~?~~ **4,000** circuit miles of covered conductor planned in a multi-year **Grid Resiliency Program** across the high fire risk areas in advance of CPUC application filing.

Current Limiting Fuses

Fault Tamer

X-Limiter CLF

- **20+** in-house certified arborists
- **800+** pruning contractors with **60** more crews added June/July 2018
- **900,000** trees inspected annually
- **700,000** pruned per year; **400,000** trees in high fire risk areas
- Dead, dying, diseased tree removal; total drought and bark beetle trees removed in 2017 was **39,000**
- Expanding use of Light Detection and Ranging (LiDAR) technology, an advanced laser surveying method, to enhance vegetation management in remote areas of our service territory
- Joint patrols with fire agencies

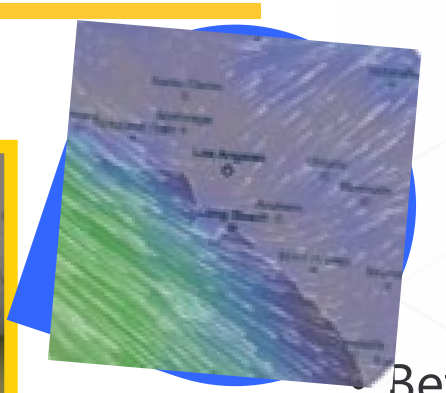
Fire and Severe Weather Monitoring

Weather Stations

- Hi-Res Data
- Local Weather

Situational Awareness Center

- 24/7 monitoring
- SCE meteorologists



Advanced Weather Modeling

- Better Forecasting
- Advanced Warning

Fire Monitoring Cameras

- High-Definition
- Remote-controlled

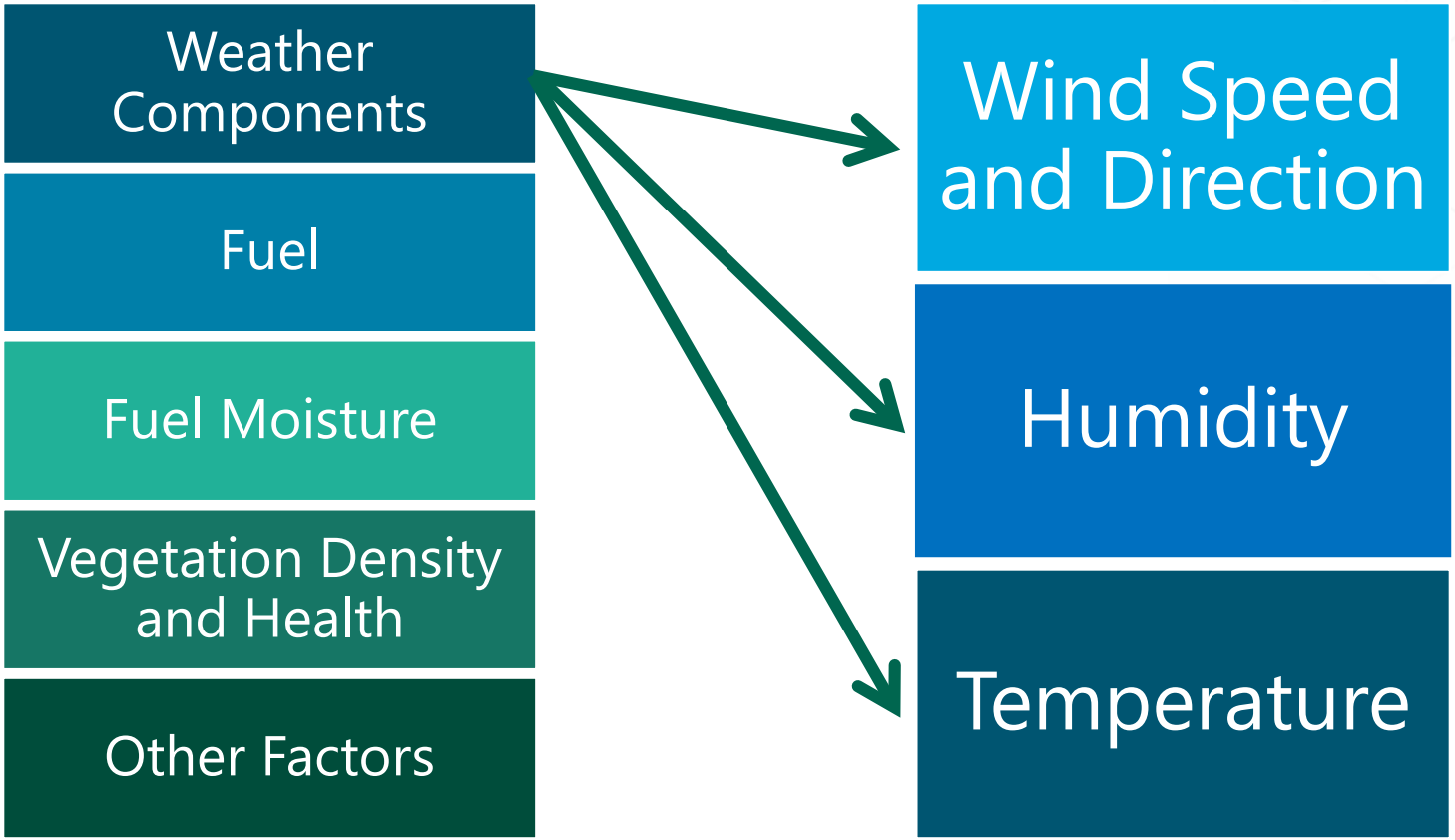
Fire Cameras: www.alertwildfire.org

Public Safety Power Shutoff (PSPS)

- De-energization to **prevent wildfire ignitions**
- Used only in **most extreme weather conditions**
- Limited to **impacted circuits** in high fire risk areas
- Red Flag Warning **does not** mean a PSPS will be called
- Actual frequency of PSPS events will depend on various weather and environmental factors
- **Critical Care Customer Notifications**

PSPS Used Only During Extreme Fire Weather Conditions

- Significantly **increased risk of ignition**
- Fires can grow rapidly, burn intensely, and/or erratically

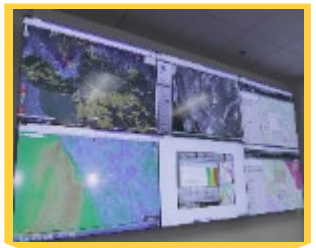


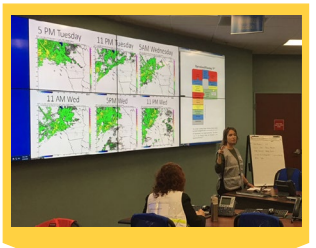
Public Safety Power Shutoff - Considerations

Many factors inform decision to turn power off. Factors include but are not limited to:

- **Real-time conditions**
  - Weather station data
  - Trained field personnel in local area
- **Input from fire authorities and Emergency Management Personnel**
  - Evacuation orders / status
  - Impact on essential services
  - Location of evacuation centers
  - Other emergency operations

Public Safety Power Shutoff: Timeline





4-7 DAYS AHEAD — Forecast Weather & Fire Conditions

3 DAYS AHEAD — Incident Responders On Alert

2 DAYS AHEAD — 1st Notification PSPS Possible

1 DAY AHEAD — 2nd Notification PSPS Likely

POWER SHUTOFF — 3rd Notification Power Shutoff

POWER RESTORATION — 4th Notification Power Restored

NOTE: Actual weather conditions and other circumstances beyond our control may impact coordination and advance notification efforts

Corona and SCE

- Multiple PSPS circuits identified within City
- SCE circuits that feed Corona electric utility (WDAT)on PSPS list
  - Interpace, Owens, Porphyry
- Coordination with public safety partners and city utility

Community Outreach

- Direct Mail
- Social Media
- Community Meetings
- Online Tools
  - www.sce.com/wildfire
  - www.cpuc.ca.gov/deenergization
  - http://www.cpuc.ca.gov/firethreatmaps/