

ALERT ildfire

Experiences from the 'San Diego
County model' and application to San
Mateo County...

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&
ALERTWildfire Team

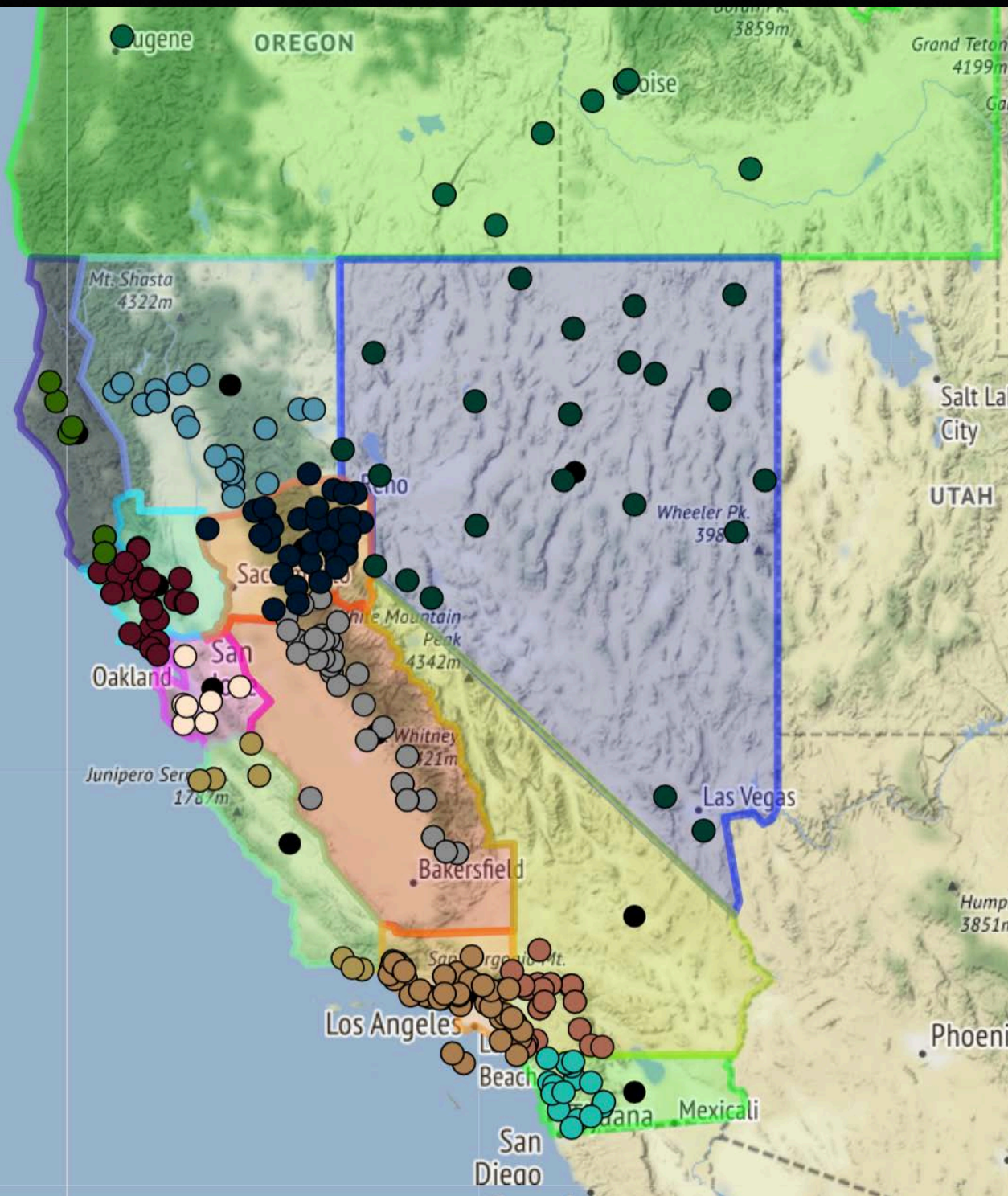
ALERTWildfire

University Consortium:
Nevada, UC San Diego & Oregon

started in 2013, *AlertTahoe*
Tahoe Prosperity Center

2018 EOY Install Base
~85 cameras

2019 and beyond –
SDG&E, SCE, PG&E, NVE,
BLM, USFS, counties, and others...
300+ new cameras in '19



ALERTWildfire—<http://www.alertwildfire.org>

Installations: California, Nevada, Oregon, Idaho and Washington

- near infrared, HD PTZ cameras
- on demand time lapse
- integrated lightning map
- Amazon Web Services—“Public, S3 infinite scale”
- smart power system—power savings in “off season”
- distributed, works on desktop, laptop and mobile
- 600+ fires supported in 2016-18; 1000+ to date

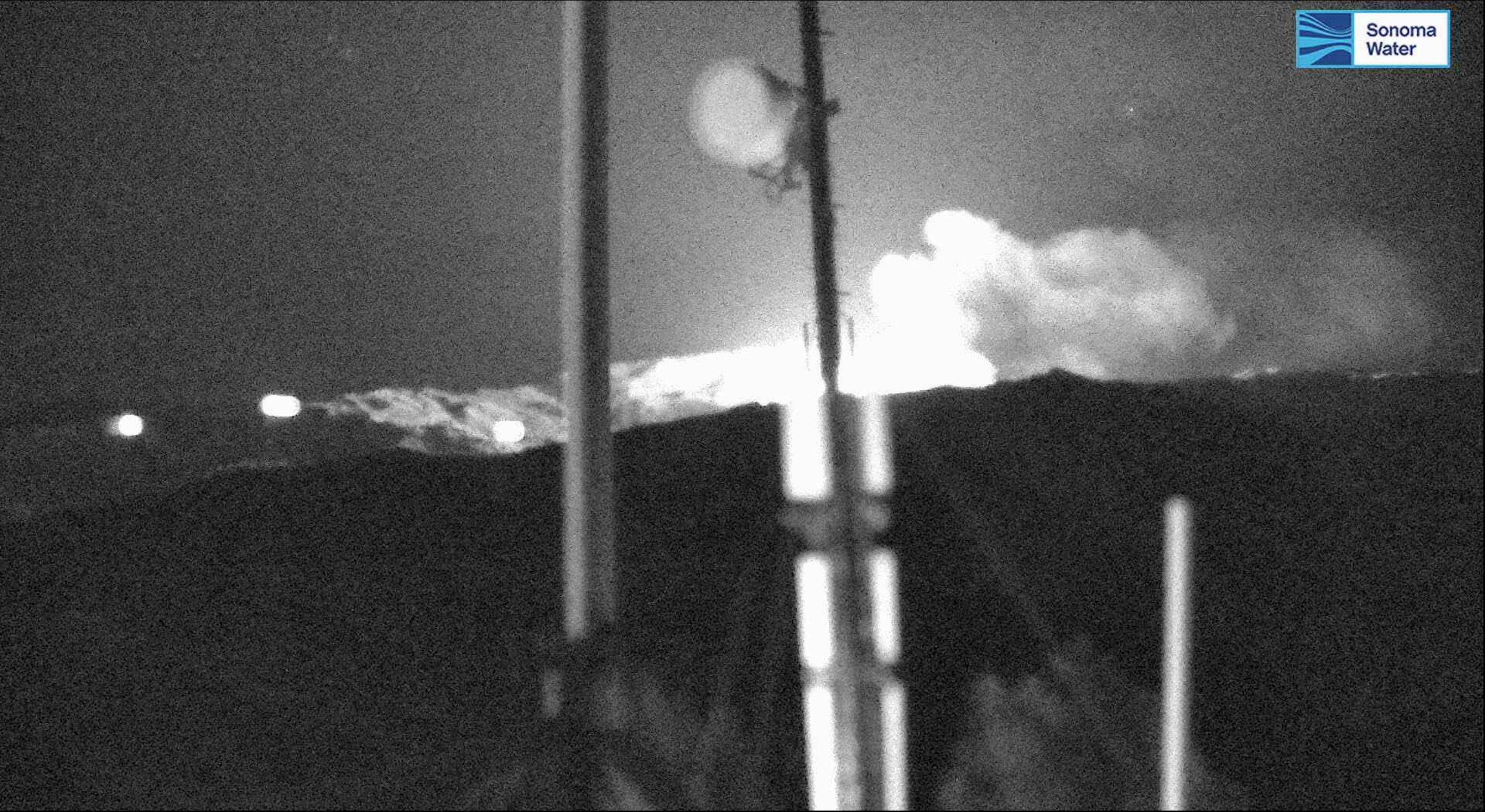
Why ALERTWildfire?

- (1) reduce response time to wildfires
- (2) ability to scale resources up or down within seconds of confirmation or discovery
- (3) follow fire behavior in real-time
- (4) provide critical info to first responders and public during an explosive phases, where timely evacuations can save lives
- (5) after containment, provide a watchful eye to reduce the likelihood of re-ignition

Kincade Fire—Oct. 23rd, 2019

–first glimpse, 9:31 PM

Kincadee Fire



GeyserPeak X:+60.14 Y:-3.63 Z:1.0 CalFireLNU.tknecht.10-23T21:33 © Nevada Seismo Lab 2019/10/23 21:43:14.43

-2X scale up (save 35 minutes)

Kincade Fire realtime observations of rate of spread



GeyserPeak X:+76.41 Y:-1.21 Z:1.0 CalFireLNU.scriss.10-23T21:52 © Nevada Seismo Lab 2019/10/23 21:59:21.06

Geyser Peak-10 PM



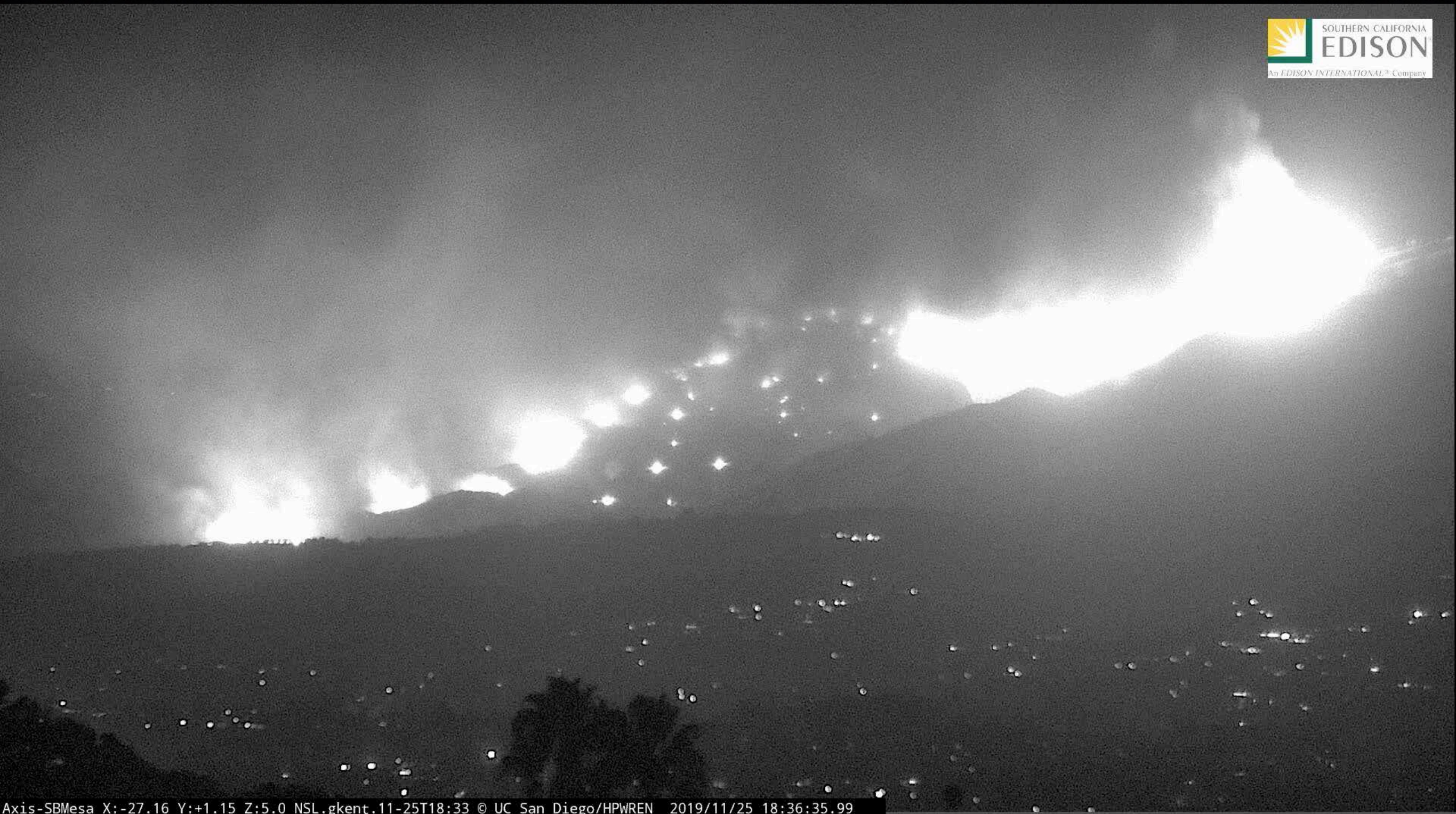
AlertNorthBay

Pepperwood Preserve—reburn, Tubbs Fire scar



Cave Fire—Nov. 25th, 2019

Cave Fire-extreme spotting behavior



Axis-SBMesa X:-27.16 Y:+1.15 Z:5.0 NSL.gkent.11-25T18:33 © UC San Diego/HPWREN 2019/11/25 18:36:35.99

Santa Barbara Mesa-6 PM

Lilac Fire—Dec. 7th, 2017

ALERTWildfire

Alert SDG&E Cameras Current View [Tweet](#)

ALERT SDG&E CAMERAS

Axis-RedMtn X: -171.03 Y: -3.35 Z: 1.0 CFMVU: agettman:32.2m UCSD 2017/12/07 17:15:19.68

Leaflet | Map tiles by Stamen Design, under CC BY 3.0. Data by OpenStreetMap, under CC BY-SA.

- public interface
- Lilac Fire
- visible

Tahoe Camera Sites | BLM Camera Sites | SoCal Camera Sites

Big Black Mtn	Birch Hill (Palomar)	Boucher Hill	Cowles Mtn	Felicita San Diego
High Point (Palomar)	Mt. Laguna Observatory	Black Mtn	Lyons Peak	Monument Peak
Otay Mtn	Los Pinos	Red Mountain	Volcan	Mt. Woodson CDF



- crowd-sourced,
- 21st century
- fire lookout
- towers

Lilac Fire Dec. 7th, 2017—6 s since last camera move

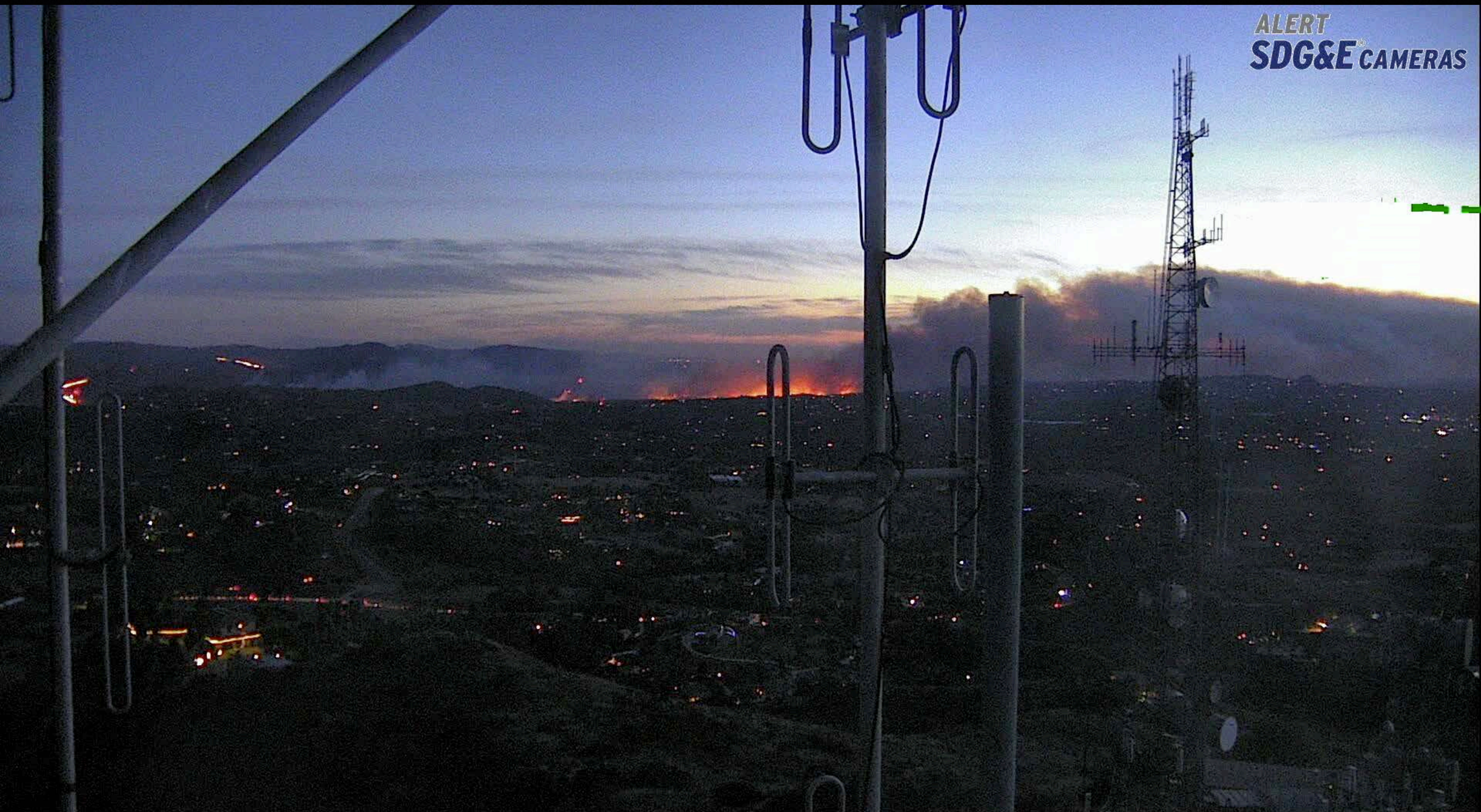
ALERT
SDG&E[®] CAMERAS



Axis-RedMtn X:+159.99 Y:-1.80 Z:7.0 CFMVU:cco ta:6s UCID 2017/12/07 11:15:39.69

Lilac Fire Dec. 7th, 2017—shortly after 9-1-1 call

ALERT
SDG&E CAMERAS



Axis-RedMtn X:-171.03 Y:-3.35 Z:1.0 CFMVU:agettman:28.5m UCSD 2017/12/07 17:11:39.70

Nearly a year later ...

Fire near Mt. Woodson Nov. 12th, 2018

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SDG&E CAMERAS



Axis-Woodson X:-3.76 Y:-9.87 Z:3.0 CFMVU:aking:4.0m UCSD 2018/11/12 13:40:03.54

Every fire has a story...

Arson Spree—2 dozen+ fires near south shore, Lake Tahoe (2016)



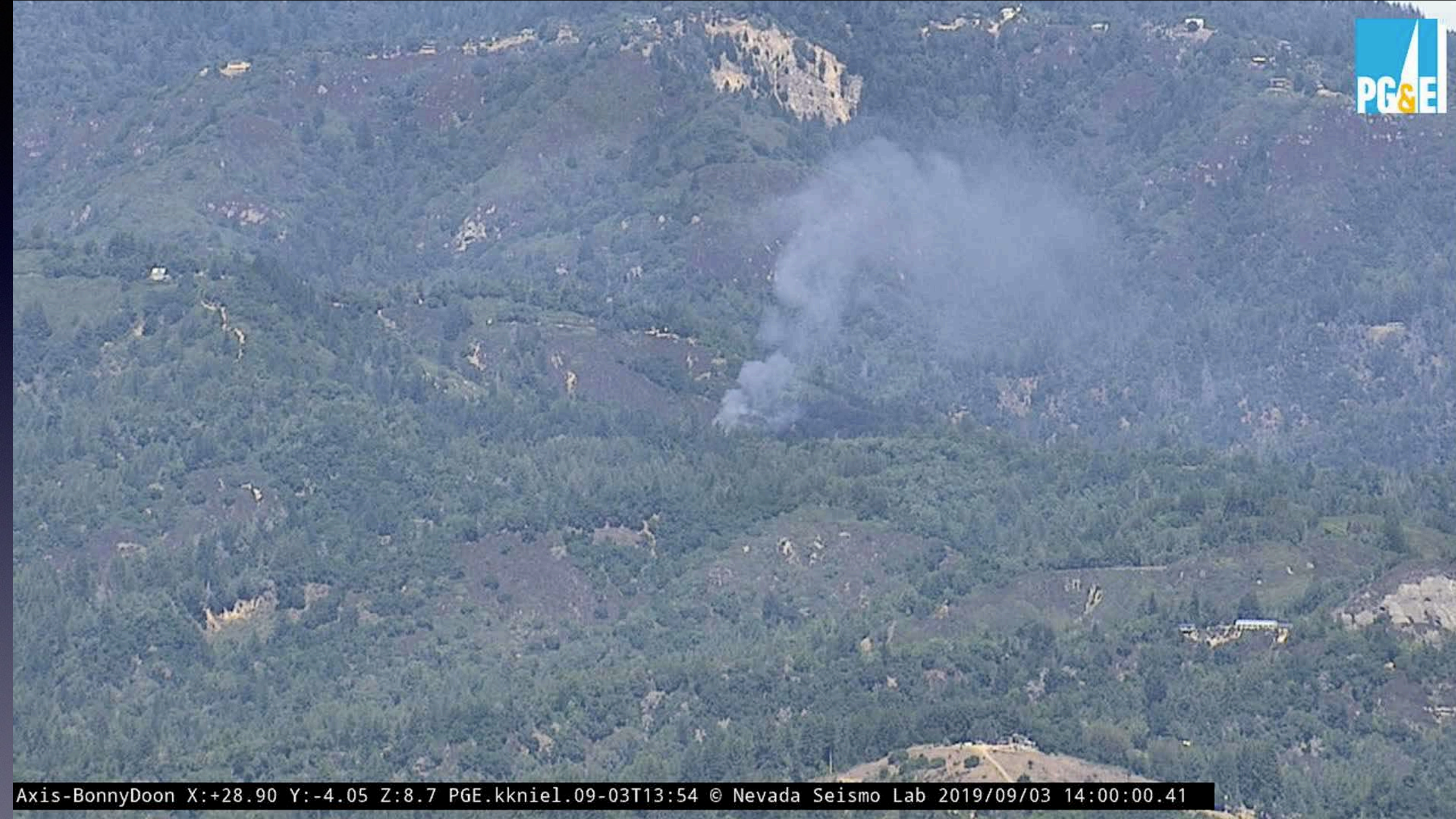
Arson Fire, 1h45m later, knocked down in high winds



Axis-Heavenly X:-82.15 Y:-2.36 Z:1.9 PTZ: © 2016 Nevada Seismo Lab 2016:10:14 03:15:45.93

High Wind Discovery and Knock Down

Deer Fire, Bonny Doon Tower



Axis-BonnyDoon X:+28.90 Y:-4.05 Z:8.7 PGE.kknie1.09-03T13:54 © Nevada Seismo Lab 2019/09/03 14:00:00.41

Thanks to Ridge Wireless, Mike Lyon and Matthew Kaufman

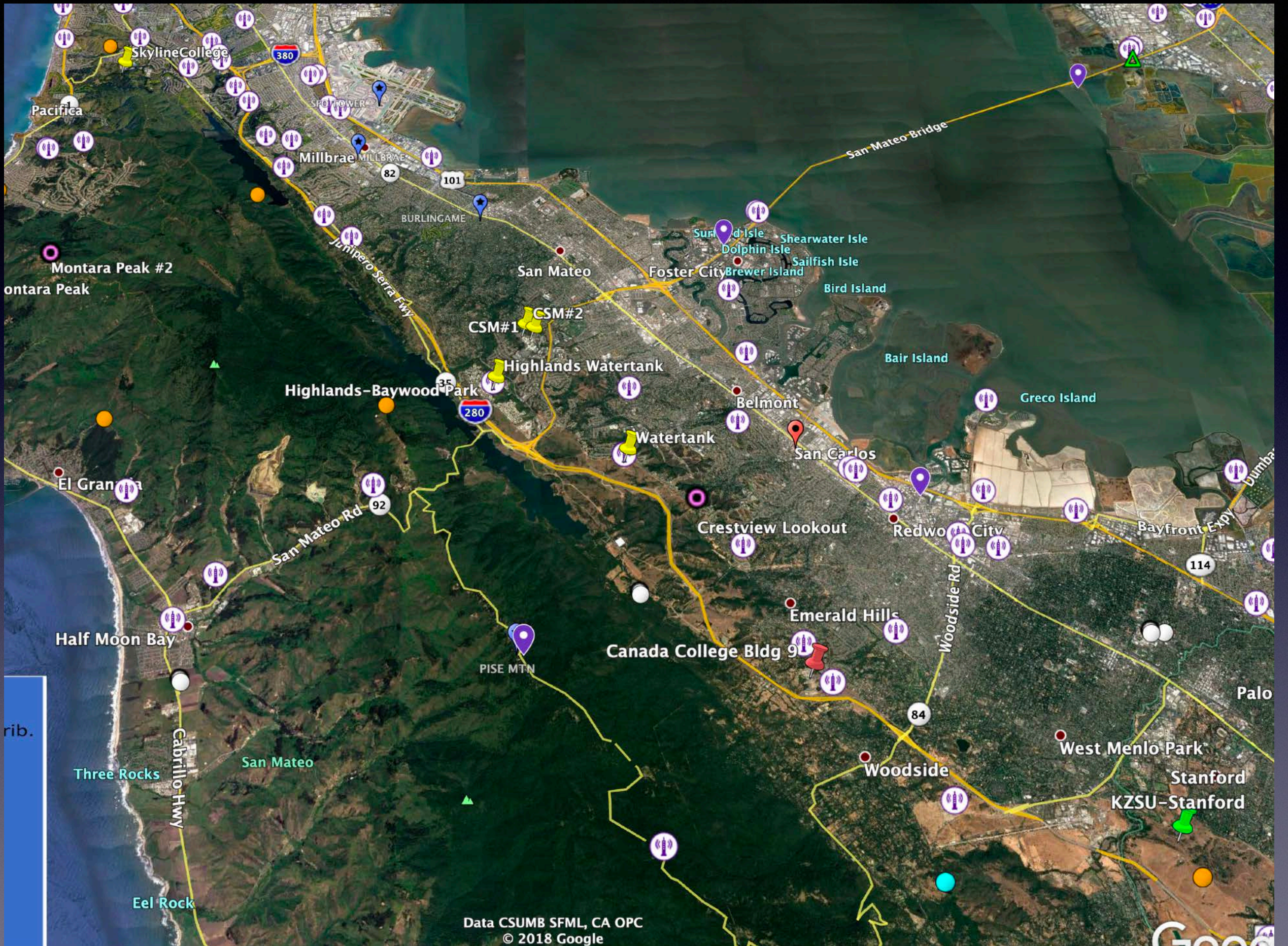
It takes a village... and dozens and dozens of contacts in Sonoma County alone!

...and support from SDG&E, SCE, PG&E, BLM, USFS, Sonoma Water, many counties, Tahoe Prosperity Center (NGO) and many others

...and hundreds of WISP towers in California (& across the west) to scale rapidly.

Current Coverage: Working with CalFIRE CZU, College of San Mateo, Santa Clara County/Fire and Ridge Wireless





Data CSUMB SFML, CA OPC
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