

Cupertino ARES/RACES 2020 Year-End Review

December 3, 2020
Jim Oberhofer KN6PE



Topics for tonight

The top 5 changes/updates for CARES and Citizens Corps operations...

5. First Look Exercise Review
4. Enhanced ARK Comm Update
3. Comm 469 Network upgrade
2. ~~PSPS~~ COVID19: Our New Normal
1. SitStat tools (or, 2020 Wildland Fire Events)





#4

**ENHANCED ARK COMM
UPDATE**

Update

#4 Enhanced ARK Comms

The Situation

- City approved and funded the purchase and build of 7 GMRS/FRS-based radio kits. This includes:
 - Midland MXT-115 GMRS radio, 15W, mag-mount, internal battery
 - Motorola T600 FRS 2W Radios
 - Case
- Radios are temporarily assigned to CARES and CERT members to keep the batteries charged, with the intent to get them all staged at the ARKs.



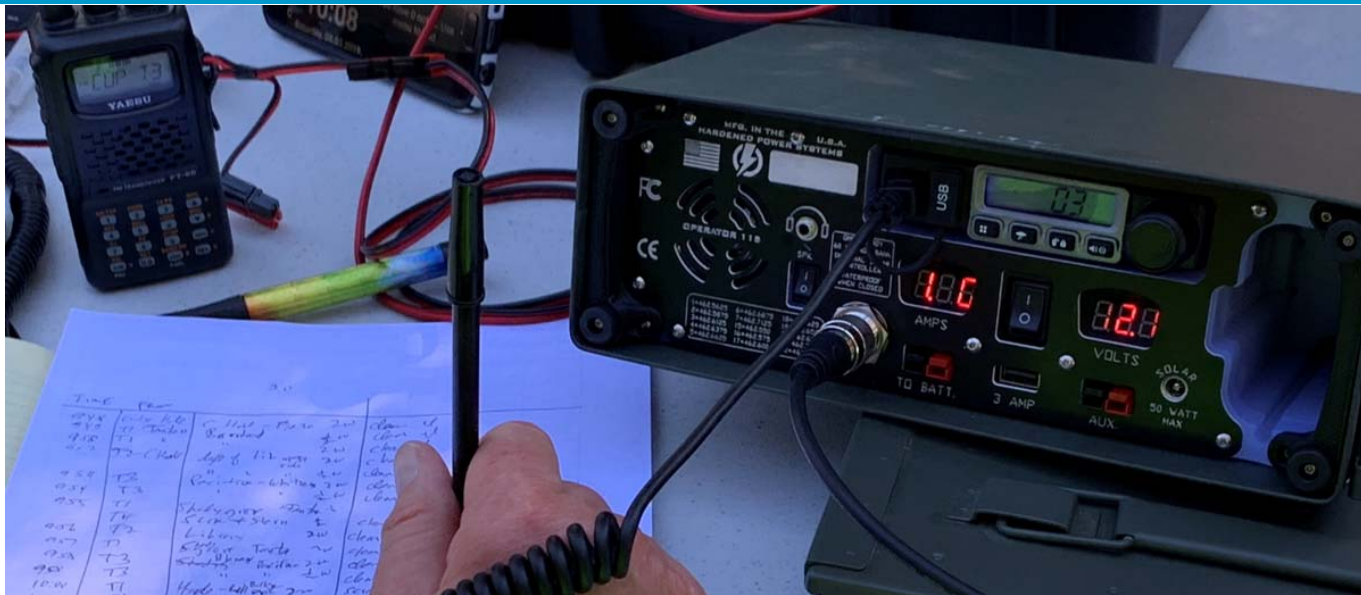
Radio Pack

#4 Enhanced ARK Comms



GMRS Base

#4 Enhanced ARK Comms



Midland MXT115 GMRS Radio

Microphone Jack

On/Off, Volume



Antenna connector

Bypasses the switch, direct to the battery

Through the switch, load shows on Amps

Battery charge connector



CERT Field Communications Handbook

#4 Enhanced ARK Comms

www.cupertinoares.org > Docs and Ref's > Field References

NOTE! Ch 1-7 Tone Changes

2 Channels and Frequencies

Location	Channel/Tone	Notes
Monta Vista ARK	1 / 21	2W, Zone 1 CERT Net
Regnart ARK	2 / 22	2W, Zone 2 CERT Net
Garden Gate ARK	3 / 23	2W, Zone 3 CERT Net
Lawson ARK	4 / 24	2W, Zone 4 CERT Net
DeAnza ARK	5 / 25	2W, Zone 5 CERT Net
Creekside ARK	6 / 26	2W, Zone 6 CERT Net
EOC/Comm 469	7 / 27	2W, Trailer, City Access
CERT TAC 1	8 / 0	0.5W
CERT TAC 2	9 / 0	0.5W
CERT TAC 3	10 / 0	0.5W
CERT TAC 4	11 / 0	0.5W
CERT TAC 5	12 / 0	0.5W
CERT TAC 6	13 / 0	0.5W
CERT TAC 7	14 / 0	0.5W

CERT Field Communications Handbook

Cupertino Citizens Corps
9 August 2020

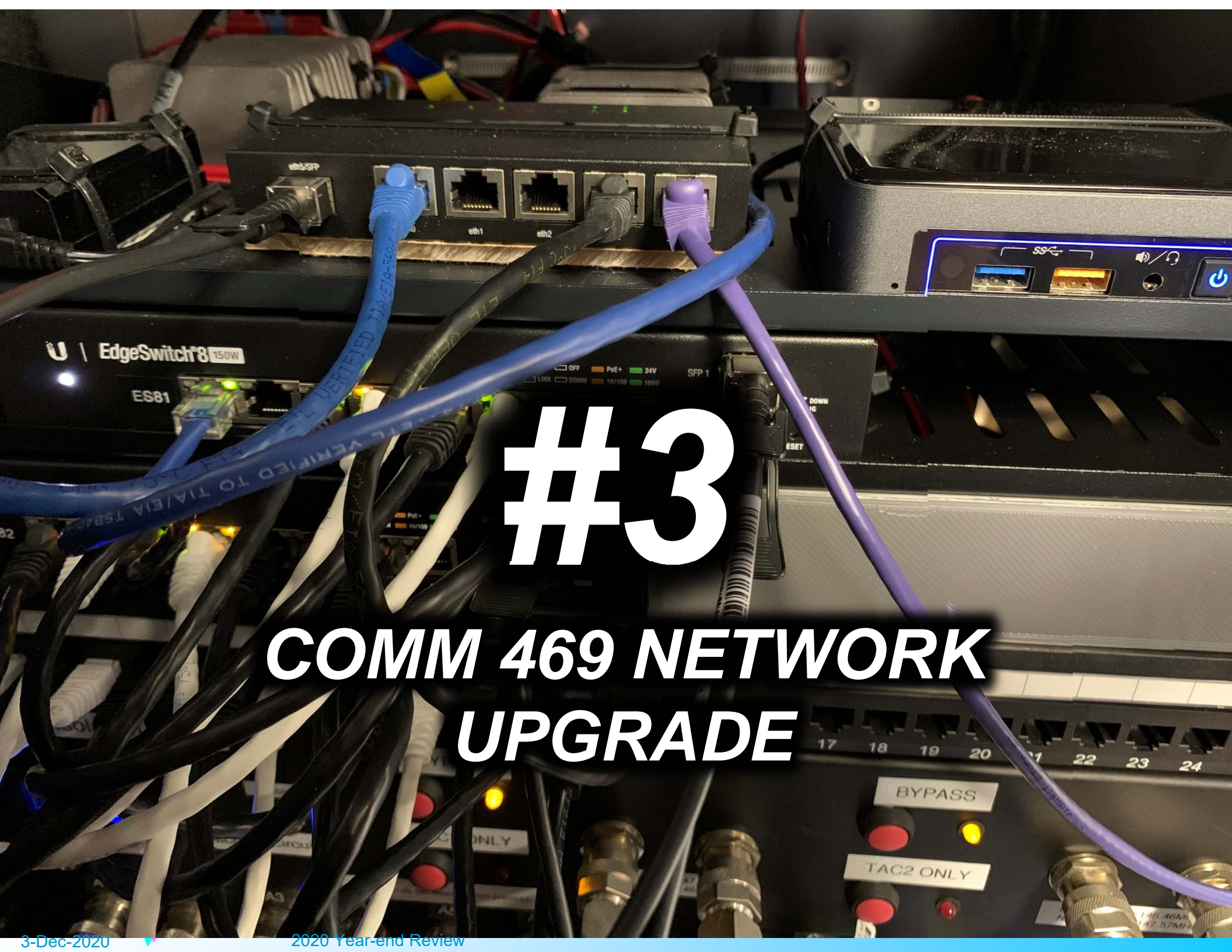


Next Steps

#4 Enhanced ARK Comms

1. **Schedule regular GMRS Radio Tests**
2. **Introduce to CERT and Block Leaders**
3. **Roll out zone by zone**





#3

COMM 469 NETWORK UPGRADE

Situation

#3 Comm 469 Network Upgrade

1. Original equipment was residential grade (wireless routers, switches, etc.).
2. Current configuration was limiting our ability to expand to accommodate ARKnet, City network access, SCC RACES emergency net.
3. Starting to see some equipment failures.



Equipment Upgrade

#3 Comm 469 Network Upgrade

1. Upgrade router and switches to Ubiquiti equipment
2. Upgrade C469 server from Raspberry Pi to Intel NUC7i5BNK running Linux ubuntu 20.04



Capabilities

#3 Comm 469 Network Upgrade

Current

1. VoIP Telephone (internal)
2. Walk-up (WiFi) printing
3. File Sharing
4. Wireless link to the DOC and EOC
5. Internet access

Planned

1. Link to ARKnet, City network, SCC RACES net
2. Chat app among network clients
3. Move to web-based app (paperless) processing?



Any tech expertise out there?

#3 Comm 469 Network Upgrade

Situation

1. CARES has several processes that requires data to be collected on forms.
 - Preliminary Safety Assessment
 - Infrastructure Safety Assessment
 - First Look Area Assessment
 - CERT Rapid Needs Assessment
2. As it is being collected, it needs to be shared with the DOC/EOC.
3. This process is very manual, requires transcription and manual handoffs.

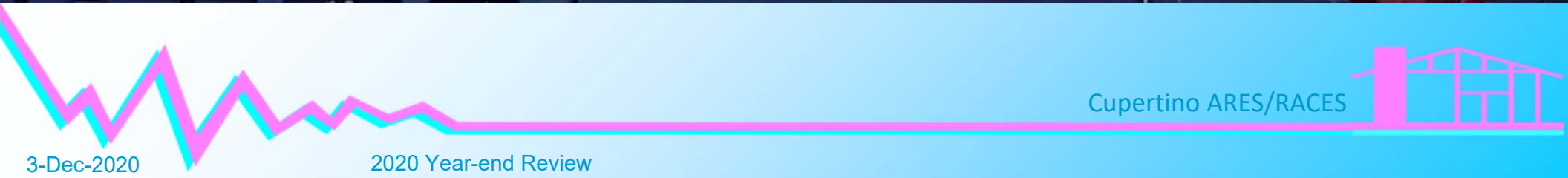
Opportunity

1. Create a C469 web environment (html, apache, php, mysql)
2. Develop web apps that can facilitate collecting, storing, and sharing the data in real time



#2

COVID-19: OUR NEW NORMAL



COVID-19 by the numbers

as of 2-Dec-2020

Location	Cases	Deaths
Worldwide ⁽¹⁾	64.6M	1.49M
United States ⁽¹⁾	13.9M (21%)	273,847
California ⁽²⁾	1.27M (9%)	19,440
Santa Clara County ⁽³⁾	35,945 (2.8%)	498
Cupertino (95014) ⁽³⁾	245 (0.65%)	(not available)

Source

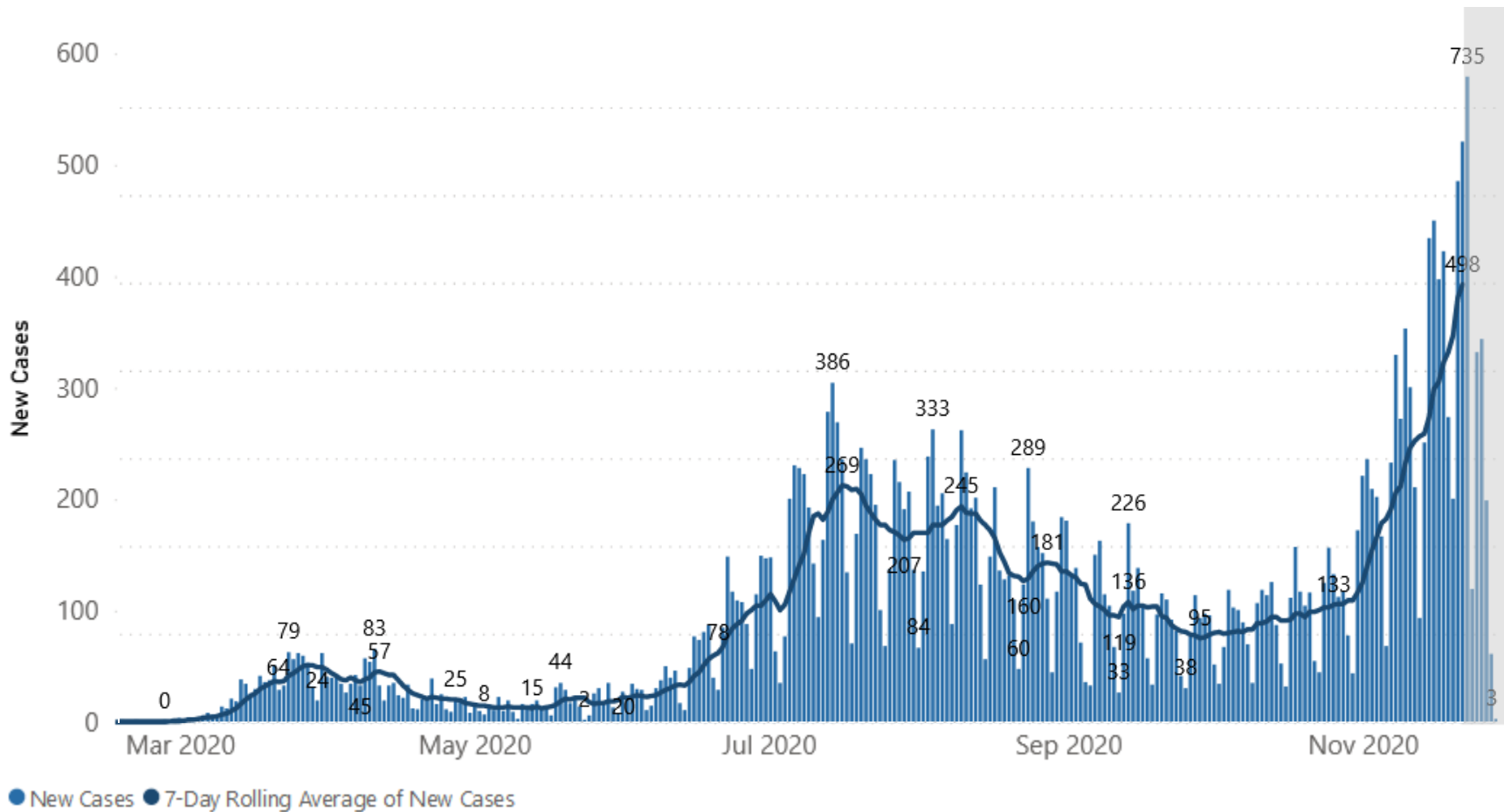
(1) Johns Hopkins University

(2) New York Times

(3) Santa Clara County Public Health

Santa Clara County's Slow Motion Emergency

COVID-19 Cases Dashboard (2-Dec-2020)



Ref: <https://www.sccgov.org/sites/covid19/Pages/dashboard-cases.aspx>



Infectious Disease Response Plan

Putting the plan to the test

Cupertino ARES/RACES
Providing emergency and public service communications
for the City of Cupertino, California

Welcome!
[Home](#)
[About us](#)
[Operations](#)
[Frequencies](#)
[Training](#)
[Exercises & Events](#)
[Docs & References](#)
[Resources](#)
[Projects](#)
[Cupertino Citizen Corps](#)
[County RACES](#)
[City of Cupertino](#)

[Member Log in](#)

Docs & References
[Introduction](#) | [SOP](#) | [Field References](#) | [Net Control Scripts](#) | [Mesh Networking](#)
Updated: 10 August 2020

Introduction
Ensuring a repeatable process is critical to ensure a successful activation and field deployment. Skills are maintained by practice and drills, and ensuring that the response process is understood, consistent, and repeatable. This section describes the various documents that support this objective.

[Back](#)

Standard Operating Procedures

Name	Description Content
Infectious Disease Response Plan (.docx), Sep 2020	This document is supplemental guidance for Cupertino Citizen Corps whenever CCC is activated for a non-medical response during an infectious disease or pandemic event. Revisions will be made as new guidance becomes available.

- IDR Plan developed, refined.
- Mtgs moved to zoom
- Field tests: 8/16, 11/14
- C469 setup, household buddies, solo assignments.
- IDR Plan is in effect until further notice.



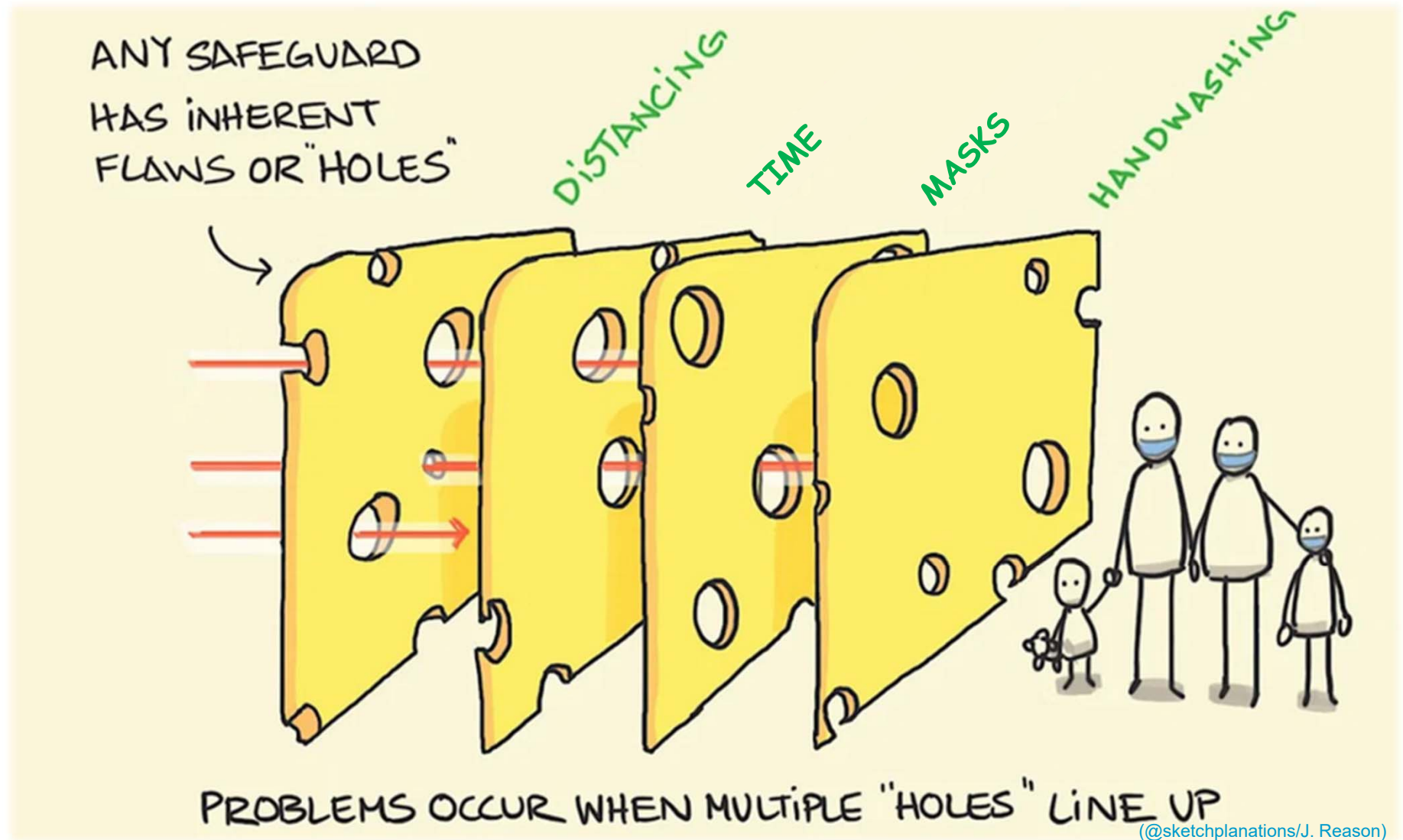
Moved to Zoom!

4-June-2020 General Meeting

A grid of 40 Zoom meeting tiles, arranged in 8 rows and 5 columns. Each tile shows a participant's video feed and their name with a call sign. The participants are:

- Row 1: Darryl K16LDM, Jim KN6PE, Max W6BG, Mark AF6IQ, paul K16DRN
- Row 2: Judy KK6EWQ, Walt K6WGY, Steve, Dick N6IK, Bill KD6TQJ
- Row 3: Ken KR6CO, Kevin, K6TD, Masa NW6UP, Clark K6EWO, Chris A16CC
- Row 4: Bob, AI K6AB, Gerhard N6ESC, fari, Ken K16SYY
- Row 5: Mark AG6CL, Skip WA6VFD, Akshat KN6DWW, Mary & Brian, Mark (k6fjc)
- Row 6: Tony KJ6OHT, Stuart F6RZR, Davide W6DGE, Todd, Tae N6TAE

Applying the *Swiss Cheese Model*



Only in Silicon Valley...



A dramatic night scene featuring a dark sky filled with multiple bright, jagged lightning bolts striking down. Below the sky, a dark silhouette of trees and buildings is visible, with some lights glowing from the structures. In the foreground, a body of water reflects the light from the lightning and the distant lights. The overall mood is intense and powerful.

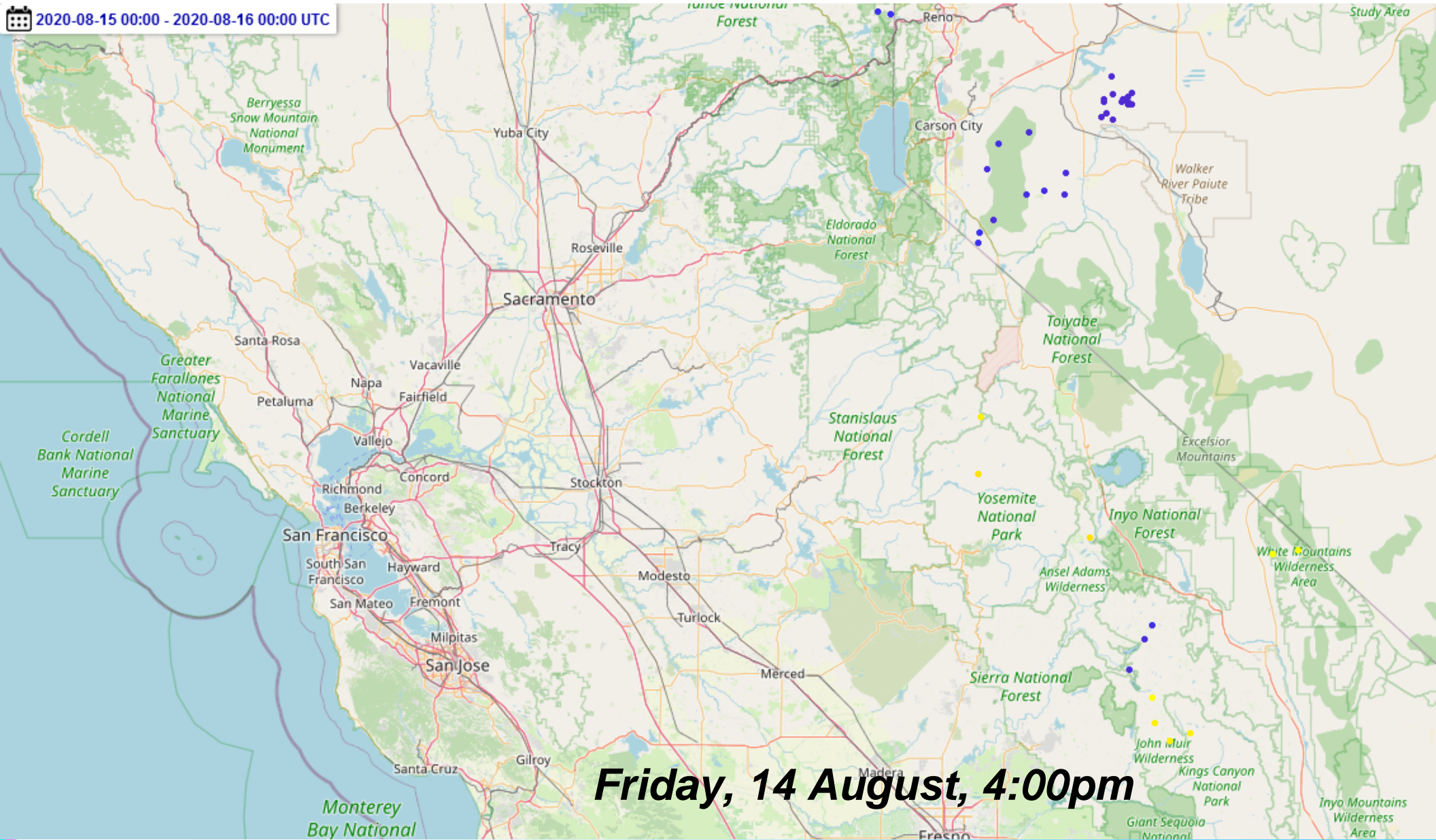
#1

SITSTAT TOOLS ***(OR, 2020 WILDLAND FIRE EVENT)***



August Lightning Event

📅 2020-08-15 00:00 - 2020-08-16 00:00 UTC



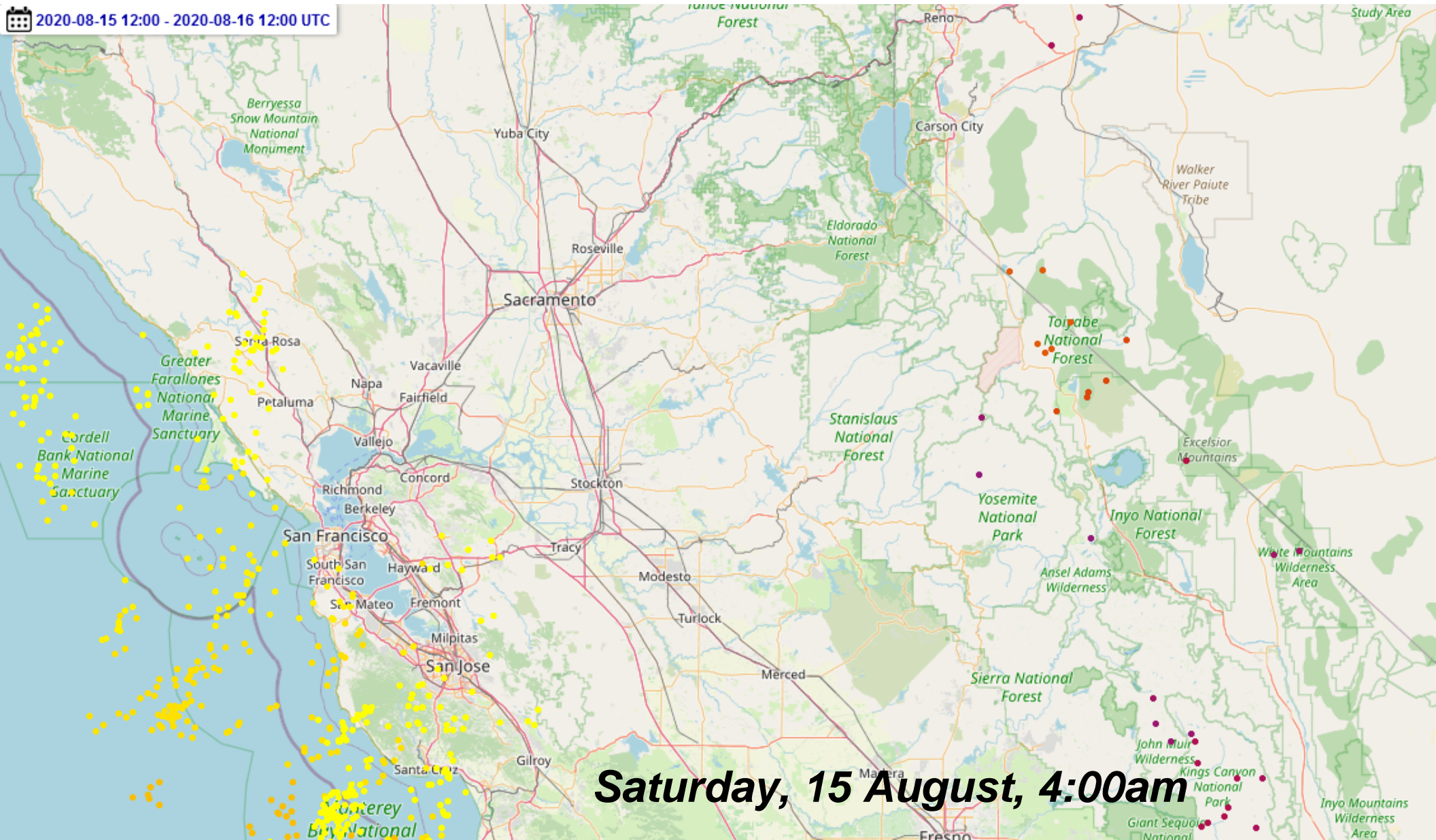
Friday, 14 August, 4:00pm

Cupertino ARES/RACES



August Lightning Event

📅 2020-08-15 12:00 - 2020-08-16 12:00 UTC



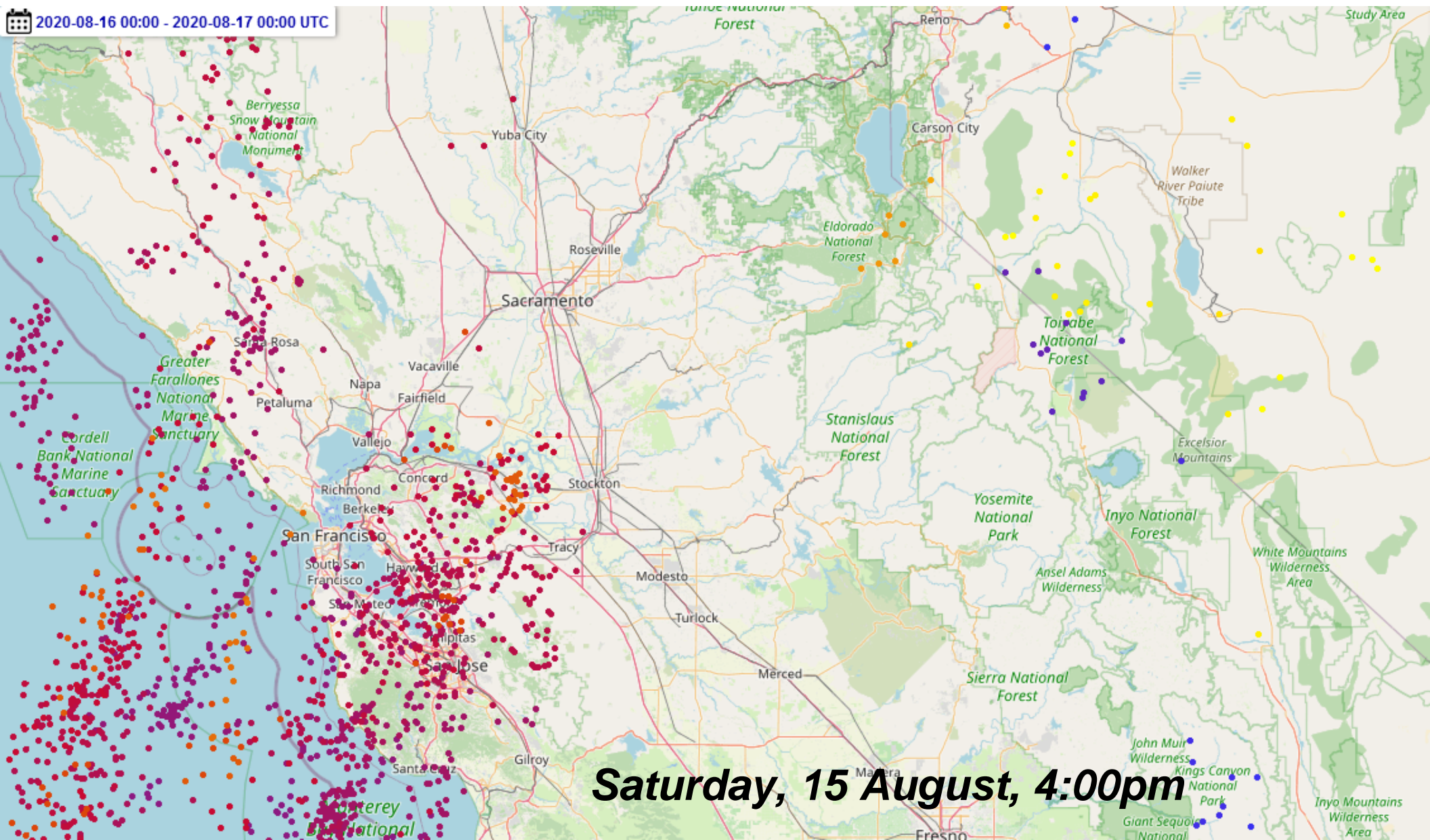
Saturday, 15 August, 4:00am

Cupertino ARES/RACES



August Lightning Event

📅 2020-08-16 00:00 - 2020-08-17 00:00 UTC



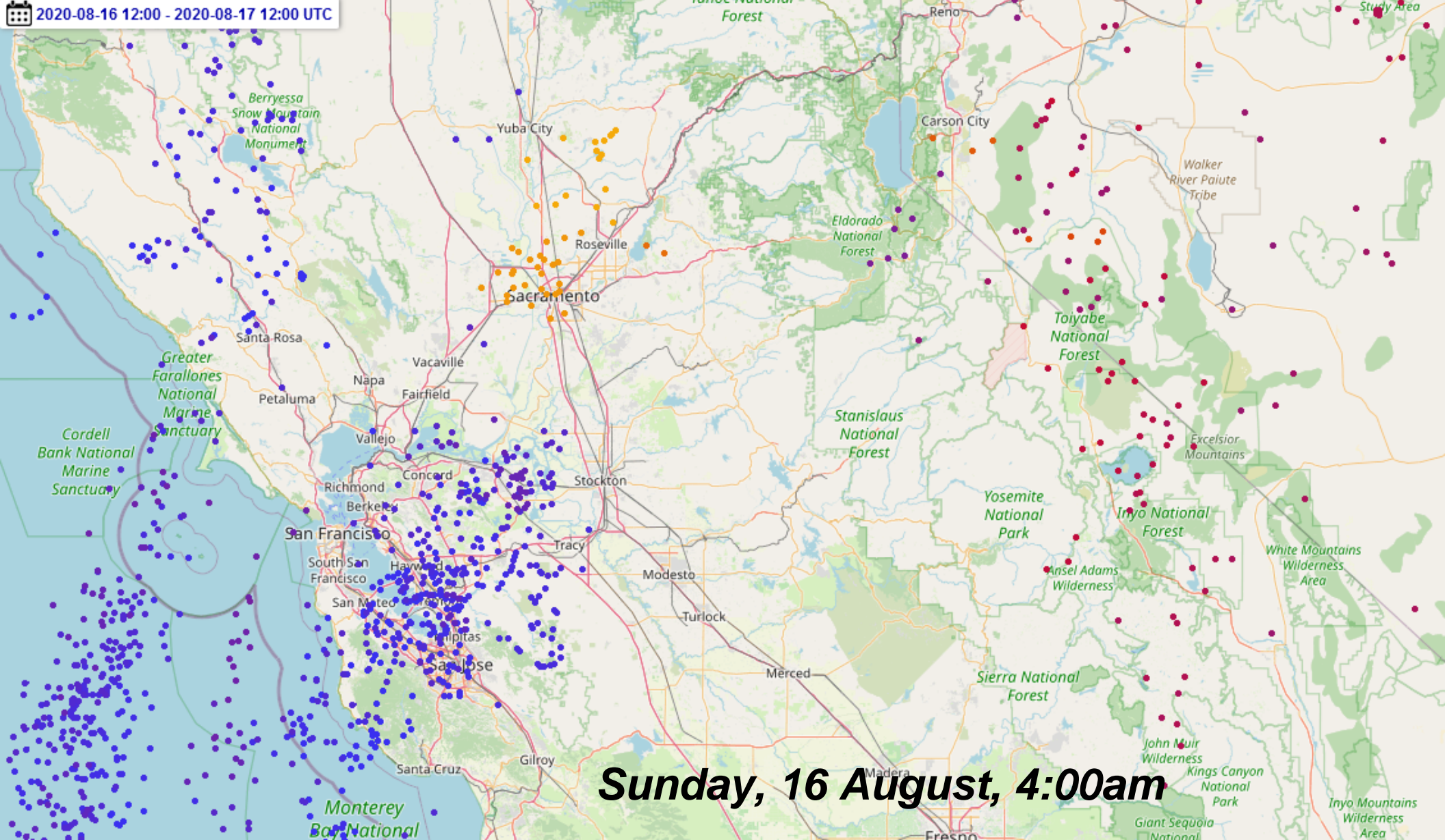
Saturday, 15 August, 4:00pm

Cupertino ARES/RACES



August Lightning Event

📅 2020-08-16 12:00 - 2020-08-17 12:00 UTC

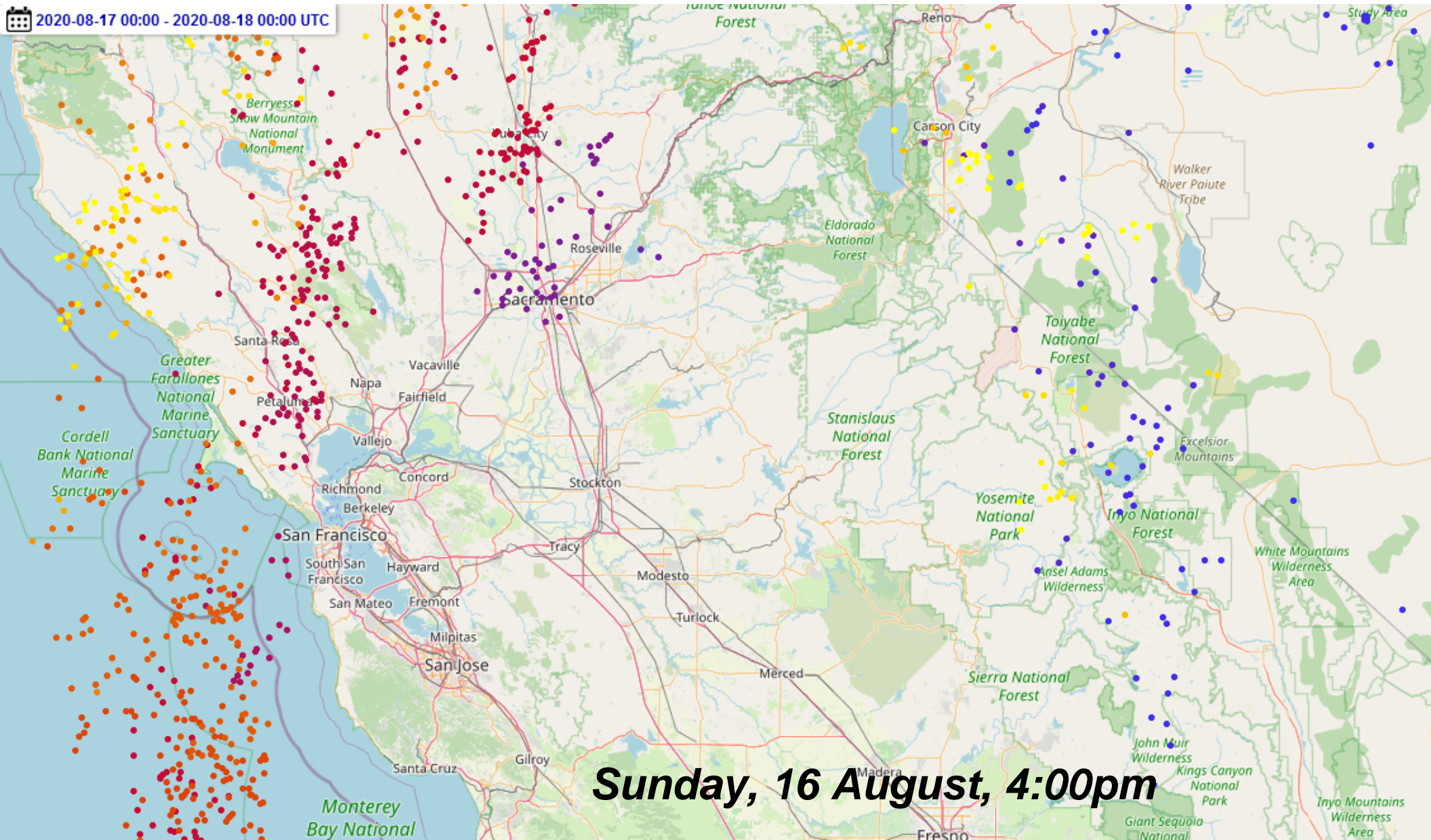


Cupertino ARES/RACES



August Lightning Event

2020-08-17 00:00 - 2020-08-18 00:00 UTC



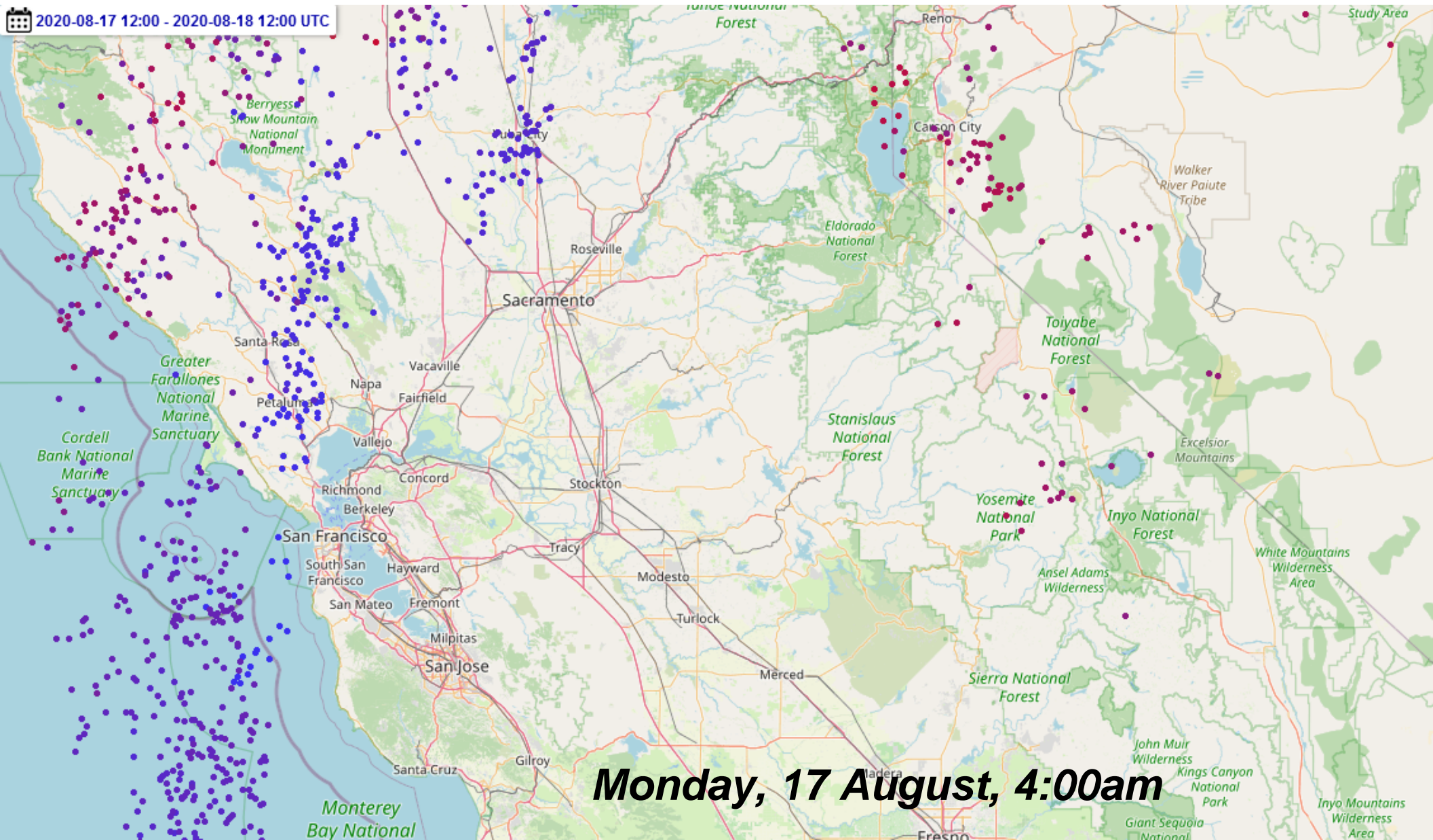
Sunday, 16 August, 4:00pm

Cupertino ARES/RACES



August Lightning Event

2020-08-17 12:00 - 2020-08-18 12:00 UTC



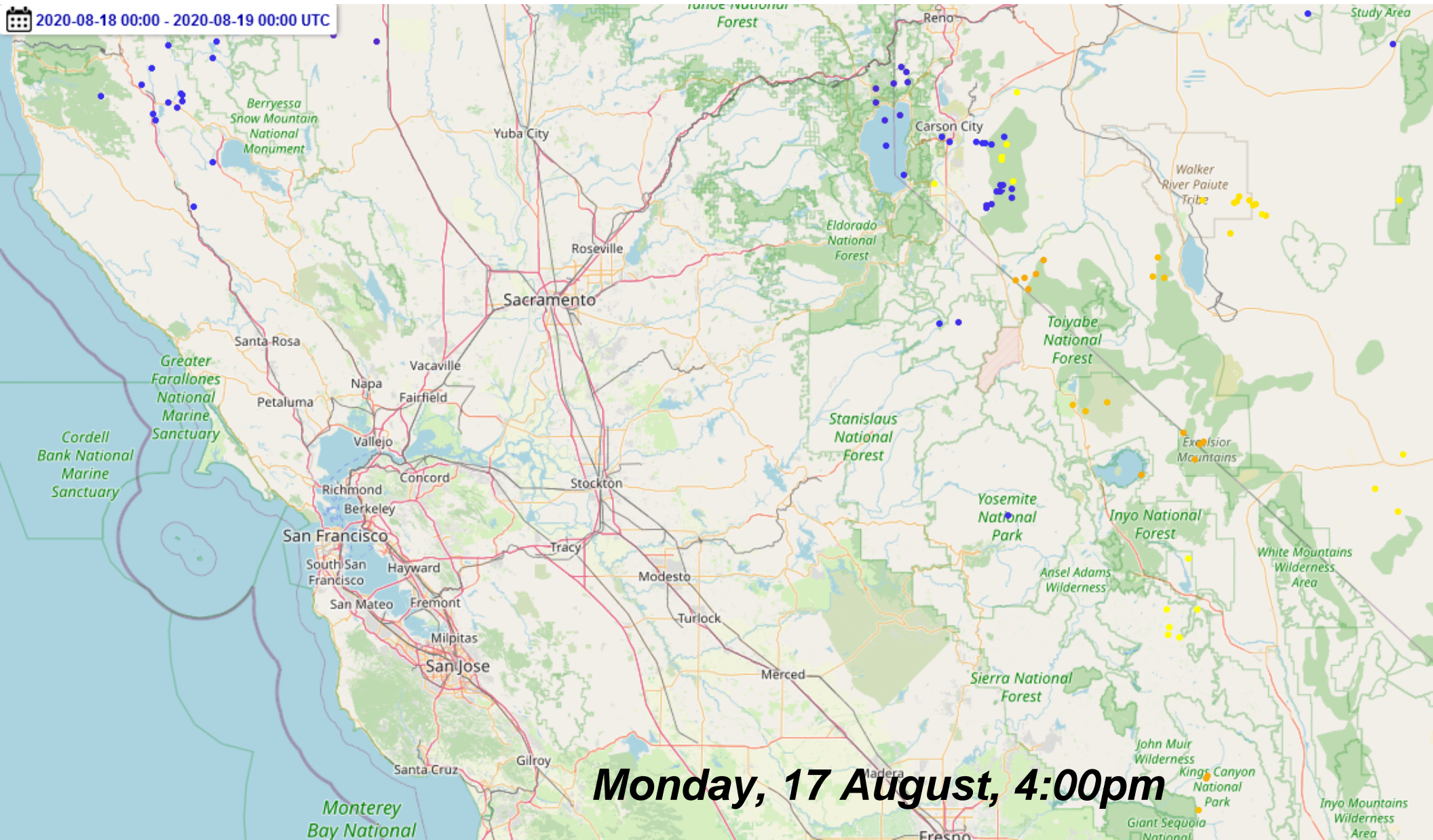
Monday, 17 August, 4:00am

Cupertino ARES/RACES



August Lightning Event

2020-08-18 00:00 - 2020-08-19 00:00 UTC



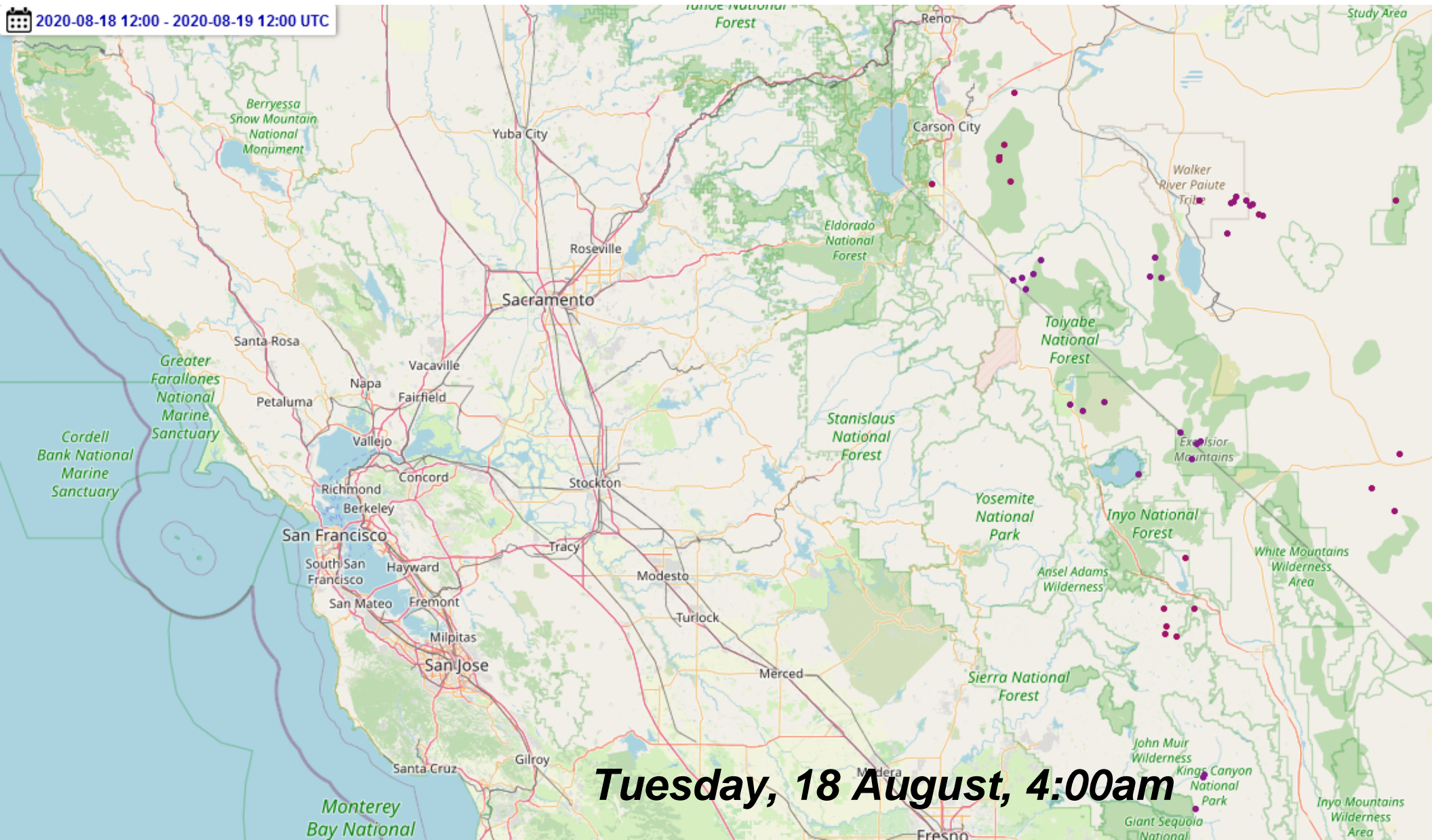
Monday, 17 August, 4:00pm

Cupertino ARES/RACES



August Lightning Event

📅 2020-08-18 12:00 - 2020-08-19 12:00 UTC



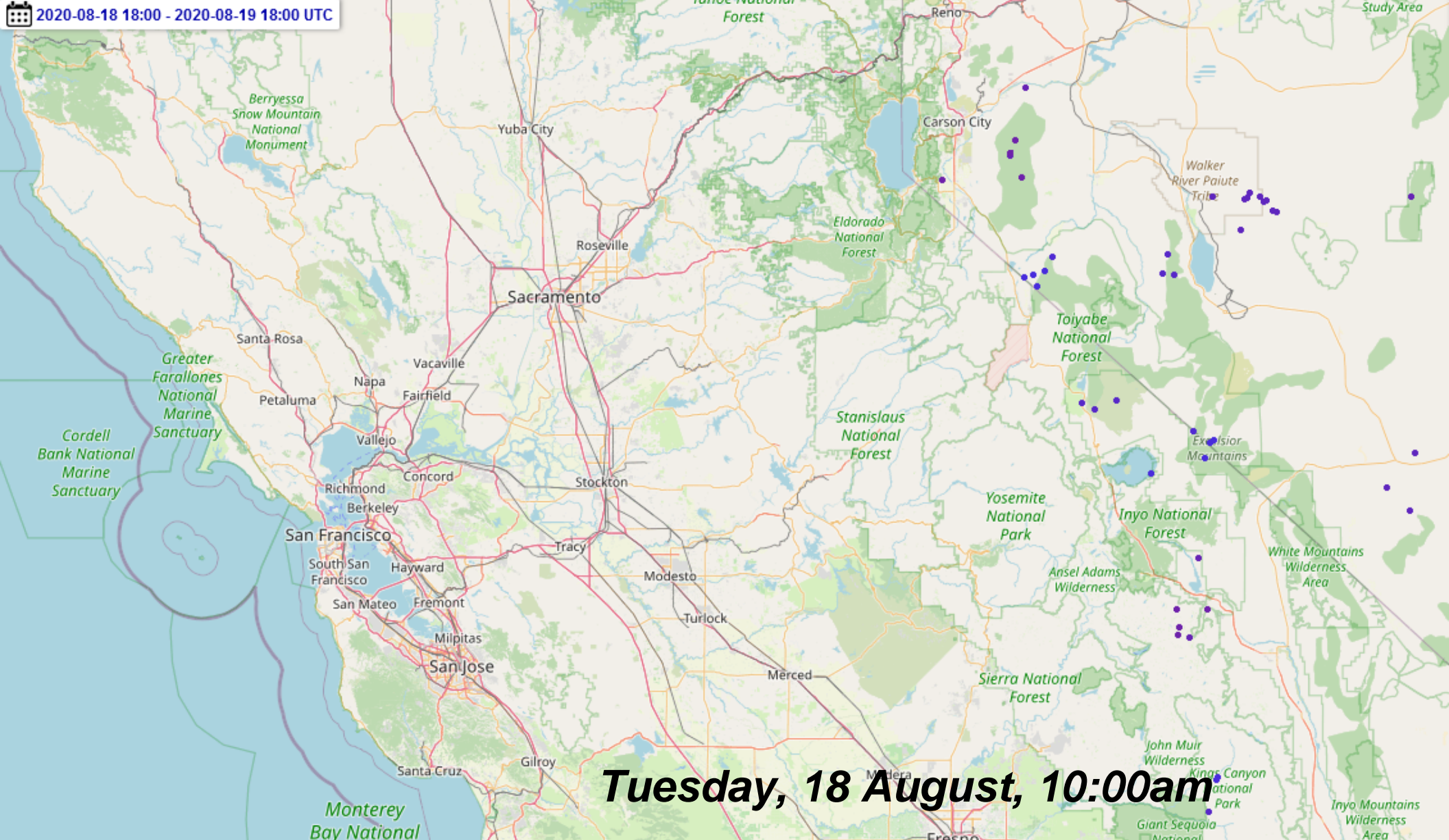
Tuesday, 18 August, 4:00am

Cupertino ARES/RACES



August Lightning Event

2020-08-18 18:00 - 2020-08-19 18:00 UTC



Tuesday, 18 August, 10:00am

Cupertino ARES/RACES







3-Dec-2020 2020 Year-end Review

Cupertino ARES/RACES 





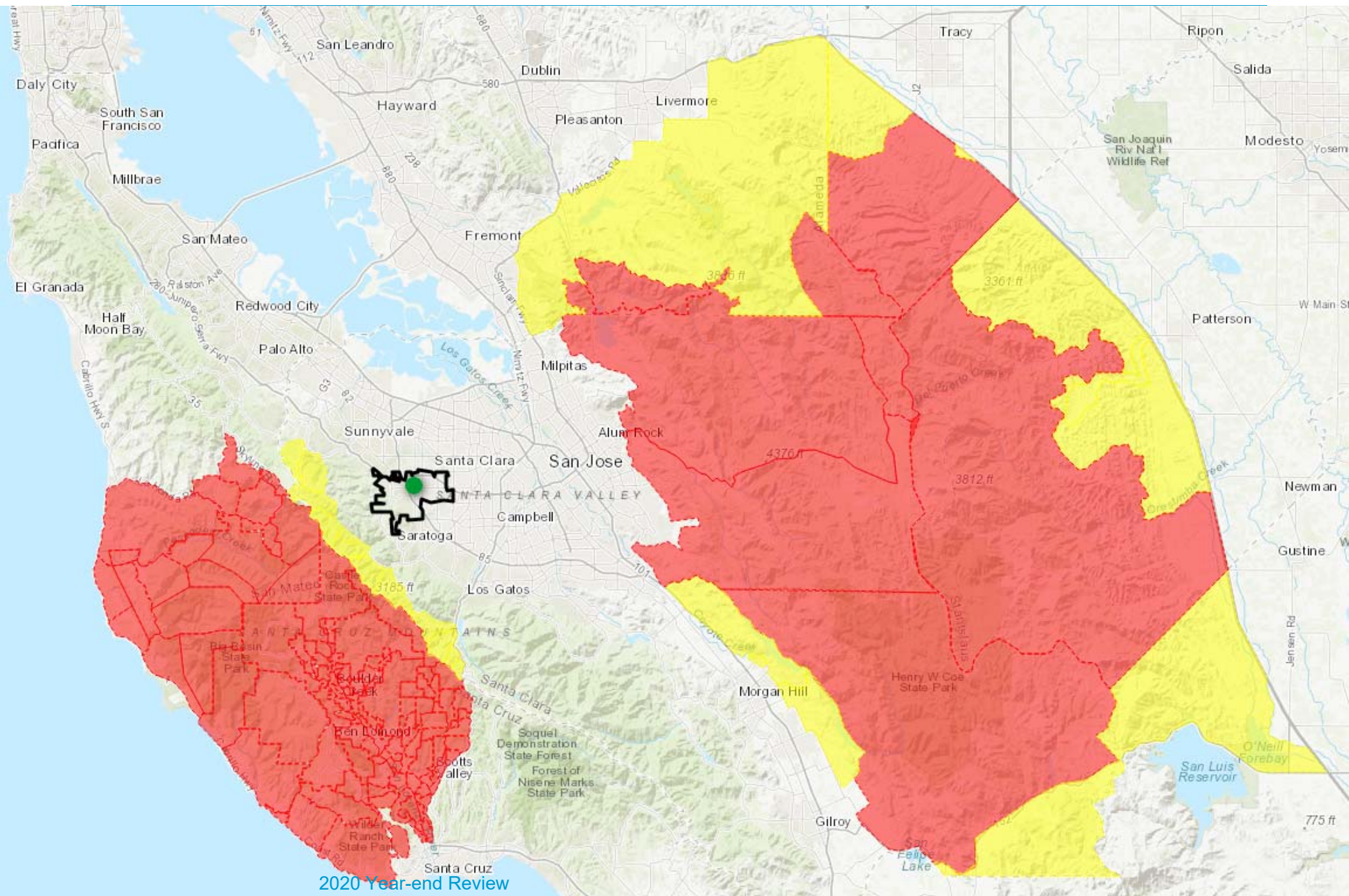


One of the last images from the Bonny Doon AlertWildfire camera



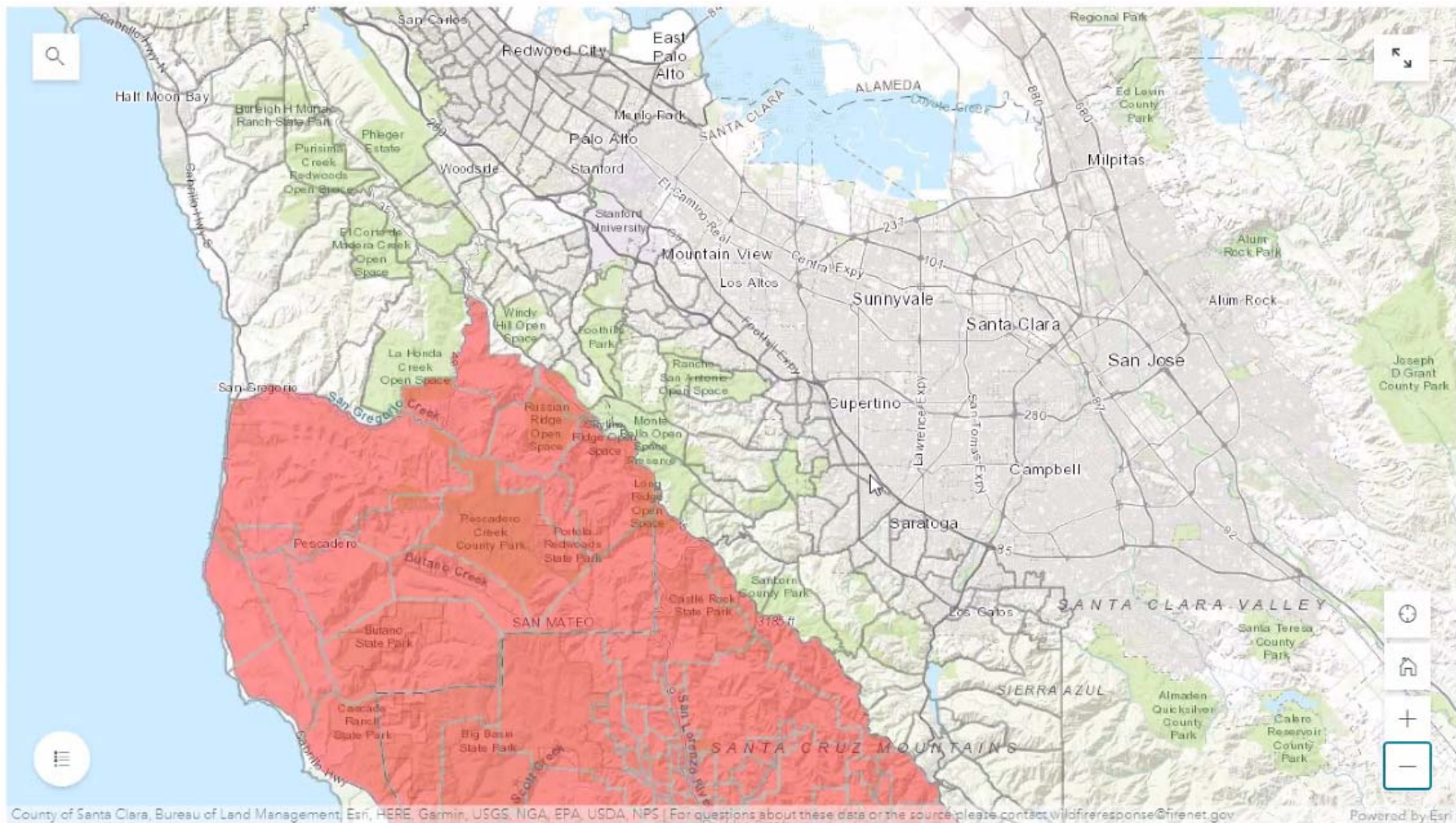
Tracking the fires

24 August 2020



Setting evacuation plans

24 August 2020

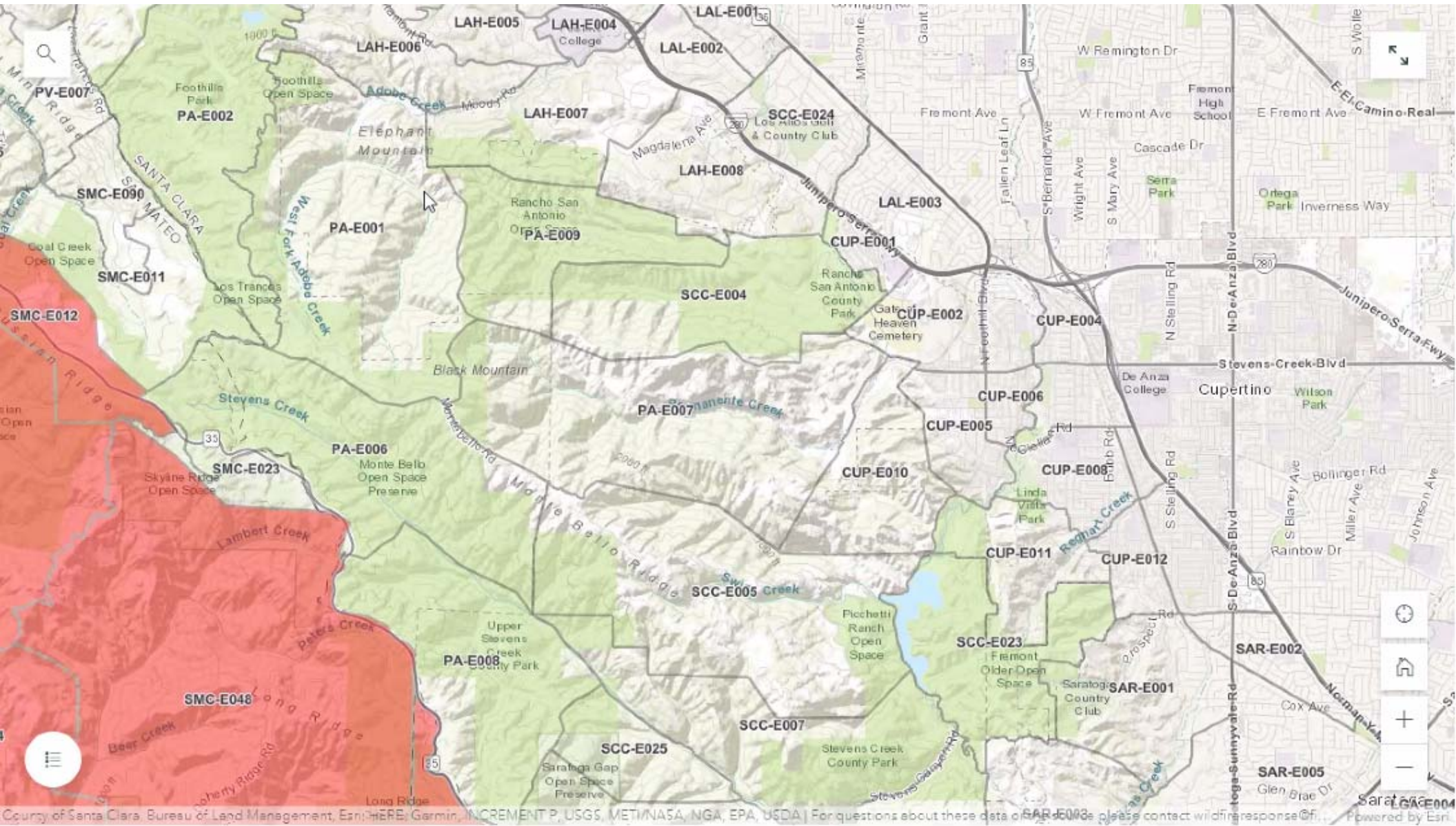


CZU Lightning Complex

Cupertino ARES/RACES

Setting evacuation plans

24 August 2020

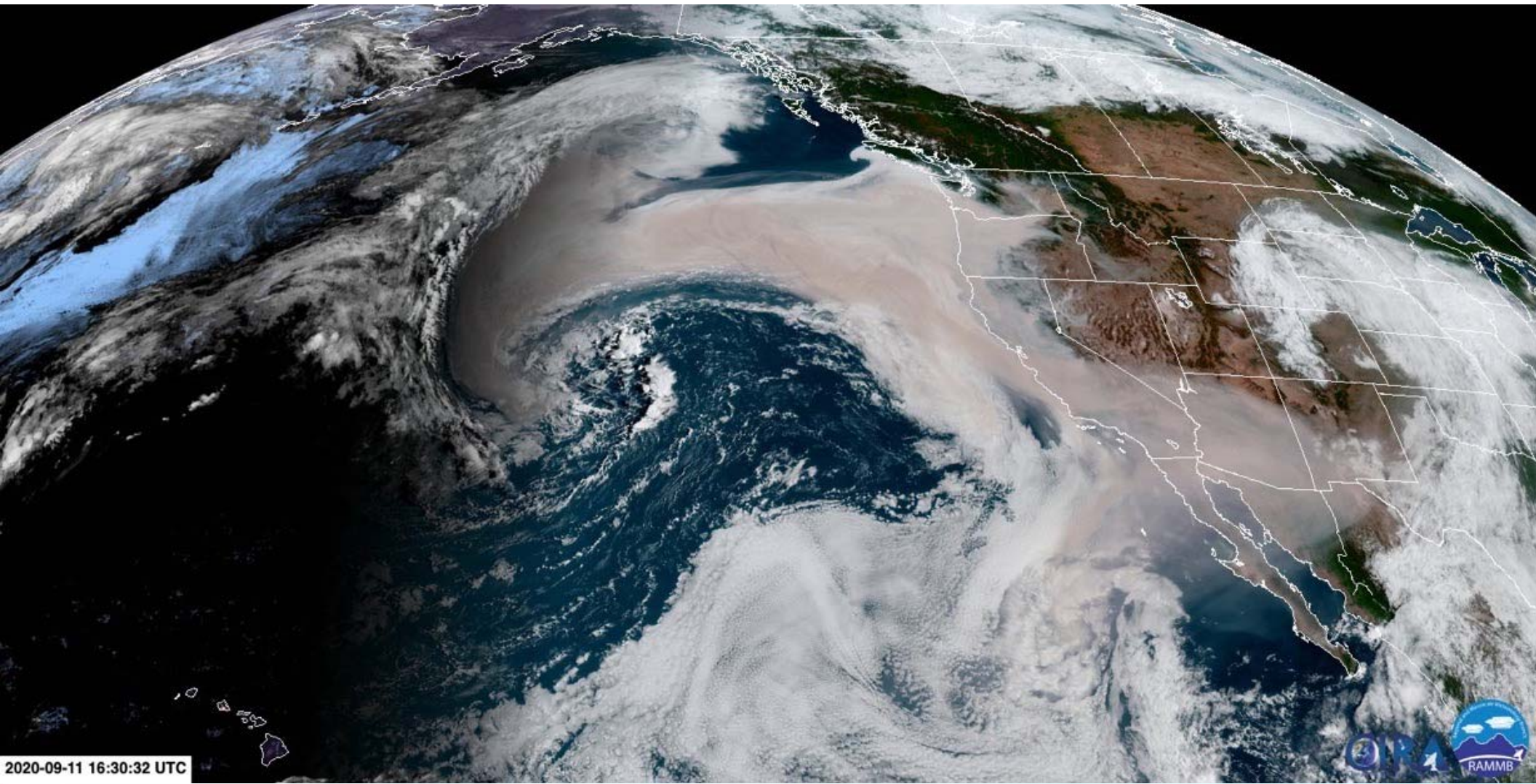


<http://gis.cupertino.org/service/index/>

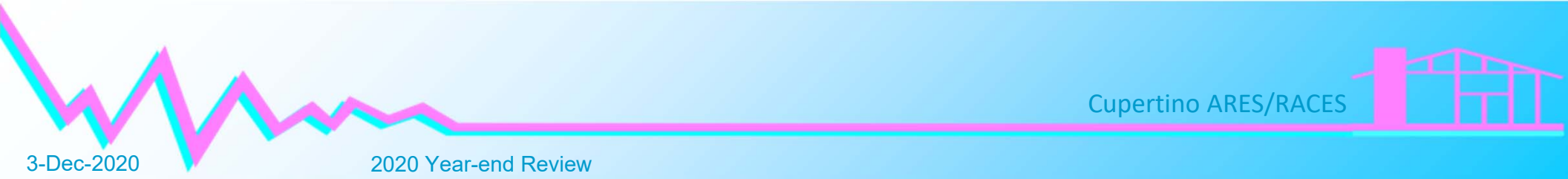
Cupertino ARES/RACES



Tracking Air Quality



2020-09-11 16:30:32 UTC



3-Dec-2020

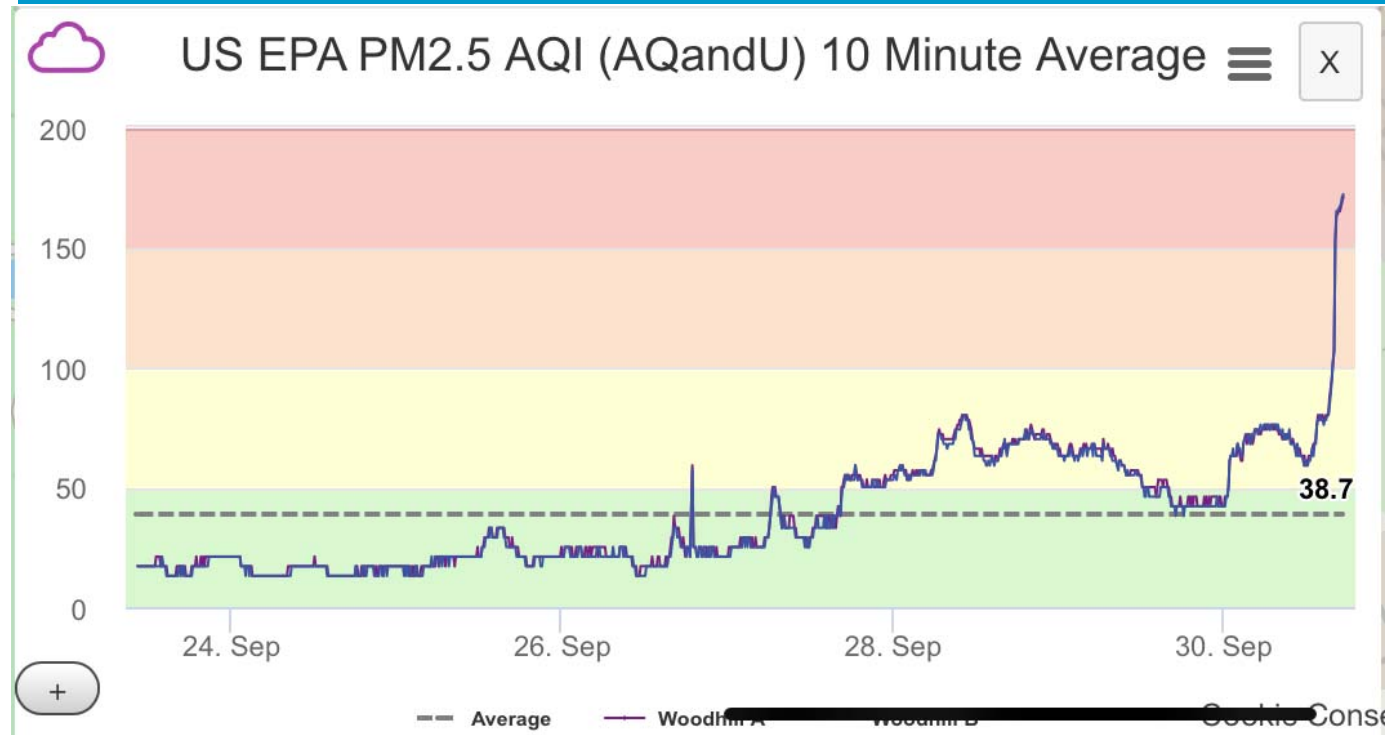
2020 Year-end Review

Cupertino ARES/RACES



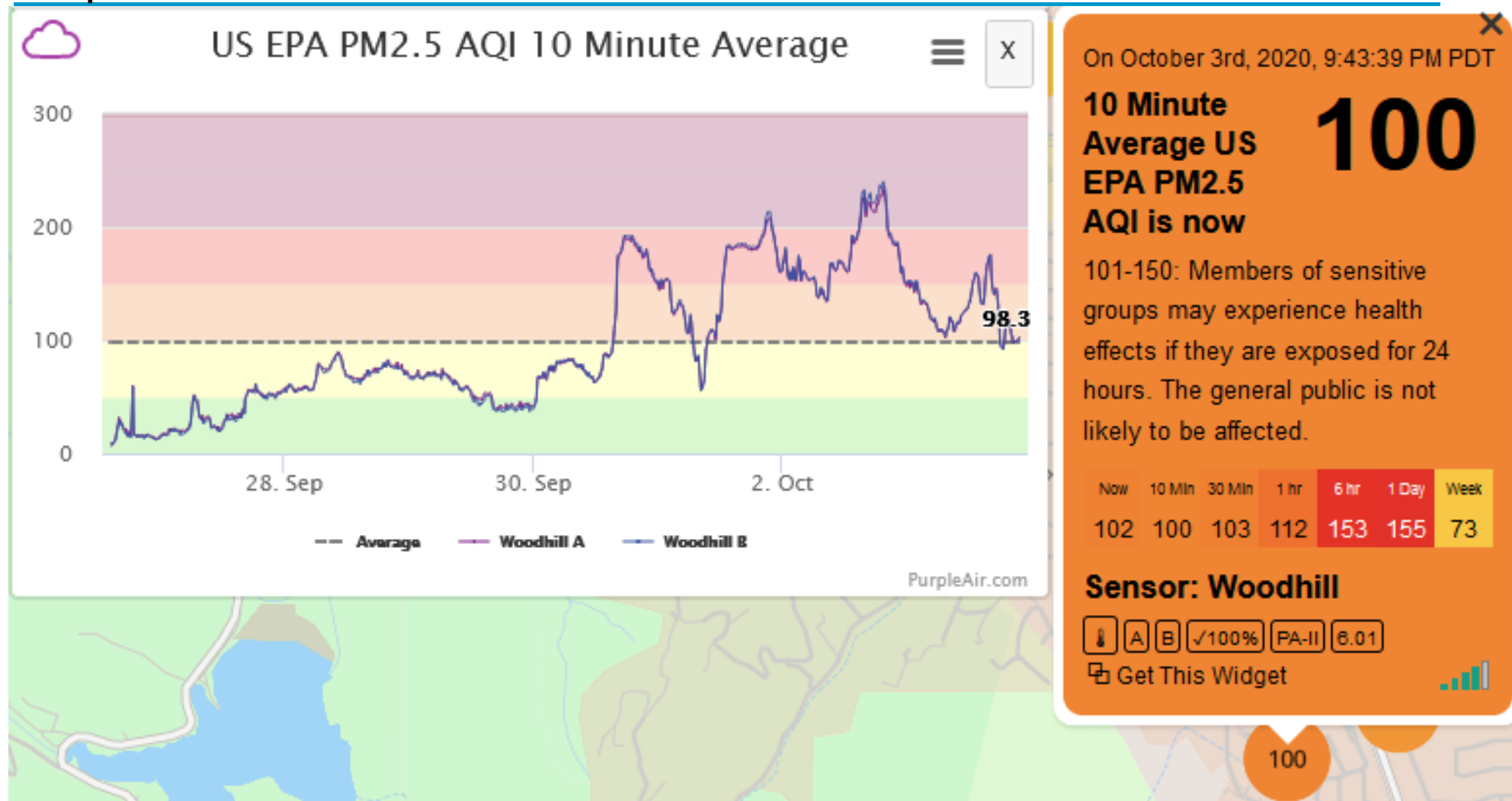
Tracking Air Quality

Purple Air



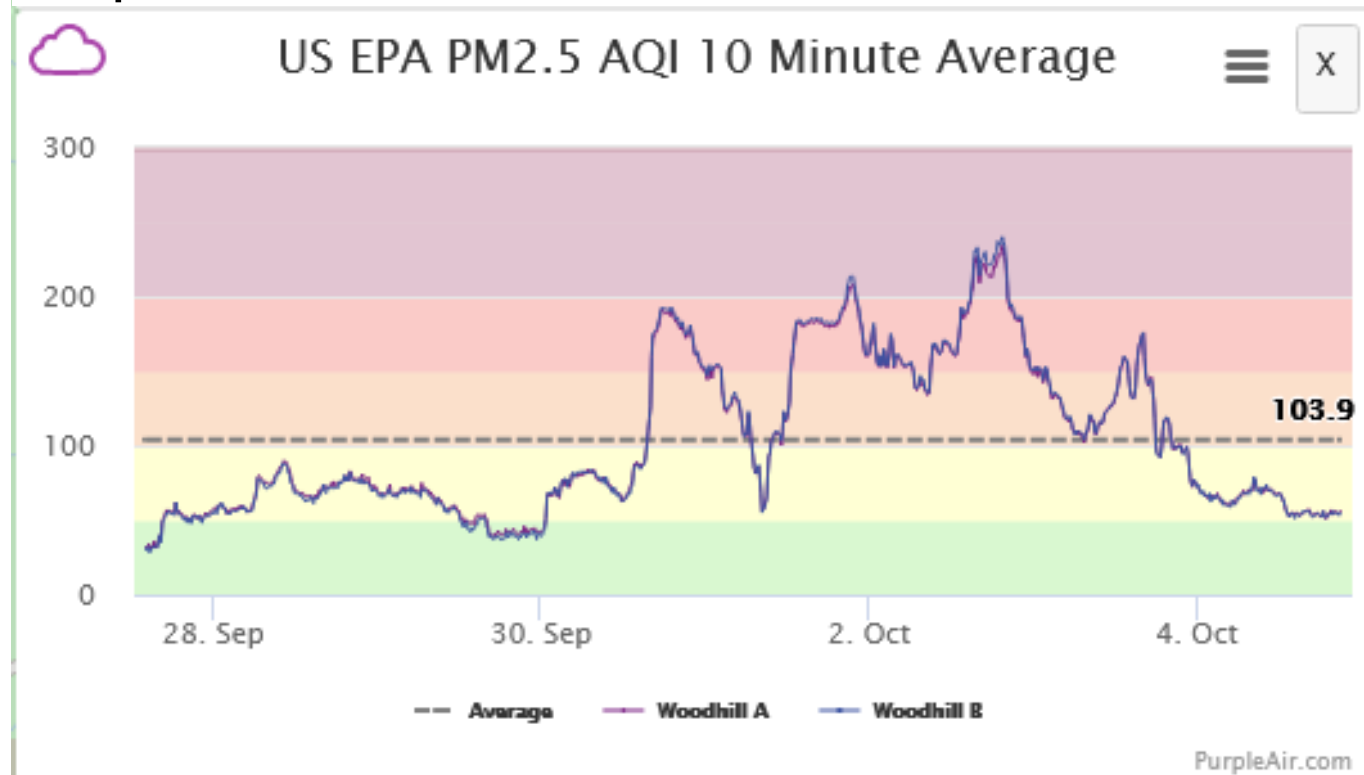
Tracking Air Quality

Purple Air



Tracking Air Quality

Purple Air



On October 4th, 2020, 9:10:34 PM PDT

10 Minute Average US EPA PM2.5 AQI is now

55

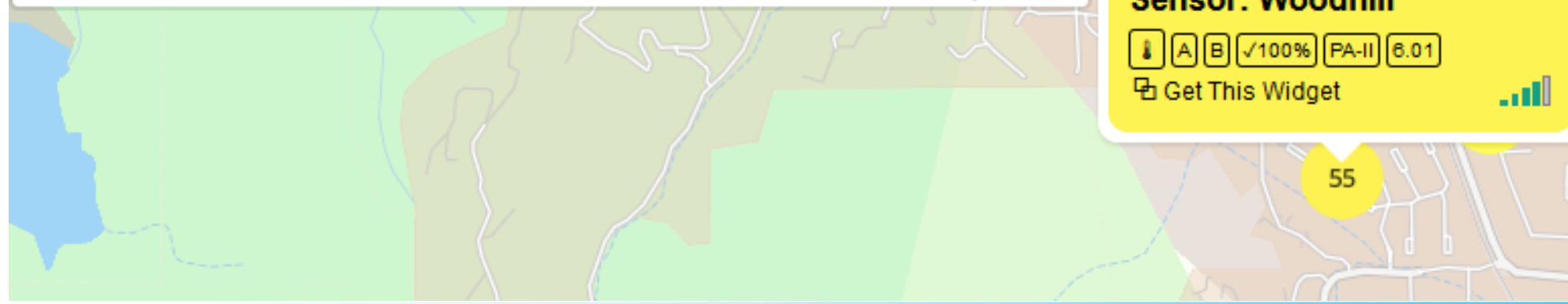
51-100: Air quality is acceptable; however, if they are exposed for 24 hours there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.

Now	10 Min	30 Min	1 hr	6 hr	1 Day	Week
53	55	54	54	73	127	72

Sensor: Woodhill

📍 A B ✓100% PA-II 6.01

🔗 Get This Widget



Tracking... everything

www.cupertinoares.org > Resources > Wildland Urban Interface Fires

Building out our *SitStat* toolbox...

- Mapping
- Monitoring
- Visuals

Wildland Urban Interface Fire Resource Page

[SitStat](#) | [Articles](#) | [Links](#) | [Videos](#) | [Reports](#) | [Presentations](#)
Last Updated: 30 October 2020

Introduction

This page contains links to a variety of material on Wildland/Urban Interface (WUI) Fire.

This page will be updated as additional material is identified.

[Back](#)

Situation Status

Note: All interactive links in this section will open in a separate browser tab.

[Cal FIRE Current Fire Information](#)

Cal Fire, www.fire.ca.gov

[Active Fire Map](#), integrates several useful mapping layers relevant to OES including active fire and weather.

[Lightning Maps, Real-time](#), LightningMaps.org.

[Wind Map #1](#), WindAlert.com

[Wind Map #2](#), WindFinder.com

[PurpleAir](#), Air quality monitoring. EPA recommends the [AQandU](#) conversion.

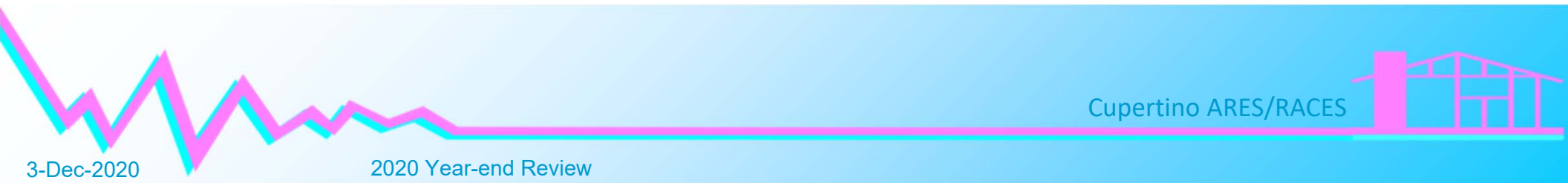
[AirNow](#), Local air quality data.

[Air Quality](#), Real-time Air Quality Index Visual Map.

[Air Quality Index](#), table format. Bay Area Air Quality Management District

[Fire Cameras](#), PGE/Nevada Seismological Laboratory. HD cameras view of the South-East Bay area.

Closing out 2020...



Cupertino ARES/RACES



3-Dec-2020

2020 Year-end Review

Thank you

Any Questions?

