2018 Wildland Fire Communications Drill Prep

May 3, 2018
Jim Oberhofer

Agenda

1. Drill introduction – what's the plan?

2. Our 12-May scenario

3. What's our assignment

4. Spotting

5. Cross-band repeater

6. Message Handling refresher

Wildland Fire Drill Introduction
Wildland Fire Scenario, May 12, 2018

Objectives

1. Exercise resource net concepts and procedures.

2. Exercise message net concepts and procedures.

3. Exercise emergency voice and packet communications message handling procedures.

4. Test deployment of a Cross-band repeater

5. Test City-wide coverage from Comm 469

6. Test the activation procedure

Wildland Fire Drill Introduction
Wildland Fire Scenario, May 12, 2018

Concept

This will be a communications functional exercise based on a wildland fire event that indirectly threatening the City.

1. The drill will occur over a 4 hour period on Saturday May 12, 2018.

2. The City EOC will be activated with minimal (if any) City staff; the CCC DOC will simulate the EOC response as necessary.

3. Field responders will be deployed to a limited number of ARKs specific to the scenario. Participating ARKs will be activated to ARK Activation Level 2.

4. Communications assignments are made based on the CARES response model, resources, and priority.

5. Non-CARES Buddies will be encouraged.

6. Field message traffic will be based on timed scripted messages and simulated interactions with other responders.

7. Simulated OpArea traffic will be developed and sent to County with an SCC RACES resource to simulate radio interactions (voice, packet)
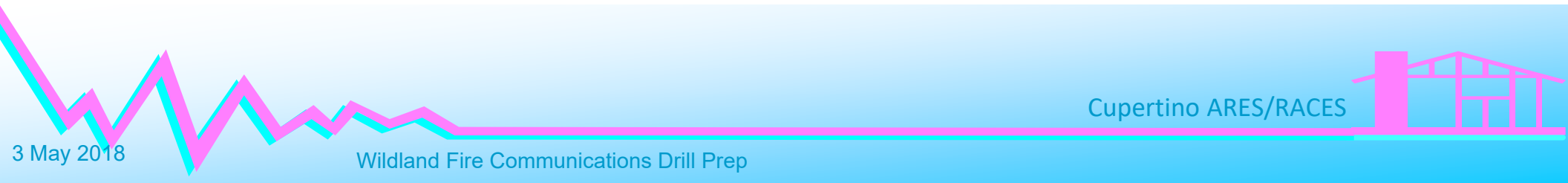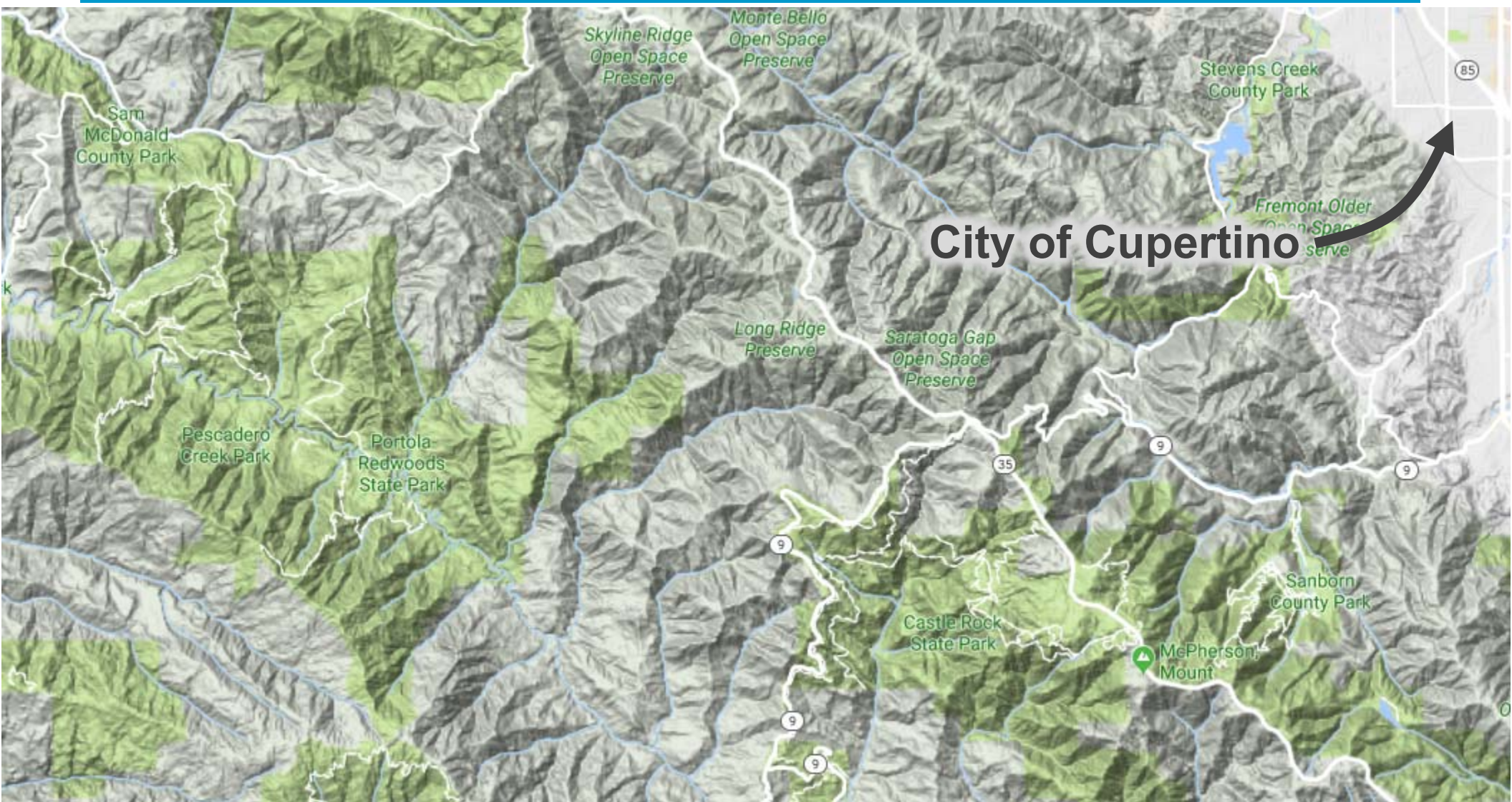
2018 Wildland Fire Drill

** THIS IS DRILL TRAFFIC **

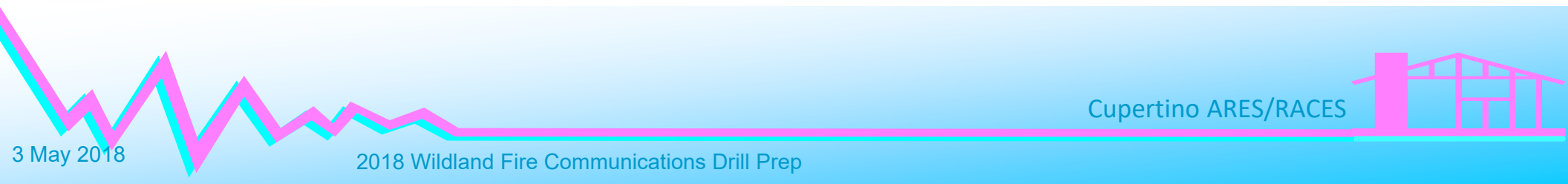The City is threatened by a wildland fire approaching from the Southwest.

Cupertino ARES/RACES

Setting the scene
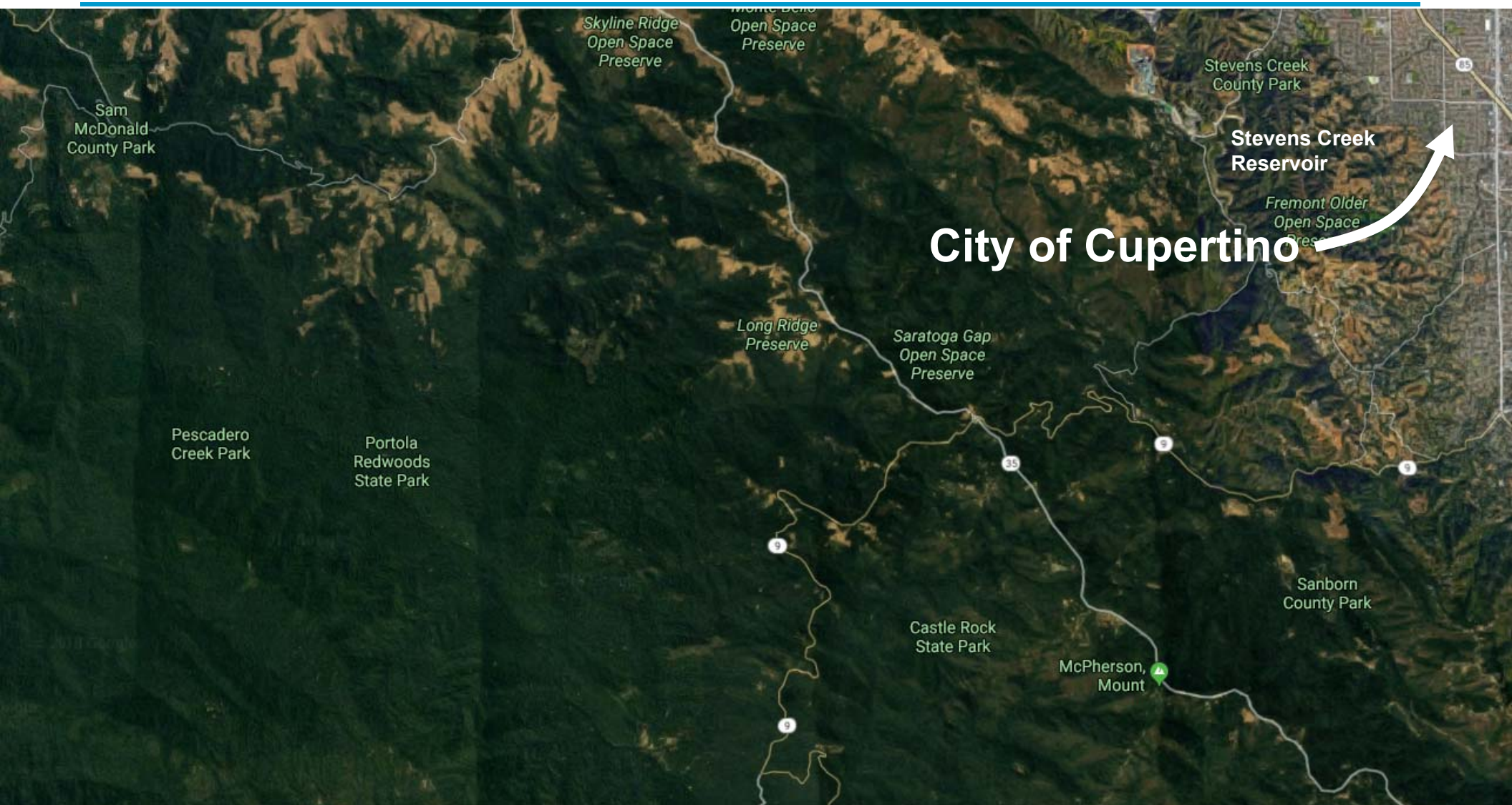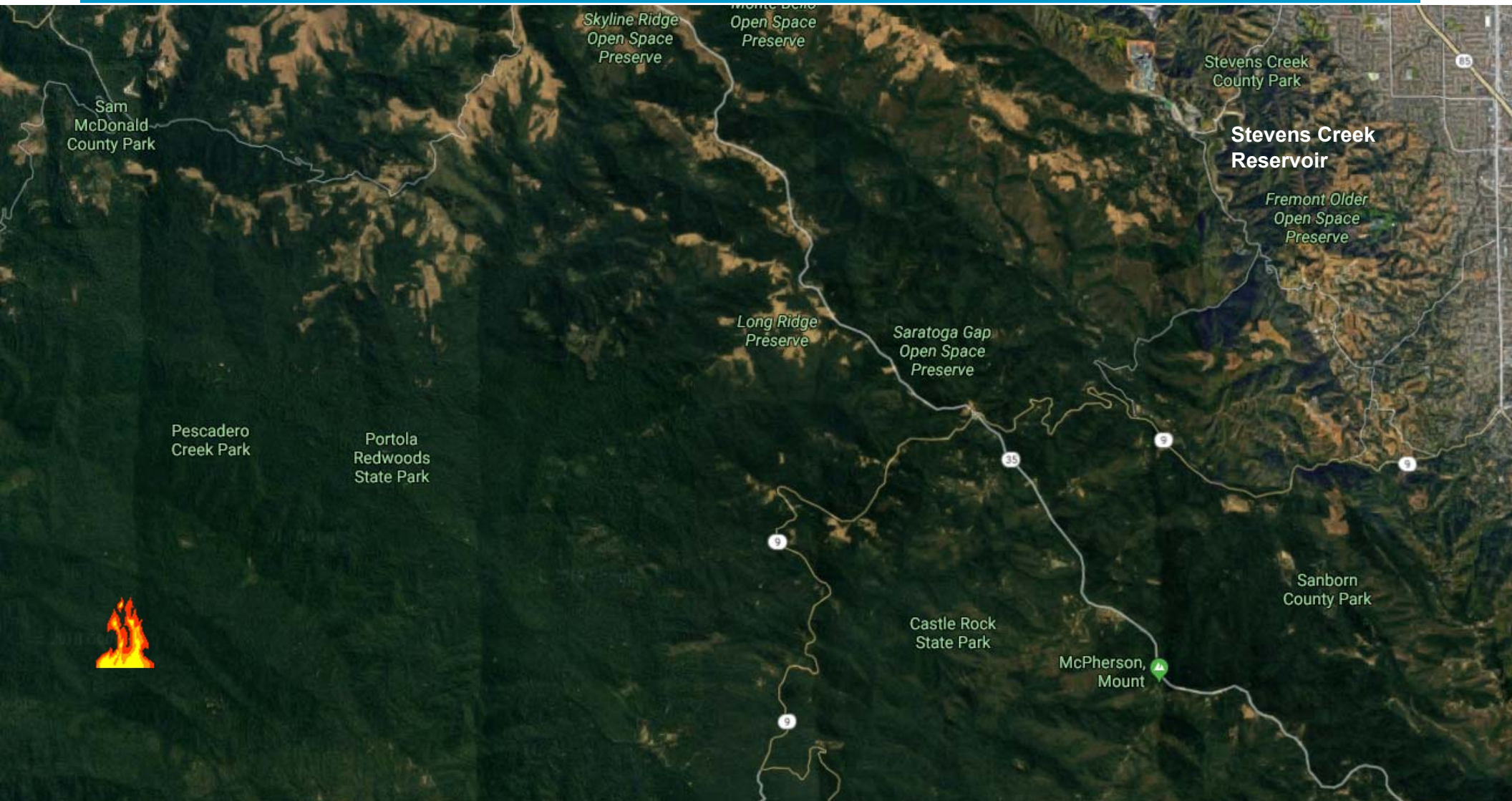

City of Cupertino

Setting the scene

Tuesday Night
Fire Starts on the South Butano Truck Trail

Wednesday
CAL FIRE works for containment SW of Portola Redwoods State Park
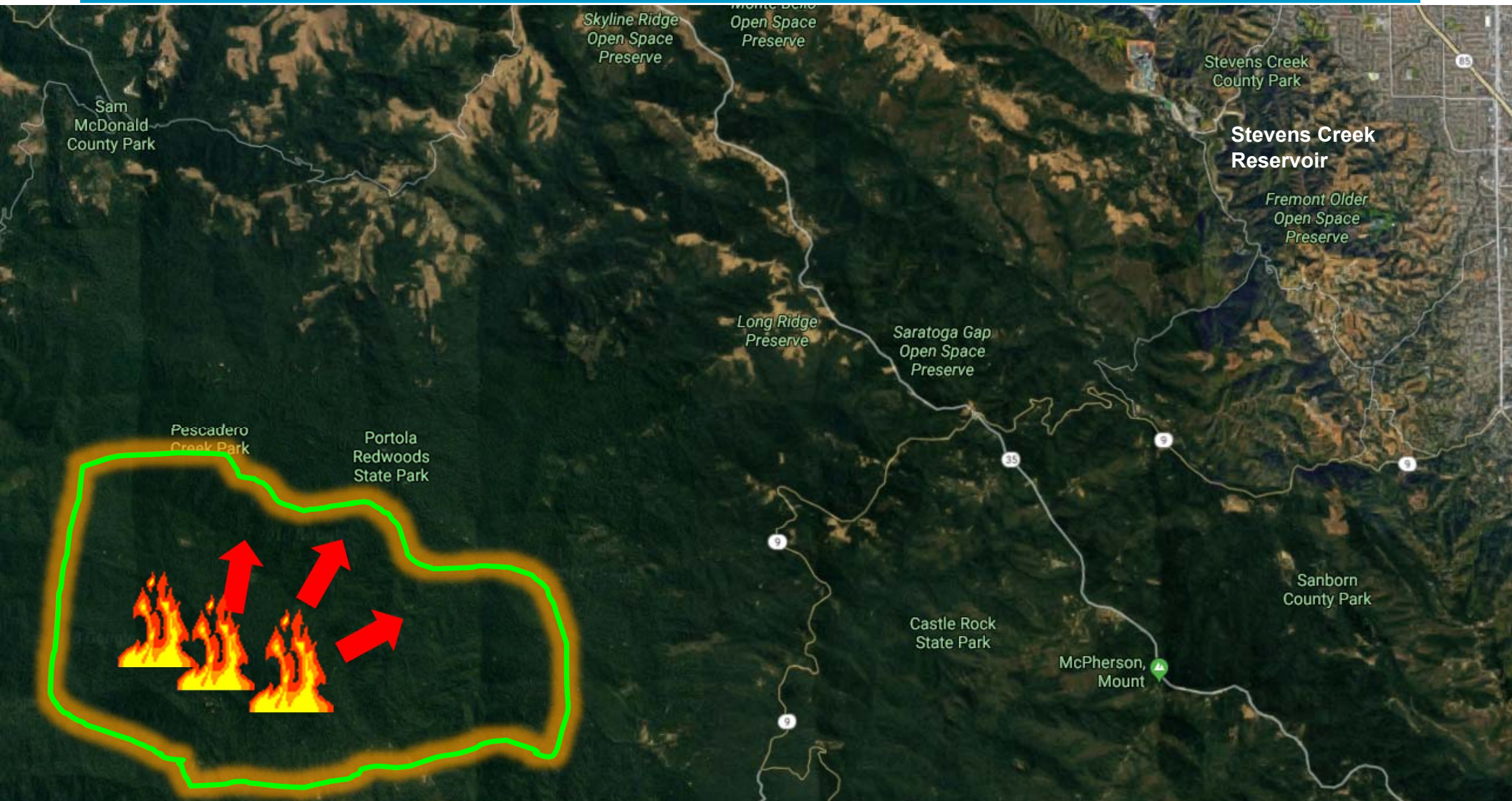
Thursday
Fire pushes toward Skyline Blvd (Rt 35)
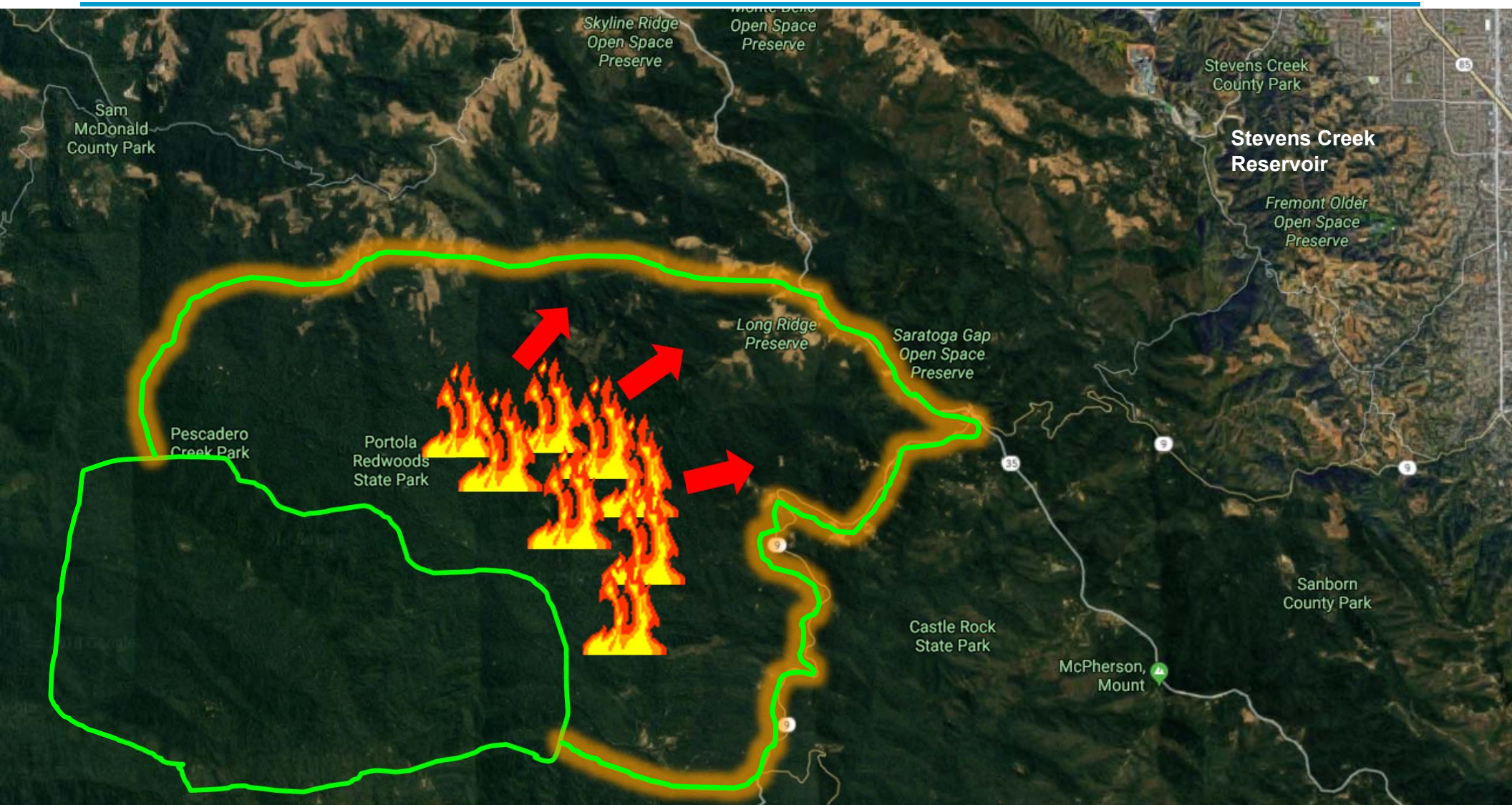
Cupertino ARES/RACES

3 May 2018

Wildland Fire Communications Drill Prep

Friday
Fire slowed last night but continued toward Skyline Blvd (Rt 35)

Saturday 06:00
Forecast: southwest winds will pick up and cause the fire to jump Rt 35

3 May 2018

Wildland Fire Communications Drill Prep

Cupertino ARES/RACES

Weather Conditions
Wildland Fire Scenario

1. Weather conditions are clear; winds are out of the Southwest.

Who are the players?
Wildland Fire Scenario

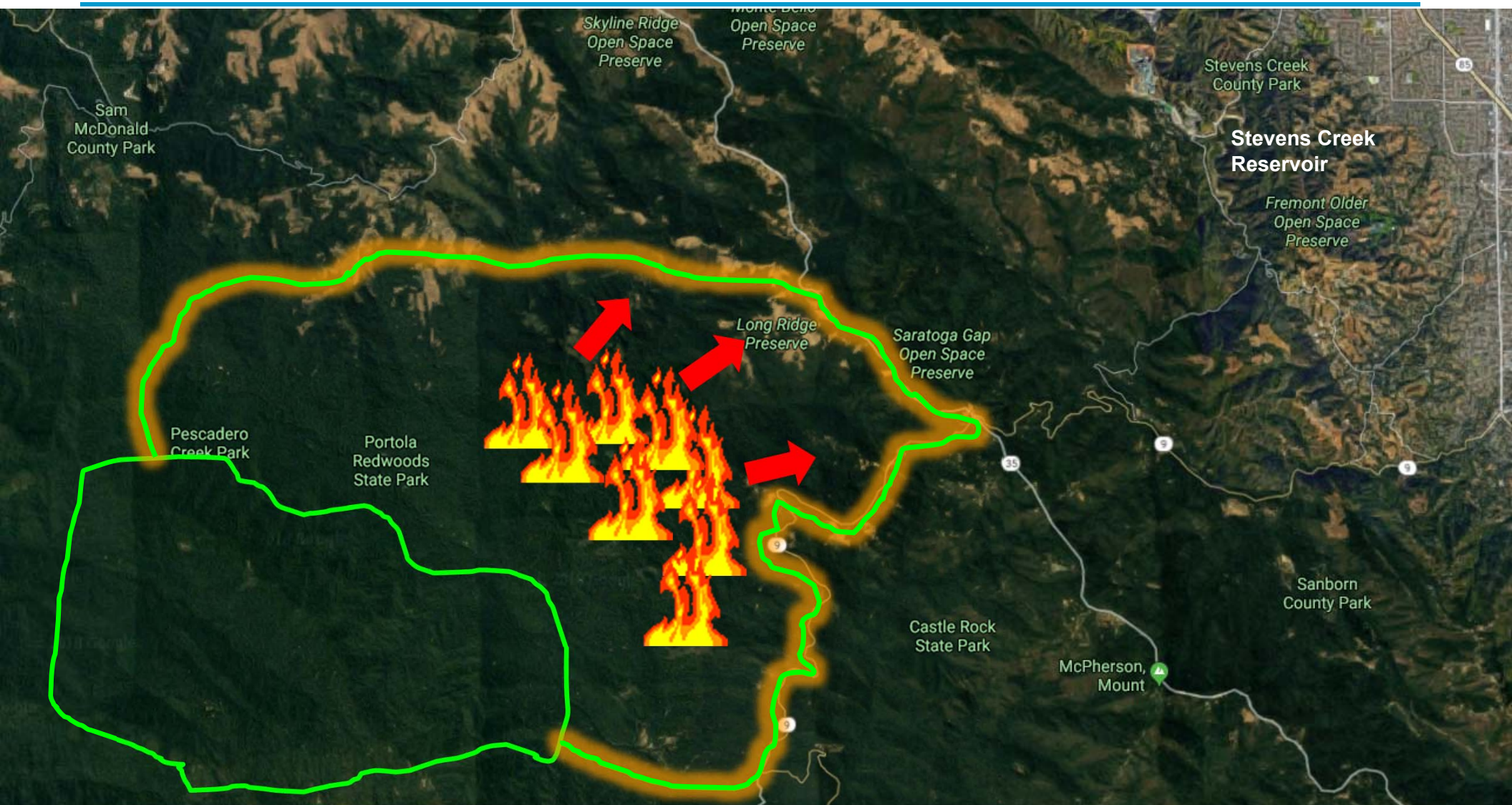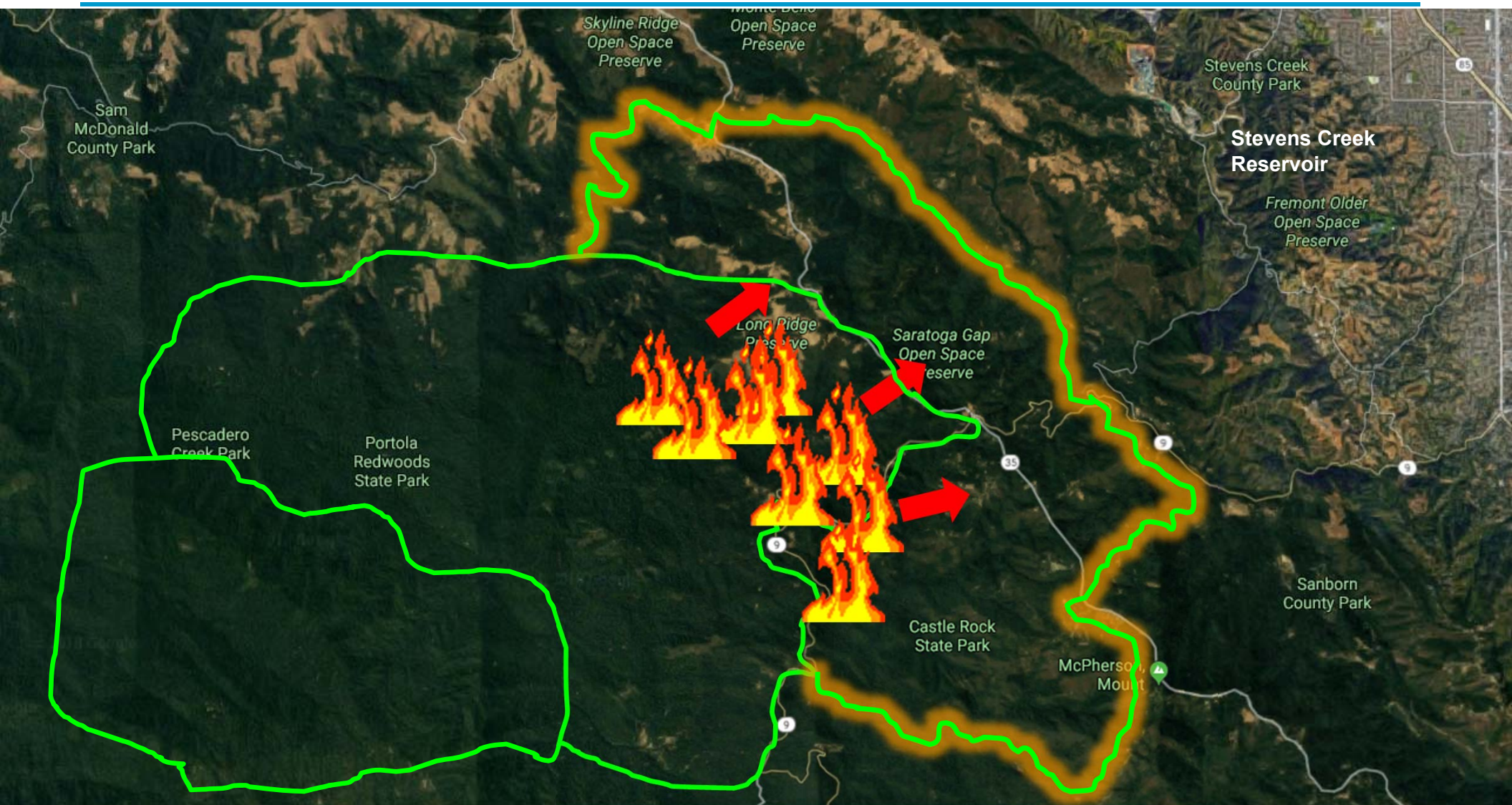| CAL FIRE	• Responds to fires on public lands, the water shed, and privately-owned wildlands
County Fire	• Mutual Aid to CAL FIRE • Responds to fires within their jurisdiction • Responds to medical emergencies
County Sheriff	• Maintains law and order • Handles traffic control, road closures, evacuations
Public Health	• Monitors air quality
Cupertino EOC	• Staffs the EOC, monitors the situation • Provides community information • Makes decisions that serve the best interest of its residents • Supports the fire suppression effort with material, logistical support, and resources as necessary
Citizen Corp	• Provides CERT, medical, and communications resources as needed to support the City and its served agencies

What does the City need?
Wildland Fire Scenario

What they need	What it includes	How do they get it
Understand the situation outside the city	• Threat assessment; fire location, speed and direction • Weather conditions, field conditions, extended weather forecast • Mitigation plans	• SCCFD, CAL FIRE briefings • City Agency Reps at the Fire ICP • National Weather Service • Monitor CAL FIRE, SCCFD radio frequencies • Commercial news outlets
Know the conditions in Cupertino	• Smoke, embers, fire starts • Traffic conditions on city streets • Evacuations, street closures, shelter status, animal evacuations • Community welfare	• County Sheriff & Fire • Observations and reports from CCC in the field • Resident phone-in reports • Social media

CARES Response – what we generally do
Wildland Fire Scenario

1. Preliminary Safety Assessment	CARES collects and reports information about the state of the city immediately after a city-wide emergency or disaster occurred.
2. Field Response	CARES members respond and operate at a field assignment during a declared emergency.
3. Infrastructure Safety Assessment	CARES observes and reports on selected Cupertino critical facilities that are deemed to be important to the City or other Agencies.
4. EOC Support	• Staff the Comm Van / Radio Room • Provide situation roll-up of field reports

CARES Response – what we would do in this case
Wildland Fire Scenario

1. Preliminary Safety Assessment	CARES collects and reports information about the state of the city immediately after a city-wide emergency or disaster occurred.
2. Field Response	CARES members respond and operate at a field assignment during a declared emergency. • Ember watch, patrols • Shadows (Sheriff, City Agency Reps, County Fire, CAL FIRE, City officials, others) • Shelter communications
3. Infrastructure Safety Assessment	CARES observes and reports on selected Cupertino critical facilities that are deemed to be important to the City or other Agencies.
4. EOC Support	• Staff the Comm Van / Radio Room • Provide situation roll-up of field reports

Ember Watch – what is it?

definition: ember watch

1. A field assignment where lookouts are stationed at elevated locations to view an area of interest; the task is to watch for and report possible fires that may arise from air-borne ember drops.

2. This can also be implemented as an Ember Patrol, where the observations are made from a vehicle.

3. Responders are looking for…

    i. first signs of smoke as an early indicator of a fire, and

    ii. signs of air-borne embers.

4. Reports are passed to the City EOC.

Smoke… what to look for
Ember Watch – what is it?

***definition*: smoke, described in terms of color, thickness, and vertical rise.**

1. Color: can indicate the temperature.
   - **Light Smoke**
     - Indicates the fire is just starting, or is burning light or damp fuels.
     - This smoke tends to reflect light, making the smoke look white.
     - As long as the fire gets lots of oxygen, the smoke stays light in color.
   - **Dark or Black Smoke**
     - Indicates a hotter fire.
     - The fire does not get enough oxygen, thereby produces smoke that contains a lot of unburned particles that absorb light.
     - A column of smoke, especially dark smoke, indicates a high potential for the fire to grow.

2. Thickness: Light, Medium, Heavy

3. Vertical Rise: in columns, drifting, blowing, leaning

Smoke… what to look for

Ember Watch – what is it?

Grass fire on I-10

Smoke… what to look for
Ember Watch – what is it?

Brush Fire

Embers… what to look for
Ember Watch – what is it?

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definition: Ember

1. A glowing, hot coal made of greatly heated wood, coal, or other carbon-based material that remains after, or sometimes precedes, a fire.

2. Blowing embers are tough to detect during the day, and may be more visible against a dark sky.

Santana Row Fire Facts, 2002
Ember Watch – what is it?

1. The Santana Row fire first was reported at 3:36 p.m., Aug. 19, 2002.

2. The fire went to 11 alarms and caused more than $100 million in damage.

3. It took a combined effort of 221 firefighters and 65 pieces of apparatus to put it out.

4. Crate & Barrel already opened, was upwind of the blaze, and was spared. Other shops on the verge of completion were consumed by the flames.

5. 9-1-1 calls were received reporting roof fires approximately 1/2 to 1 mile south of the fire.

6. Flying embers, _some as large as two-by-fours_, continued to ignite buildings in the area, including the Moorpark Garden Apartments and several townhouses at the Moorpark Village complex; more than 30 apartments and townhouses in the Moorpark neighborhood across I-280 were impacted, causing $2.5 million in damage.

7. It was ***the largest*** structure fire in San Jose's history.

Tubbs Fire, October 8, 2017

Ember Watch – what is it?

9:43PM, 10/8

10:30 pm

10:41 pm: First Nixle SMS and email alerts go out.

12 am: Fire progressed 12 Mi in 3 hours.

1 am: Fire reached city limits.

1:30 am: started neighborhood evacuations.

2 am: Fire crosses Hwy 101.

4 am: Peak winds recorded at 60 MPH

11 pm

12am

1 am

2 am

3 am

Tubbs Fire, October 8, 2017

A look at the details

- Dates: Oct 8th to Oct 31st

- Burned: 36,800 acres

- Destroyed: 5,643 structures, including 2,900 homes

- Fatalities: 43

- Cost: $1.2 billion

- Cause: Under investigation (Sonoma County emergency dispatchers sent fire crews to at least 10 reports of downed power lines and exploding transformers, caused by high winds as the fire began)

Takeaway's… we will have problems if we have

- Winds, and
- fuel load, and
- Low moisture content

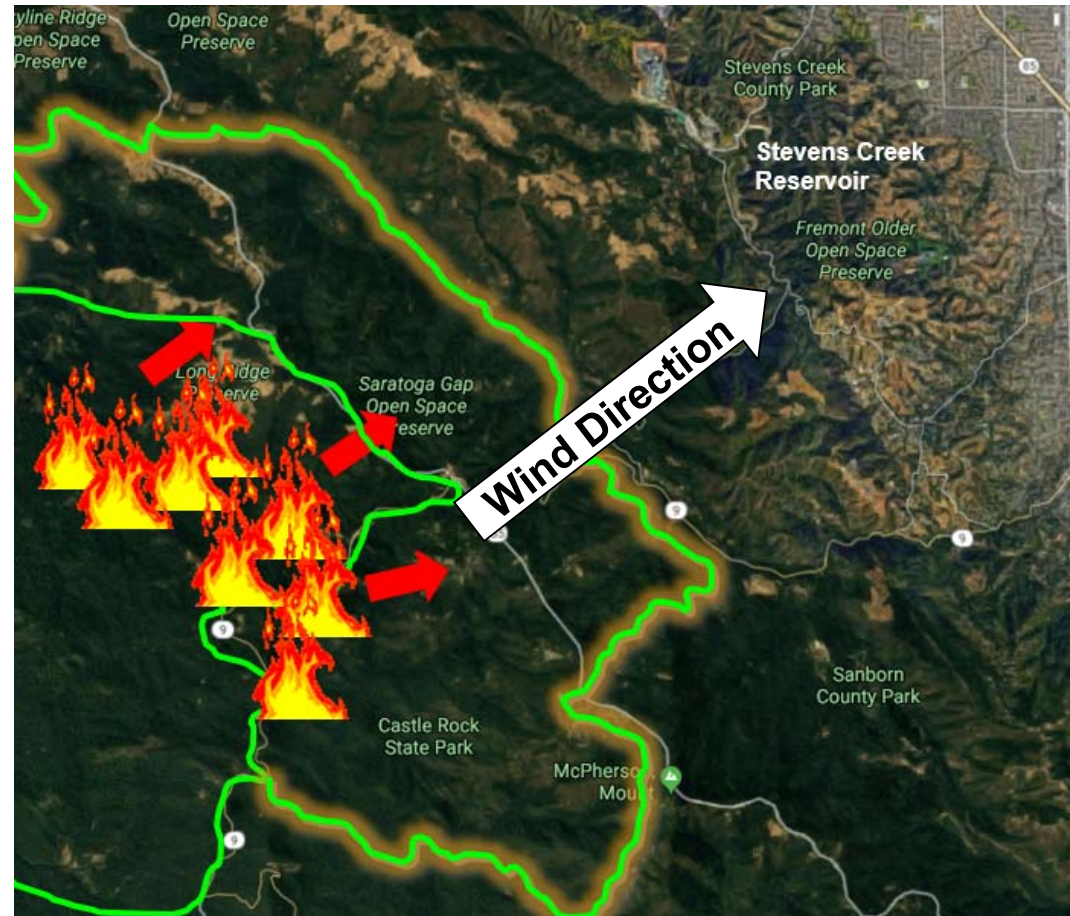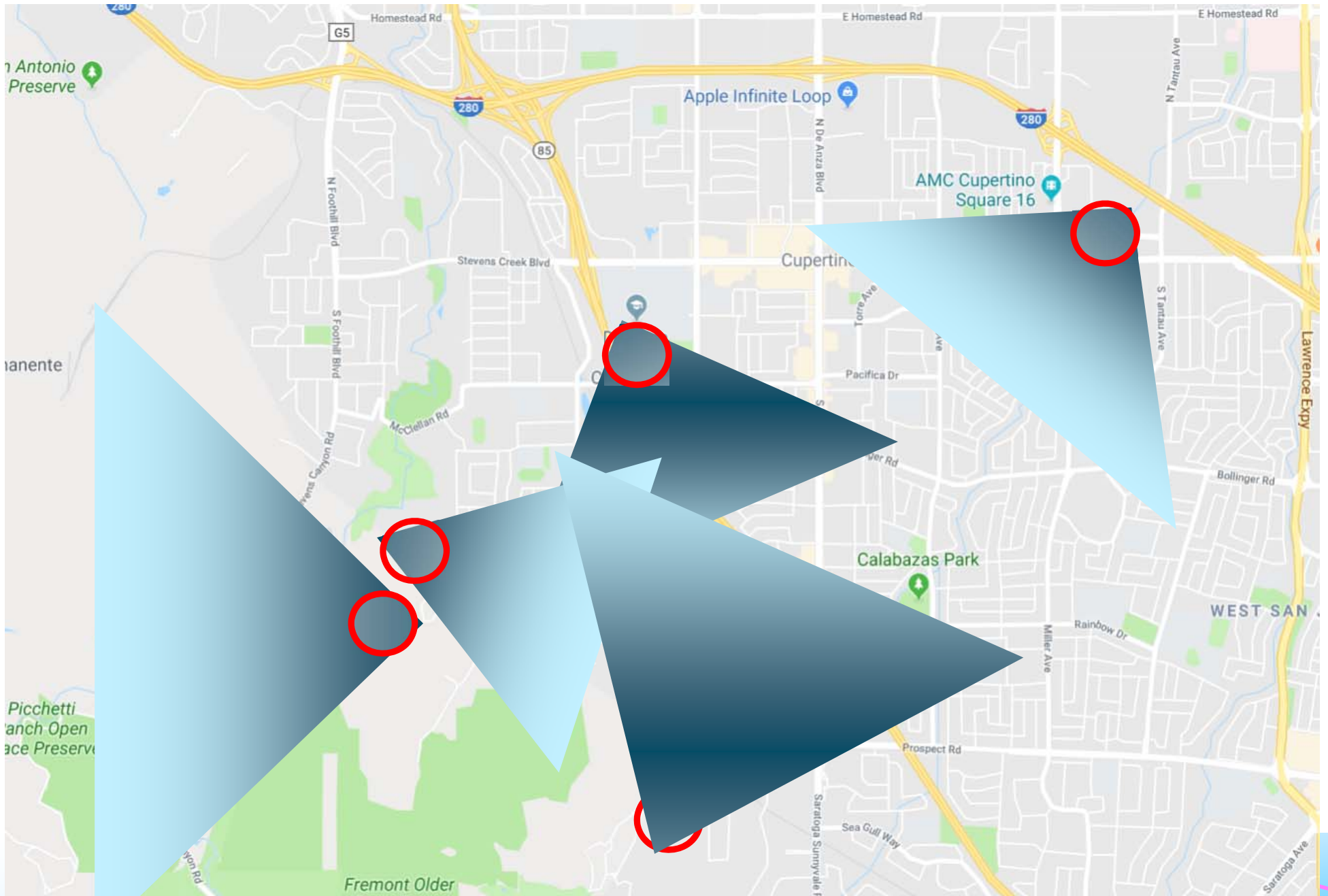# Embers… what to look for
Ember Watch – what is it?

With the right wind conditions (that we will have for the drill), and the fire closing in on the City, there could be some hot embers dropping on the City and igniting fires.

Ember watch assignment

Ember watch assignment

228.5°

Ember watch assignment

228.5°

131°

352°
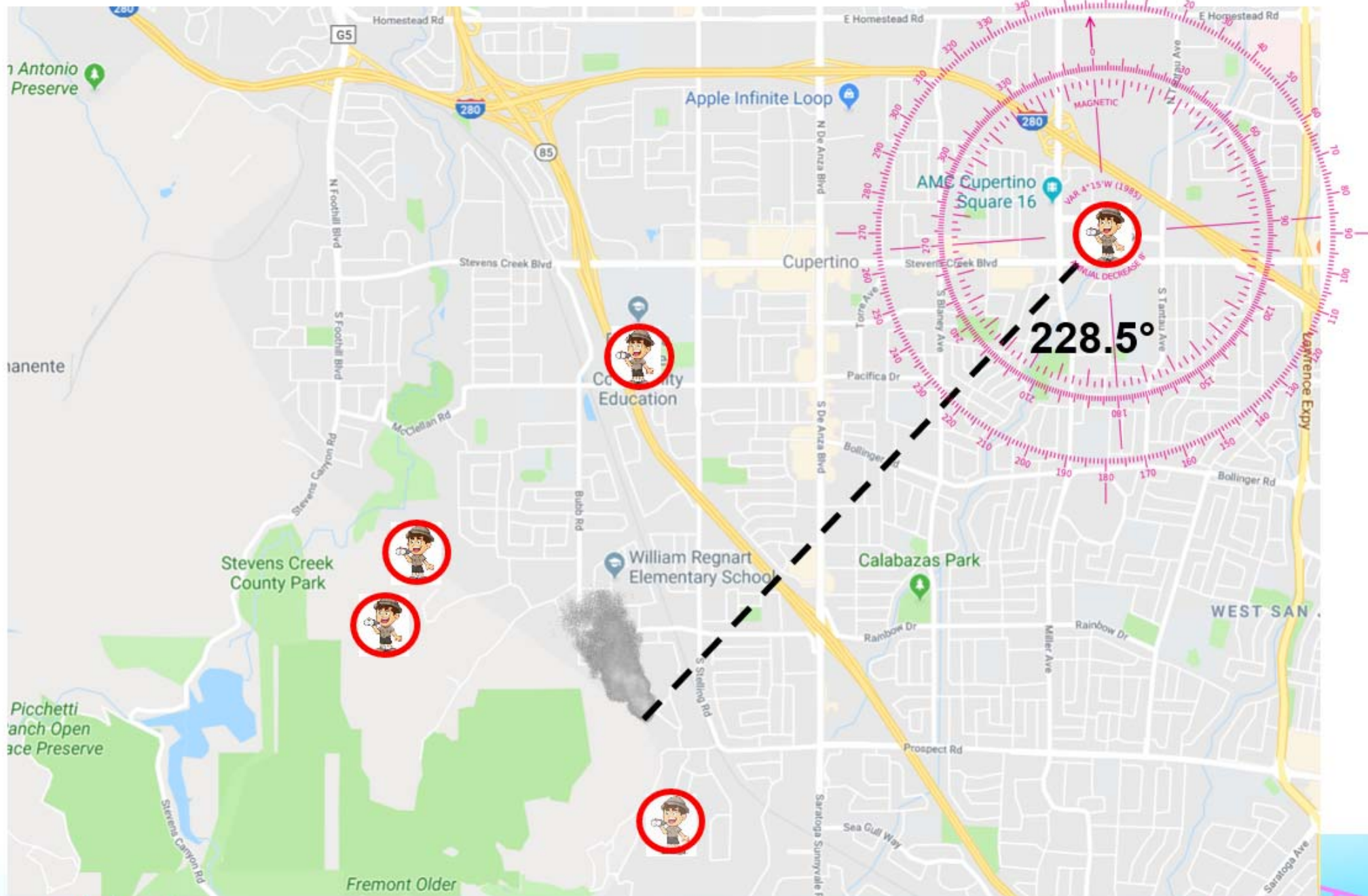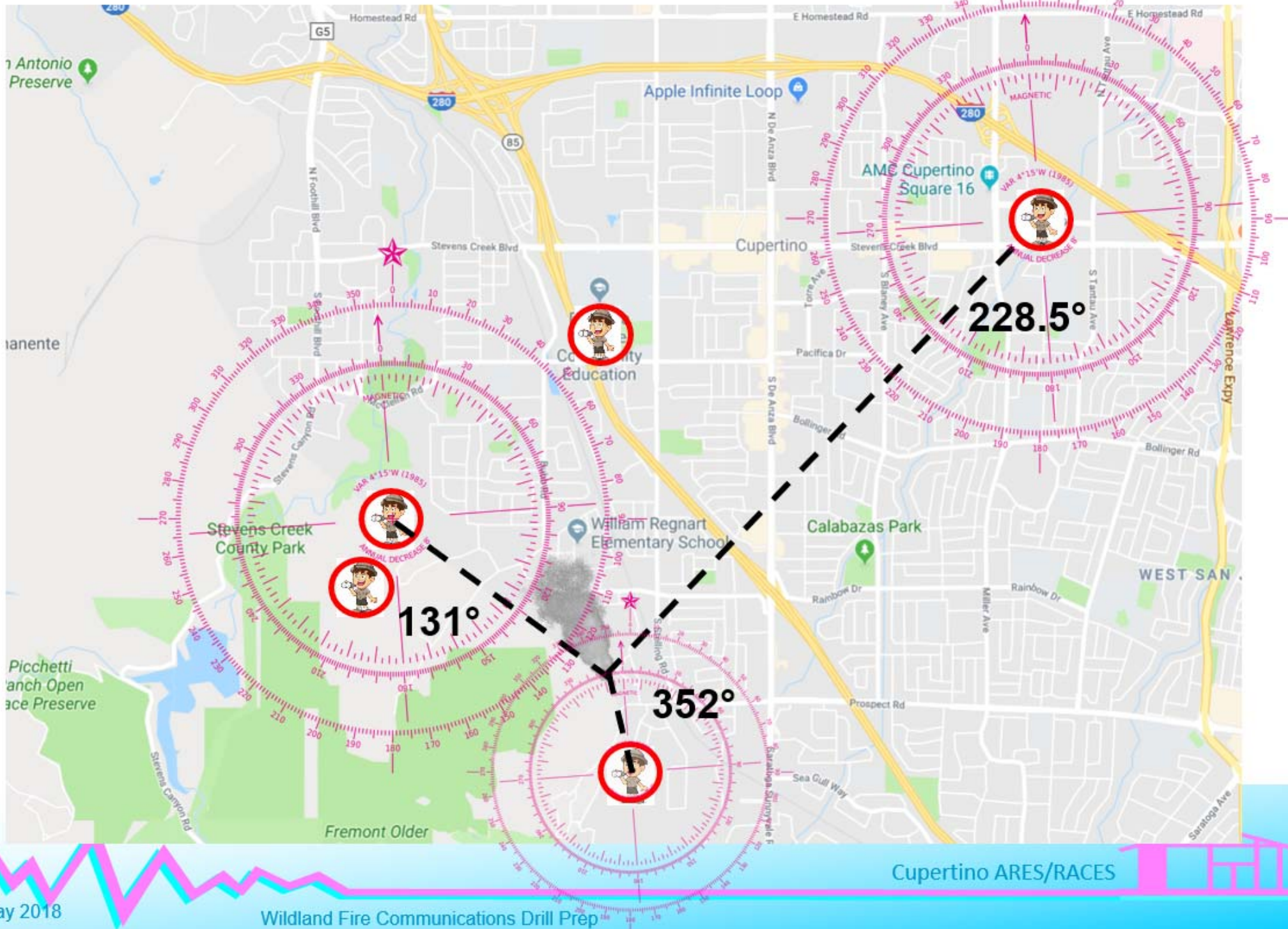
Making a Smoke Report
Collecting your observations

Getting ready to make a report…

1. Your location (Tactical Call)

2. Bearing to the smoke (in degrees)

3. Size of the smoke (Small, Medium, Large)

4. Color of the smoke (white, gray, black, yellow, other)

5. Other optional information to pass if you can tell…

    a) Direction the smoke is blowing

    b) If you see flames

    c) If it is a structure or vegetation fire

    d) If you can approximate the distance from your location

Making a Smoke Report
Recording your observations

Getting ready to make a report…

SMOKE REPORT

Message Number: 31		Location (Tactical Call Sign, usually): *Main Street*
Bearing: **228.5** degrees	Is it a column?: (circle one) yes (no)	Size: (circle one) small (medium) large
Color: (circle one) white (gray) black yellow _____		Is it building?: (circle one) (yes) no
Other: (optional) *Drifting west*		

(Circle one) (Sent) Received	Date and Time: *5/12/18, 10:45*	Name and FCC Call Sign: *Mike KJ6ABC*

Message Handling

What it sounds like - *Sending a Smoke Report*

KJ6ABC: "Net Control, this is Main Street with a Smoke Report for the EOC"

NCS: *Main Street acknowledged. EOC, are you ready to copy a Smoke Report?*

EOC: "EOC is ready"

NCS: *Main Street, your message number is 31. Send your traffic to the EOC.*

KJ6ABC: "EOC, This is <u>Main Street</u> with a <u>Smoke Report</u>, message #<u>31</u>. Break"

EOC: *"OK, Continue"*

KJ6ABC: "Bearing is figures <u>2 2 8 decimal 5</u>. Column is <u>NO</u>. Size is <u>Medium</u>. Break"

EOC: *"OK, Continue"*

KJ6ABC: "Color is <u>Gray</u>. Building is <u>YES</u>. Break"

EOC: *"OK, Continue"*

KJ6ABC: "Other is <u>Drifting west</u>. End of Message. This is KJ6ABC"

EOC: *"Acknowledged. This is EOC, K6FJC back to net."*

NCS: *This is KK6FPI, Net Control for the Cupertino Emergency Net. Other stations with any traffic, please identify now.*

Message Handling
Three types of messages

1. Third party traffic

- Passed on behalf of a 3rd party; an official, traceable message

- *However*, if it is not clear to you, it may not be clear to the EOC. It's Ok to coach the originator and suggest clarity. But, it ultimately must be the originator's message.

2. Information / Observations / Reports

- Self-originated messages

- These messages may not be written and a written response may not be required. In this case, you control what the message text will be.
When in doubt, write it down anyway.

3. Administrative traffic

- Can be a question to the NCO, Shift Supervisor, or other station, such as requesting a relief, inquiry on meals, requests for a station to meet you on a TAC-3, etc.

Message Handling
Three types of messages

2. Information / Observations / Reports

- Self-originated messages

Examples:

Net Control, this is KN6PE with a **PSA Report**

Net Control, this is Team 2 with an **ISA Report**

Net Control, this is Main Street with a **Smoke Report**

Net Control, this is DeAnza ARK with **Urgent Traffic** for the **EOC**

Net Control, this is Hyde ARK with **Routine Traffic** for the **DOC**

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Message Handling

Three types of messages

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1. *Third party traffic*

- Passed on behalf of a 3rd party; an official, traceable message

Example:

Net Control, Regnart ARK with a **Routine** Message for **Monta Vista ARK**

Net Control, this is Sheriff Shadow with **Urgent** Traffic for the **Cupertino PIO**

1. Incident Name (Optional):		Priority (E, U, R):	Message No:
2. To (Name and Position): *Cupertino PIO*			
3. From (Name and Position): *Sheriff Liaison*			
4. Subject: *Evacuation Order*		5. Date: *5/12/18*	6. Time: *10:15*
7. Message: *Request telephone notification to all residents in the vicinity of Stevens Canyon that they must evacuate. Only proceed north on Stevens Canyon Road to exit.*			
8. Approved by: Name *Mark Richie* Signature: *M Richie* Position/Title: *Dep Sheriff*			
9. Reply:			

ACES

Message Handling
Three types of messages

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Message Handling
Three types of messages

3. Administrative traffic

- Can be a question to the NCO, Shift Supervisor, or other station.

Examples:

Net Control, Main Street; What frequency is the Resource Net on?

Net Control, Base Camp; What time is my relief showing up?

Net Control, Lindy Lane; I need to step away from the radio. I will let you know when I am back.

Net Control, DeAnza Parking; I don't have $3 for parking. Returning to the EOC.

Net Control, Regnart ARK; permission to go direct to Monta Vista ARK

Comm Plan

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name: **Butano Fire, CUP-18-35T**	2. Date/Time Prepared: Date: **5/9/2018, 16:00** Time:	3. Operational Period: Date From: **5/12, 08:00** Time From:	Date To: **12:00** Time To:

4. Basic Radio Channel Use:

| Zone Grp	Ch #	Function	Channel Name Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks
	1	Resource Net	VTAC1	CARES	147.570W	none	147.570W	151.4	A	SPLX , T
	2	Message Net	VTAC2	CARES	146.460W	none	146.460W	151.4	A	SPLX , T, **XBAND Regnart Ridge**
	3	Command	UTAC3	CARES	440.150W	100.0	445.150W	100.0	A	RPTR, W6TDM, el 130'
	4	Alt Tactical	UTAC4	CARES	441.000W	151.4	441.000W	151.4	A	SPLX , CT/TSQL, **XBAND Regnart Ridge**
	5	Alt Tactical	VTAC5	CARES	147.585W	none	147.585W	151.4	A	SPLX , T, s/w Sunnyvale
	6	Resource Net	VTAC6	CARES	147.570W	151.4	147.570W	151.4	A	SPLX , CT/TSQL
	7	Message Net	VTAC7	CARES	146.460W	151.4	146.460W	151.4	A	SPLX , CT/TSQL
	8	Command	UTAC8	CARES	440.150W	100.0	440.150W	100.0	A	SPLX , CT/TSQL used on repeater failure only
	9	Unassigned	Unassigned							
	10	Alt Tactical	VTAC10	CARES	147.585W	151.4	147.585W	151.4	A	SPLX, LP , CT/TSQL, s/w Sunnyvale

5. Special Instructions:

1. Standing CARES Radio Communications Plan.
2. Abbreviations:
   - CT/TSQL – CTCSS or Tone Squelch (radio-specific)
   - LP – Low Power
   - RPTR – Repeater
   - SPLX – Simplex
   - T – TX Tone only

6. Prepared By:

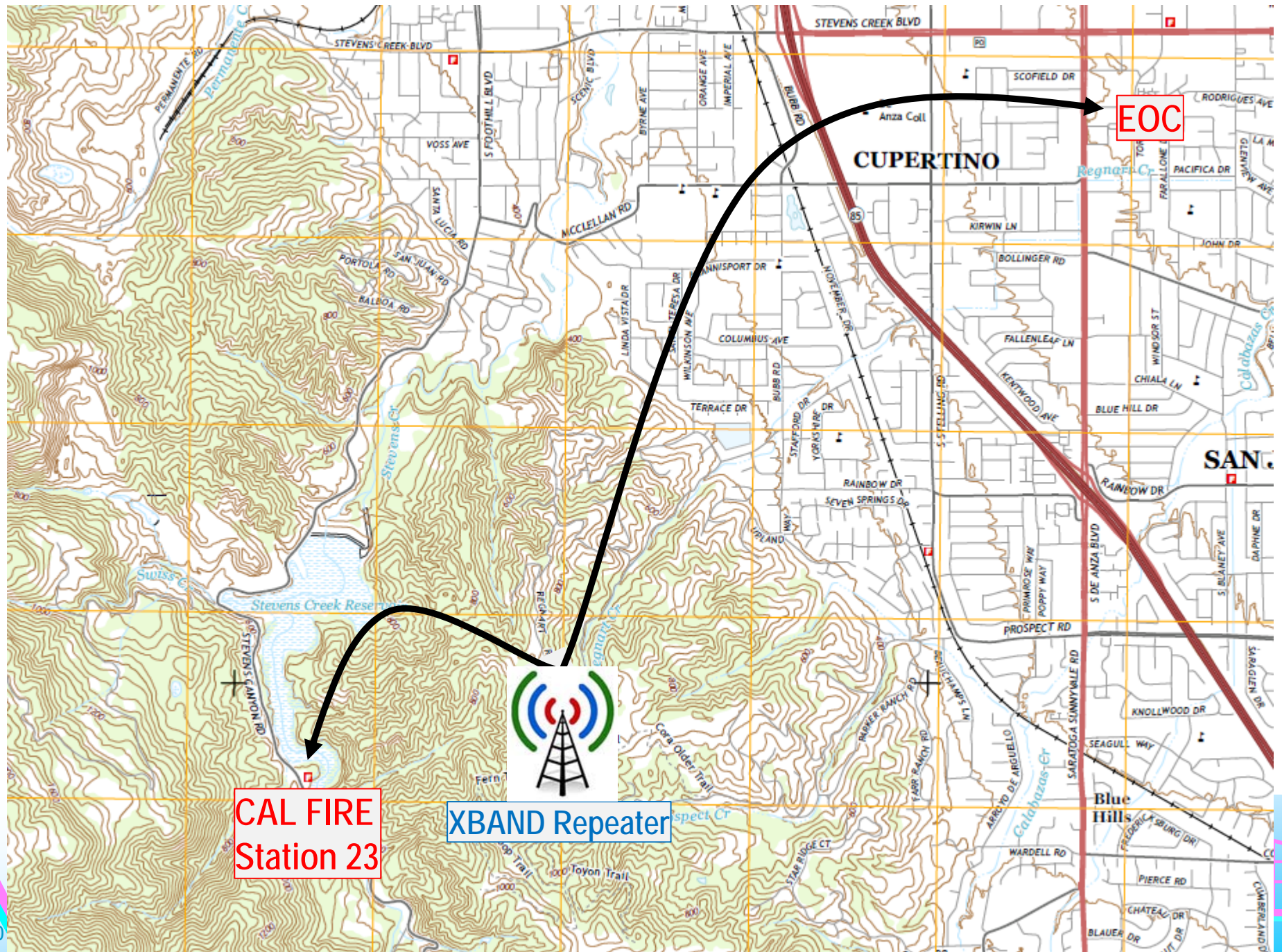| ICS 205	AIP Page

What about the dead spots?
Communications Plan

What about the dead spots?
Communications Plan

3 May 20
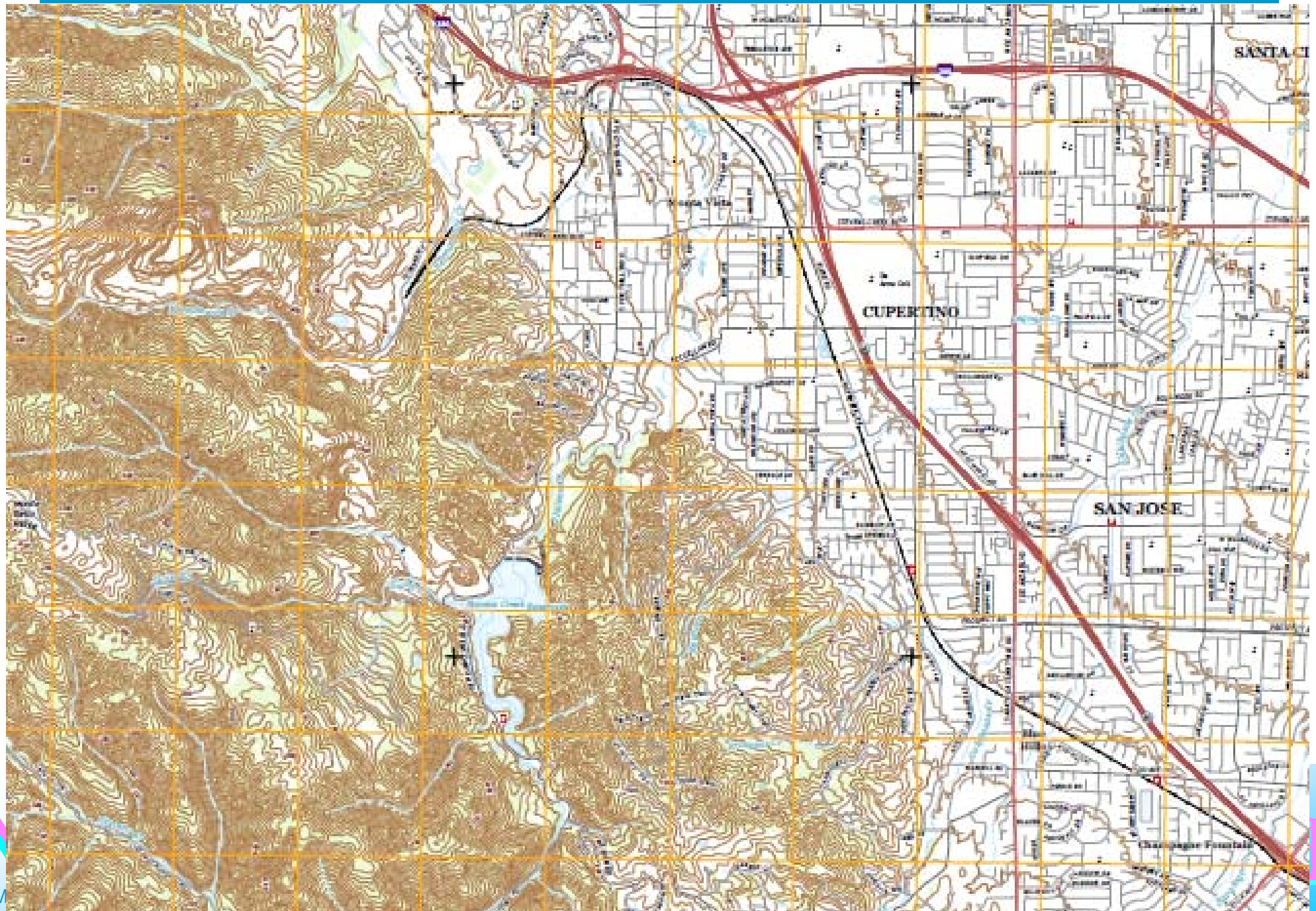
Deploying the Cross-Band Repeater
Communications Plan

The Kit

1. Battery, 12VDC, 35Ah

2. Radio: Kenwood TM-V71

    1. 2M Frequency TAC 2, 146.460, T=151.4

    2. 440 Frequency: TAC 4, 441.000 CT=151.4

    3. Power: 10W each channel

    4. Station ID: K6KP

3. Antenna: 2m/440 dual band, on a portable mast

The Plan

1. Set up on Regnart Heights (SJW-T11)

**35Ah**   **XBAND**

Timeline
Wildland Fire Scenario

Friday

- 9:00am – The City Manager receives a briefing from County Fire on the situation.

- 10:00am – The City EOC is activated with minimal staffing primarily to monitor the situation.

- Santa Clara County OES activates; requests the Red Cross to open a shelter in the event evacuations are required.

- The Cupertino PIO puts messages on Radio Cupertino for residents to shelter in place in smoky areas, or evacuate to the shelter at Quinlan Center.

- 3:00pm – the City Manager issues a request for CARES and CERT to activate Saturday morning.

- 4:00pm – An AlertSCC message is sent to all CARES members:
  i. CARES is activated Saturday morning under "CUP-18-35T"
  ii. Available responders are to report to the EOC Saturday morning at 8:00am for a briefing and assignments

Saturday 06:00
Southwest winds will pick up and cause the fire to jump Rt 35
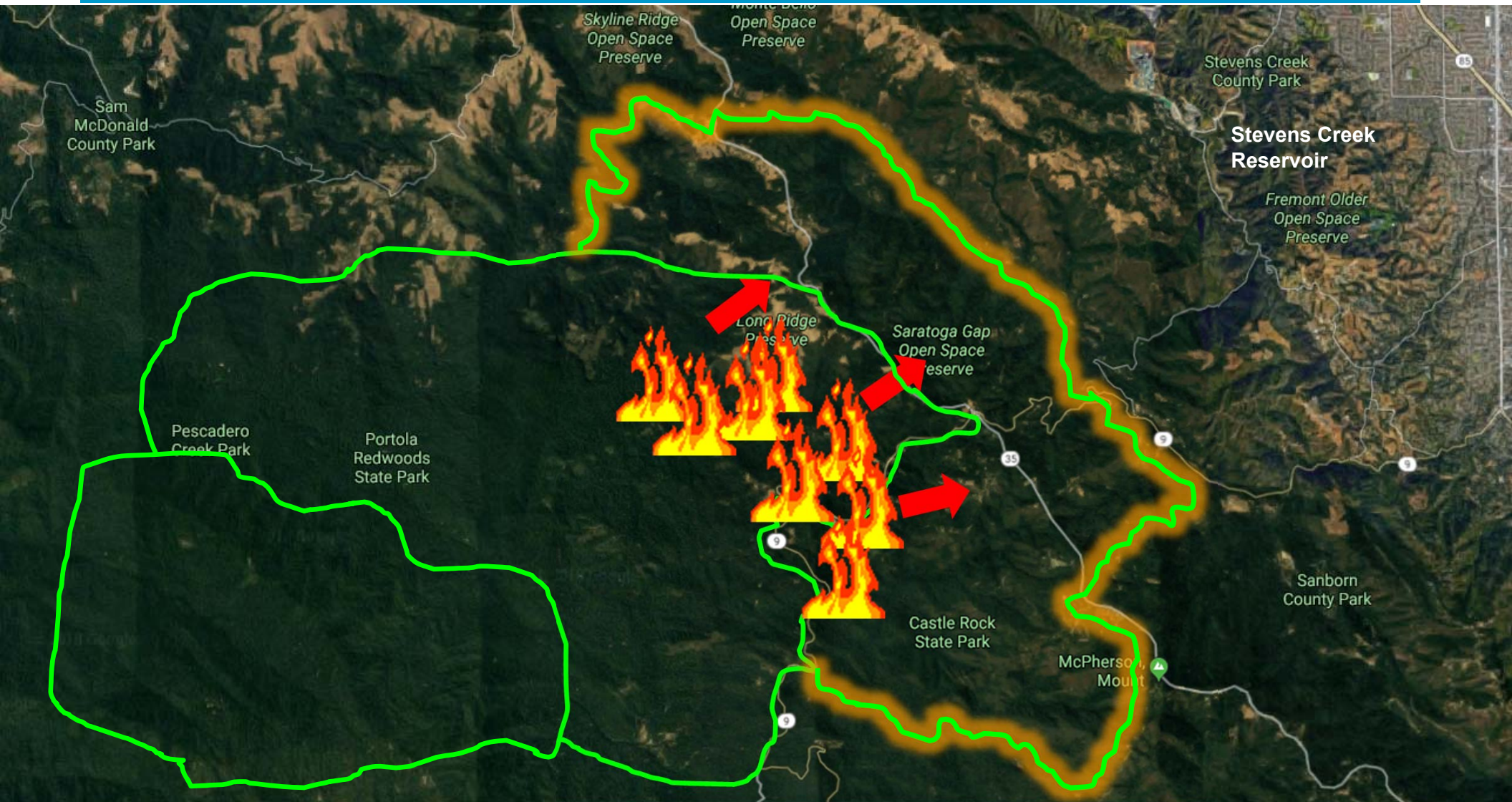
Timeline
Wildland Fire Scenario

Saturday

- 0730 Start check-ins at EOC

- 0800 Safety Briefing, make Field Assignments
    1. City Ember Watch
    2. Smoke Look-out and Cross-band Control Ops
    3. Checkpoint assignment co-located with CAL FIRE
    4. County Fire Shadow
    5. Sheriff Command Post, Shadow
    6. Quinlan Center Shelter
    7. CAL FIRE Northern Staging as Cupertino Agency Rep Shadow
    8. Comm 469
    9. Others?

- 0900 All field responders at their posts.

- 1130 Secure field operations, travel back to the EOC for debrief.

- 1200 Hold the debrief.

- 1300 End of the exercise.

Simulating the event
Wildland Fire Scenario

1. All field responders will receive a scenario sheet for your specific assignment.

2. It will include the current conditions, what you see, what you hear, and when it occurs.

3. At the assigned time, read that item, and take the necessary action.

The following is provided as general information for your consideration during this drill.

Location	Monta Vista Ark, Stevens Creek Blvd and South Foothill Blvd
General Situation	• Power has been out throughout the city since the 7.5 earthquake at 6:00am. No estimate as to when the power will be restored. • The wired and cell phone network is overloaded – no dial tone the last time you checked. • You filled a water bottle when you left your house and observed that the water pressure was low. • KCBS is on the air, one of the few stations still broadcasting. They report that there was heavy damage from Napa to Carmel. No word of a Tsunami – that is on everyone's mind… but it is still early☺.
Weather:	Weather is current conditions at the time of the drill.

The following are the things you observe on your arrival at your assignment. These are things you see and interactions that you have with the people around you.

INSTRUCTIONS: Write the time you arrived in the blanks below, and pass the message at the appropriate time.

| Local Situation on your arrival… this is what you observe. | • As you arrive at the Ark, it is still being set up. There are only a handful of CERT members covering all positions; 2 more walk in right after you. Not all ICS positions have been staffed, and some ICS members are covering multiple positions.
• As you arrived, you feel a good-sized aftershock -- you think this was about 4.5.
• Getting to the Ark was not difficult. Even though the traffic lights were out, there wasn't much traffic on the roads, only the constant wail of sirens.
• Fire Units Engine 7 and Battalion 7 are not there. The station is locked.
• YOUR TACTICAL CALL IS **MONTA VISTA ARK**. |
| _____ + 5 minutes | • You see several PG&E trucks heading West on Stevens Creek in the direction of what looks like smoke rising up from what you think is the PG&E Substation. CREATE a brief informational message and send to the EOC. |

Final thoughts – standard procedures
Wildland Fire Scenario

Net control procedures

1. Resource Net
2. Message Net

Message handling

1. Third Party Traffic
2. Information / Observations / Reports
3. Administrative Traffic

Final thoughts – what to bring
Wildland Fire Scenario

Field Assignments

1. GoKit, Radio, Batteries
2. Compass (iPhone compass is ok)
3. Binoculars

4. ICS 214 – Unit log
5. ICS 309 – Comm Log
6. ICS 213 – Message Forms

7. Sun tan lotion
8. Water, snacks
9. Others?

Thank you

Any Questions?