



IQ FireWatch Solution

California

Lake County ~ Napa County ~ Sonoma County

March 2021



- 20+ years of operation globally.
- 4,800+ telecom structures and sites with continued growth internationally.
- Partner with municipalities to provide zero-cost, sustainable public safety projects while improving wireless services.
- Passive Infrastructure Provider (PIP).

Build-to-Suit Solutions

- Turnkey deployment
- Engineering, design, licenses, permits, construction installation, inspections and maintenance

Co-location

- Allows multiple carriers to deploy enhanced wireless service on one location
- Reduces need for multiple towers/poles

Multi-purpose Structures

- Locations equipped with wireless technology, public safety monitoring and warning technology
- Delivers more functionality with improved aesthetics

California Fires Facts

4.1
mm acres



Wildfires have burned more than 4.1 million acres in the State of California.

10,488
structures



The fires have left these structures destroyed.

31
dead



Confirmed casualties from the fires.

1,447%
burned acres



California wildfires have caused more deaths and destruction so far this year than in all of 2019. Last year, wildfires burned a total of 260,000 acres and killed three people. This year has been an increase of 1,447% of burned acres.

17,000
firefighters



Deployed statewide.

500,000
evacuated



Ordered to evacuate and leave their homes.

Some of the biggest fires in previous years have been caused by sparks from power lines. Pacific Gas and Electric was sued and paid out billions of dollars in settlements.

12,000
Lightning strikes



But this year, fires came from the skies in the form of 12,000 lightning strikes over a 72-hour period. These strikes are unusual in California, where it normally takes a full year to tally up 85,000 or so lightning flashes. Lightning occurs during storms which can ignite dry vegetation: Nationwide, about 15 percent of wildfires start this way.

100°
Temperature



Also, California has been experiencing an intense heat wave. The blazes, coming during a heat wave that has seen temperatures top 100 degrees. Record-breaking temperatures and lack of rain exacerbated conditions.

Fire Stopper

Early Fire Detection Solution



Early Fire Detection technology outperforms conventional early wildfire and forest fire detection method, whether it's CCTV cameras, spectroscopy, or infrared – IQ Fire-Watch is specifically manufactured for early wildfire and forest fire detection.

Fire Stopper can design and deploy an early fire detection system that can monitor your property 24/7

Early Detection - Sensors

What Sensors Do?

Sensors are IQ FireWatch technology, specifically manufactured for early wildfire detection. These sensors actively monitor the landscape 24/7 using highly advanced artificial intelligence.

This system was developed in collaboration with the German space industry and has been operational for nearly twenty years. It is utilized in 11 countries covering nearly 15 million acres.

The sooner a hazard is identified the sooner resources can be deployed to mitigate a threat.

Sensors Capabilities:

- ✓ Optical sensors scientifically designed to detect smoke day or night; outperforms thermal infrared. Sensors instantly detect fire starts from all sources:
 - Accidental or intended human ignitions
 - Lightning strike
 - Powerline related ignitions
- ✓ Provides:
 - Immediate alert notification
 - Images to enable rapid confirmation and proportionate response
- ✓ Significantly reduces contact time: resources can be dispatched with real-time information detailing the extent of the fire and prevailing conditions.
- ✓ Sensors are self powered and designed for installation in high-risk locations, to create region-wide fire detection.
- ✓ Personnel can view interactive maps that detail live fire front, as well as firefighter and asset location/movement to enhance safety and effective resource management.



iq FireWatch

Real Case – Diamond Mountain (Calistoga, Napa)

August 24, 2020

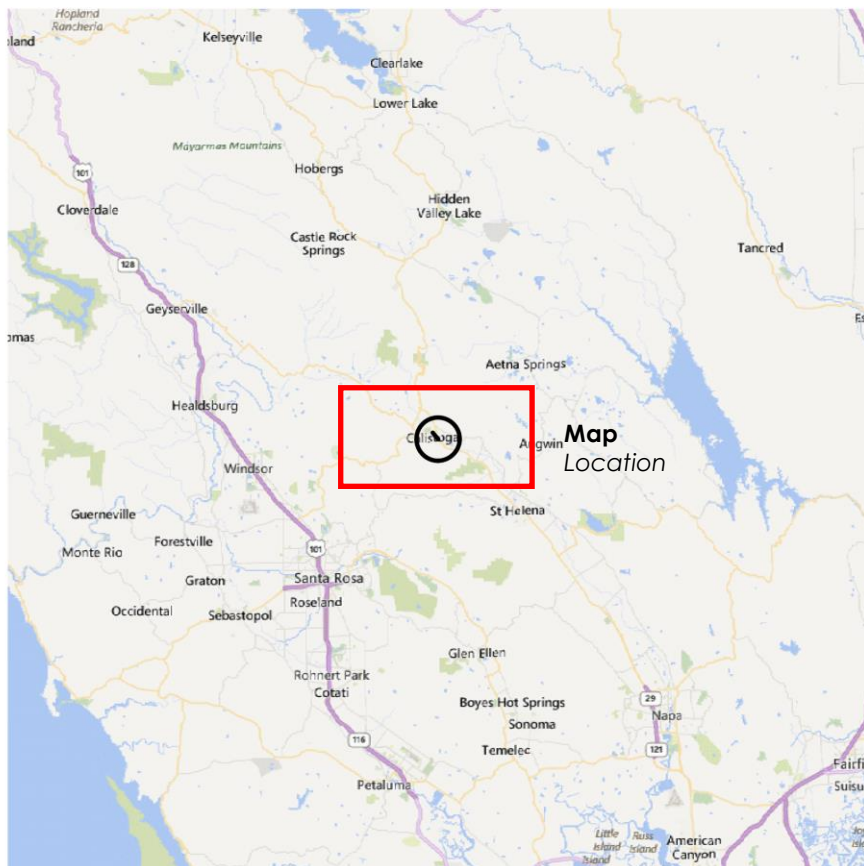
Fire Detection with IQ Firewatch System

On August 24th, there was a fire that started on Diamond Mountain that required fire crews to be dispatched.

We had installed the IQ Firewatch system on Diamond Mountain in Dec. 2019.

While the system was still in "proof of concept" mode and not linked to a monitoring center or dispatch, it demonstrates its abilities to detect fires.

Alert - / Suspicion from 25/08/2020 07:07:36 (print date) page 2



IQ Reports

Calistoga

XxXx
Tel: xx1-932-5535

1329 Lincoln Avenue, Calistoga CA
Fax:

Report

ALERT

Number of pages - 4 - (page 2 - map, page 3 image)

ben@cloverdalecomputer.com

firewatch@illuminationtechnologies.com

Detected at : 24/08/2020 17:42:18

1. Place of fire:

10 S 537215, 4268427 (UTM, WGS84)
122°34.37'W 38°33.81'N (Geo / WGS84)
79536821, 4269049 (GK3 / RD83)

Coordinates
Location

Reference:
Remarks : test

2. Detected by

Tower 1 1) T2 USA-CA Diamond Mountain Road
Bearing 1 138.3 deg
Distance1: 0.652mi (Estimated value in case of no crossbearing)

Tower 2 1) No cross bearing
Bearing 2
Distance2:

3. Other messages

Referred to neighbour office(s) :

Referred to supervisor :

Username: otto

Printed at : 25/08/2020 07:07:36

1) Coordinates (Name/ Westing/ Southing / Graticule)
Tower 0 T1 USA-CA Cover Flat/ 10540233/ 4270881/ (UTM, WGS84)
Tower 1 T2 USA-CA Diamond Mountain Road/ 10536517/ 4269211/ (UTM, WGS84)

Real Case – Diamond Mountain (August 24, 2020)

Fire Detection with our IQ System

IQ Reports

Alert- / Suspicion from 25/08/2020 07:07:36 (print date) page 3



Sensor

Smoke Detection or Hidden Fires

Alert- / Suspicion from 25/08/2020 07:07:36 (print date) page 4



IQ FireWatch

The Game Changer for Modern Wildfire Management

Statistically IQ FireWatch detects
>50% of all wildfires before any
911 call comes in

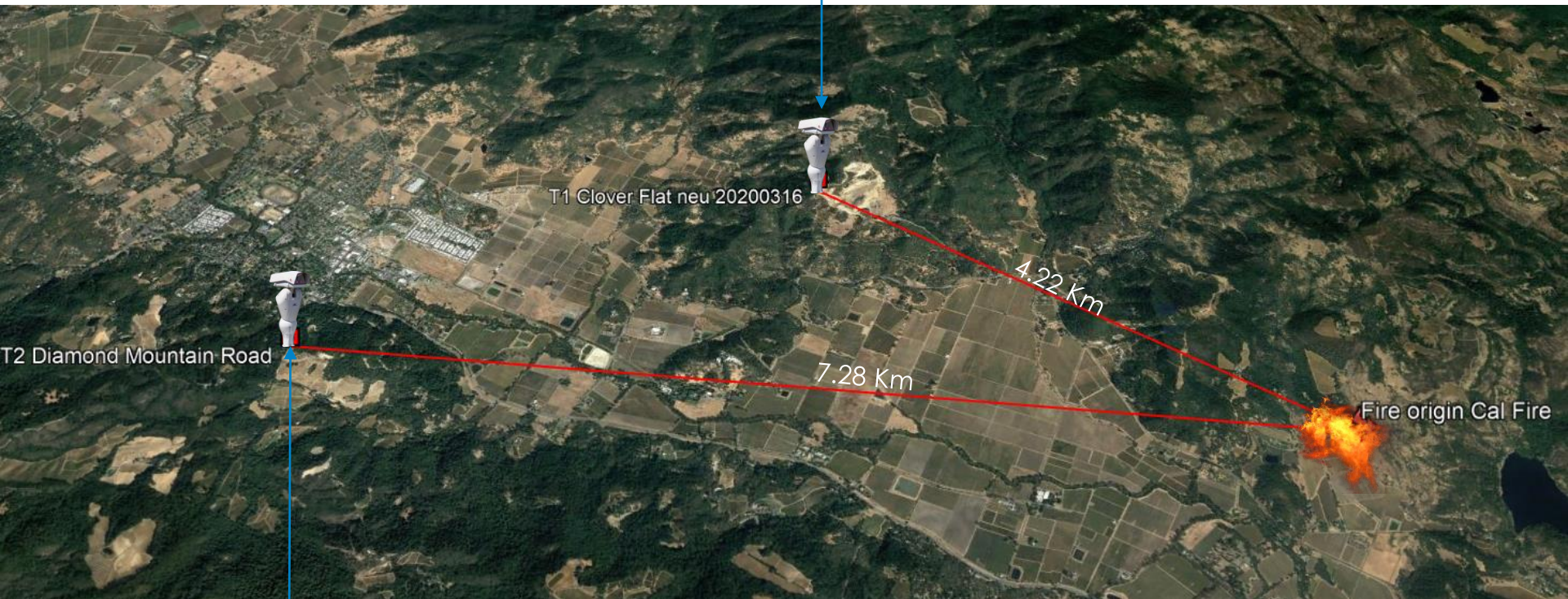
Real Case – Glass Fire (Calistoga, St. Helena Napa)

September 27, 2020

Start time has been changed at the CAL-Fire-Status report from beginning

Last Updated	09/27/20 11:50 PM
Date Started	09/27/20 5:59 AM 09/27/20 3:48 AM
Location Information	North Fork Crystal Springs Rd & Crystal Springs Rd
Lat/Long	[38.56295, -122.49745]
Administrative Unit	CAL FIRE/ Sonoma-Lake Napa Unit
Cause	Under Investigation

T1 at Clover Flat had its verification at **03:39**
09/27/2020 from a distance of 4.22 Km



T2 at Diamond Mountain Road did the first detection at **03:37**
09/27/2020 from a distance of 7.28 Km

Real Case – Glass Fire (Calistoga, St. Helena Napa)

September 27, 2020

Fire Detection with our IQ System

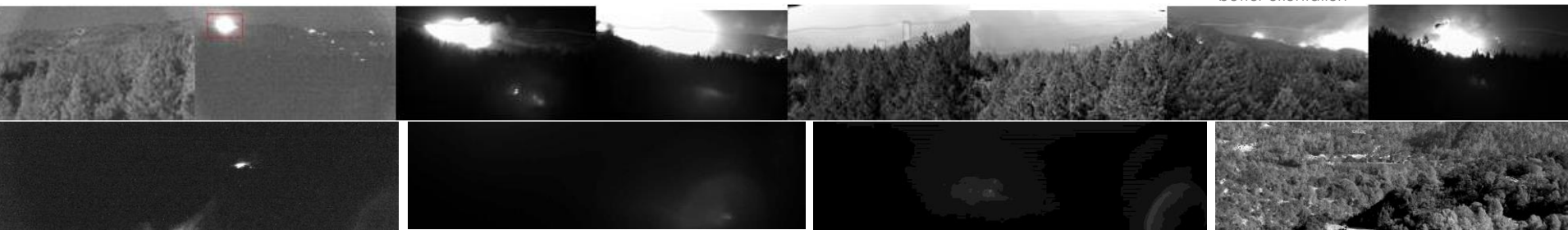
On September 27th at 3:37 AM, our IQ System detected the first activity on the Glass Fire.

These sequence of images caught what it believed to be the ignition time and location on/near Crystal Springs Road.

The bright “glowing” images (seen are smoke and light reflection) *are not actual flames*. It is part of the technology that makes IQ unique and far more advanced and sensitive than static cameras or infrared devices.



Clover Flat T1



3:39 AM

3:51 AM

4:03 AM

First Detection

12 minutes later

12 minutes later

3:37 AM

3:49 AM

4:01 AM

Day Image from the related position for better orientation



Firewatch (Diamond Mountain Road)
09-27-2020 First detection

Diamond Mountain Road T2

Real Case – Glass Fire (Calistoga, St. Helena Napa)

September 27, 2020

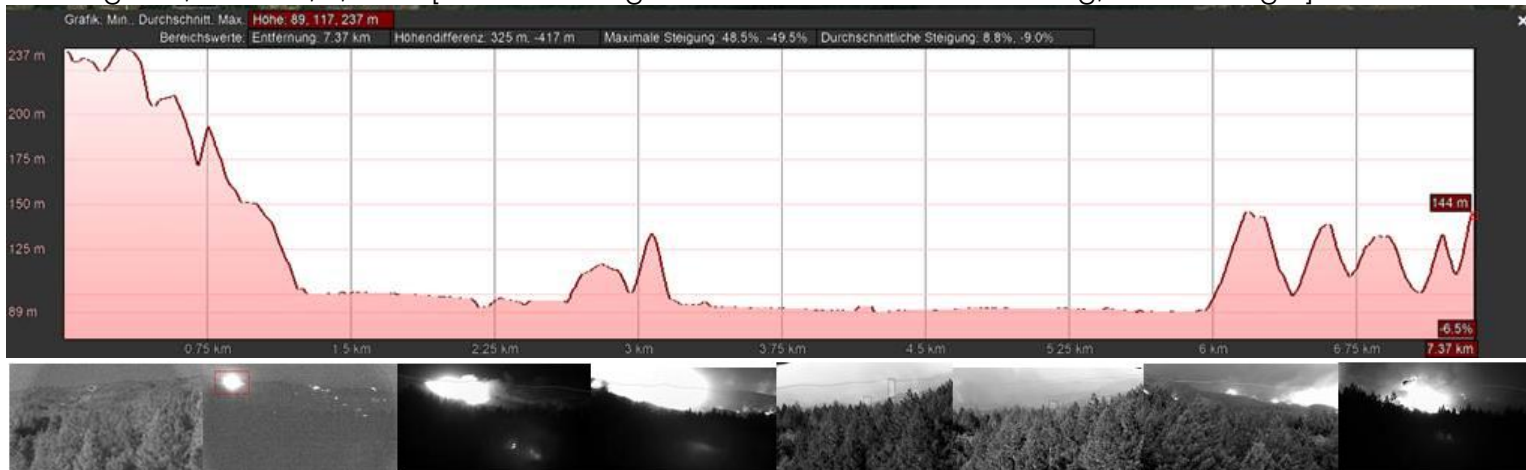
Clover Flat T1

Fire Origin 123,88 Grad , 4,22Km [hidden fire origin due to mountain view blocking, no line of sight]

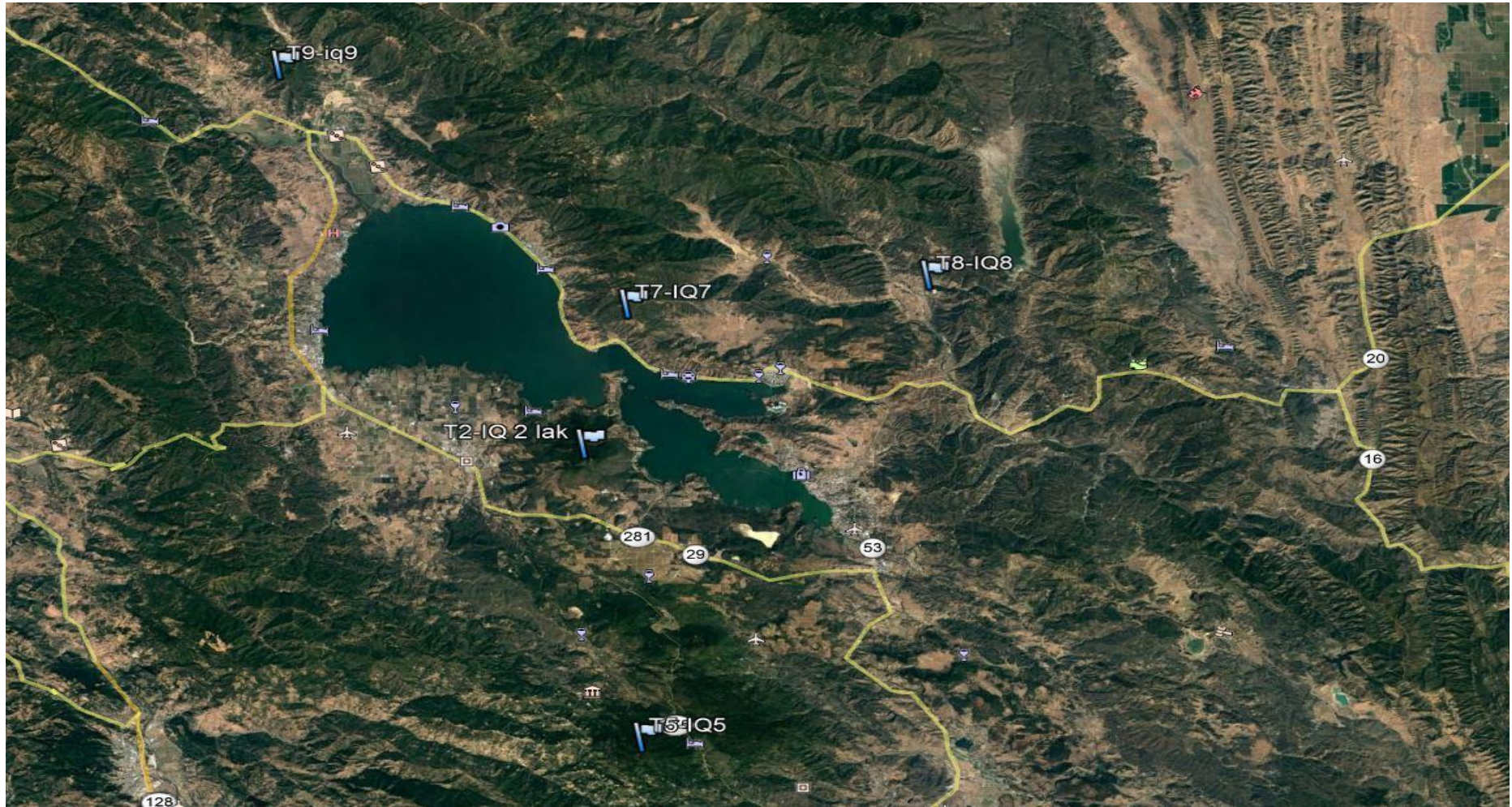


Diamond Mountain Road T2

Fire Origin 95,99 Grad , 7,28Km [hidden fire origin due to mountain view blocking, no line of sight]

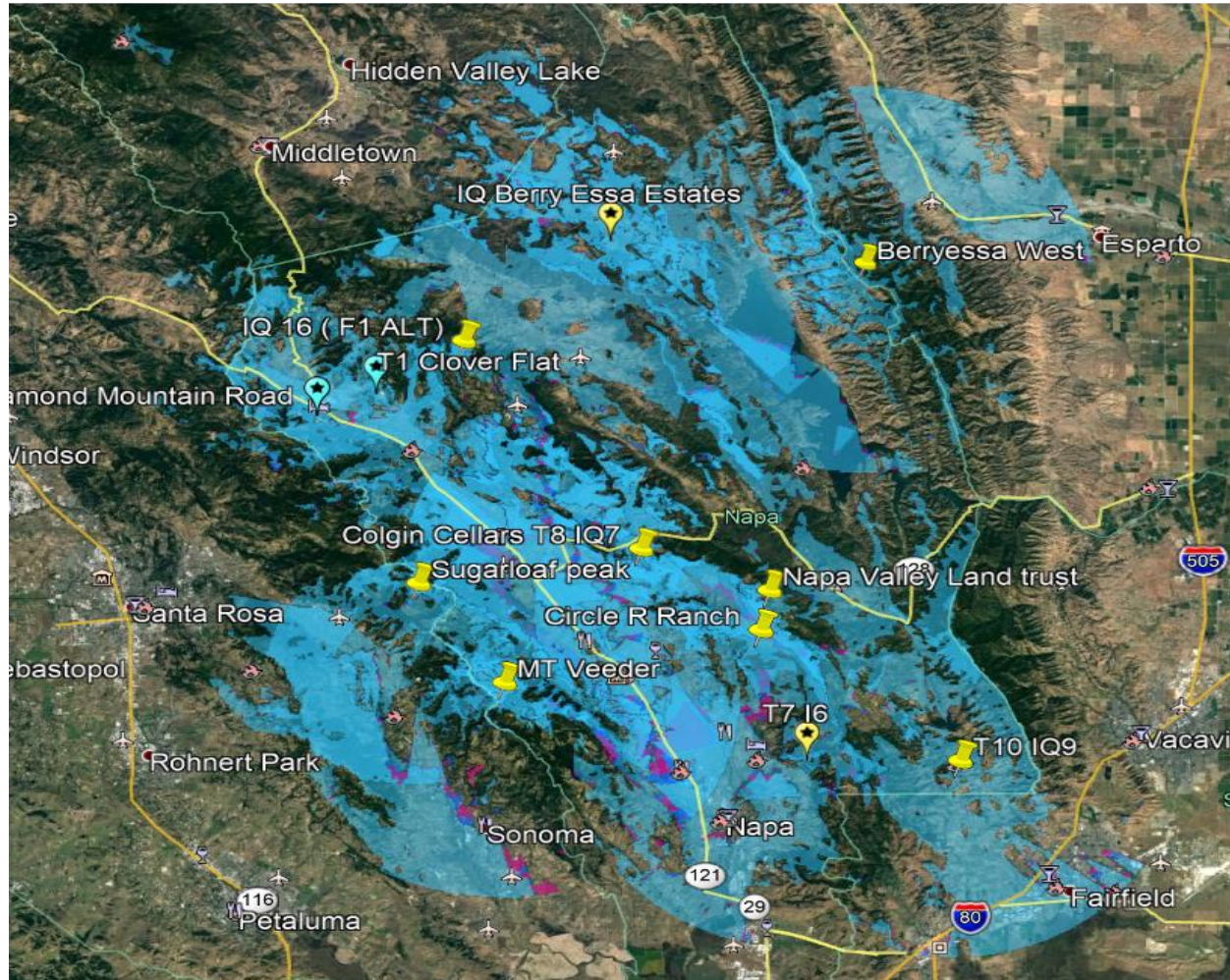


Lake County Potential IQ FireWatch Detection Proposed Locations



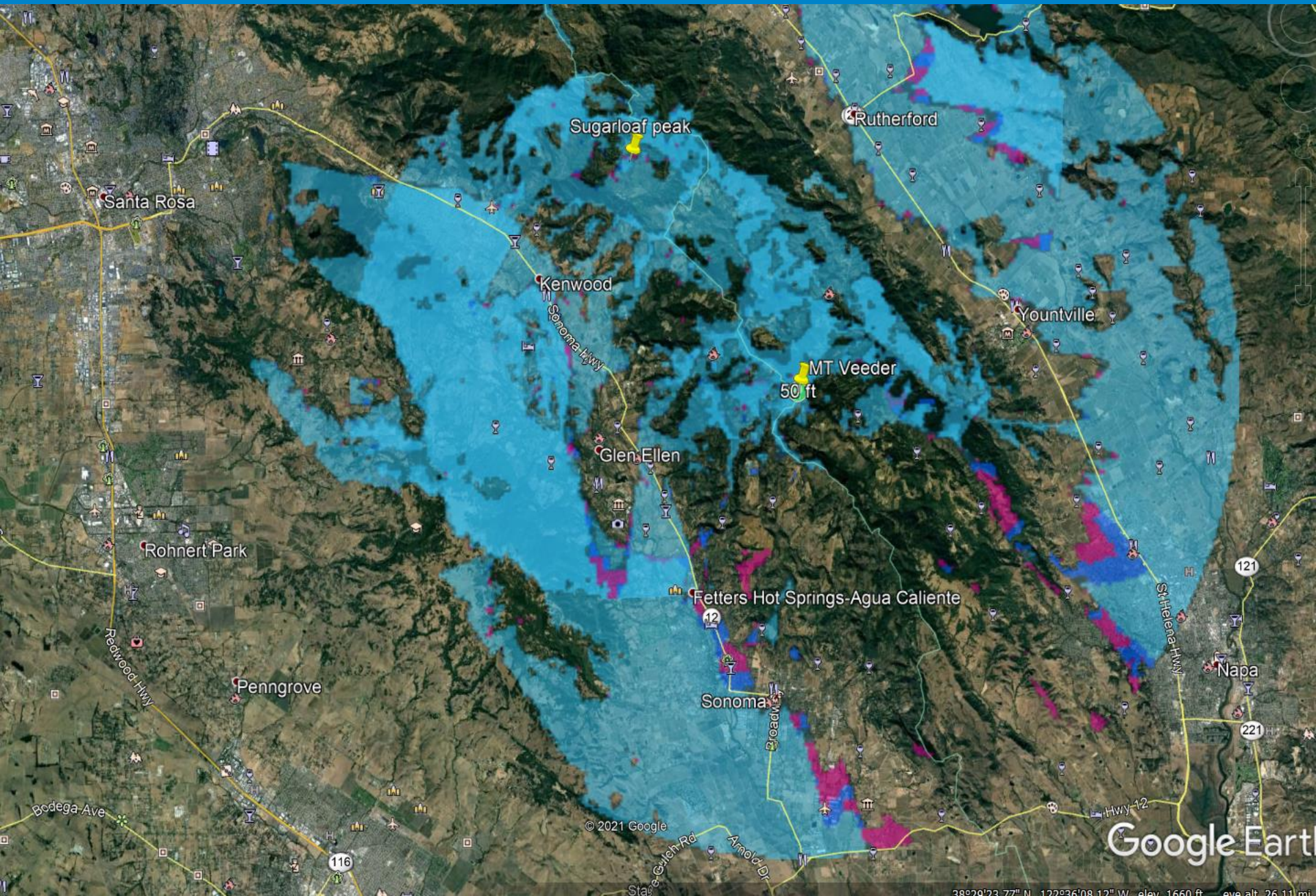
Napa County IQ Fire Watch Proposed and CEQA Studied Placements

In order to be effective, IQ Firewatch needs to have a specific location and pole/supporting structure to be part of a network of sensors over a large area. If more sensors are installed, a more accurate and rapid response may be deployed.

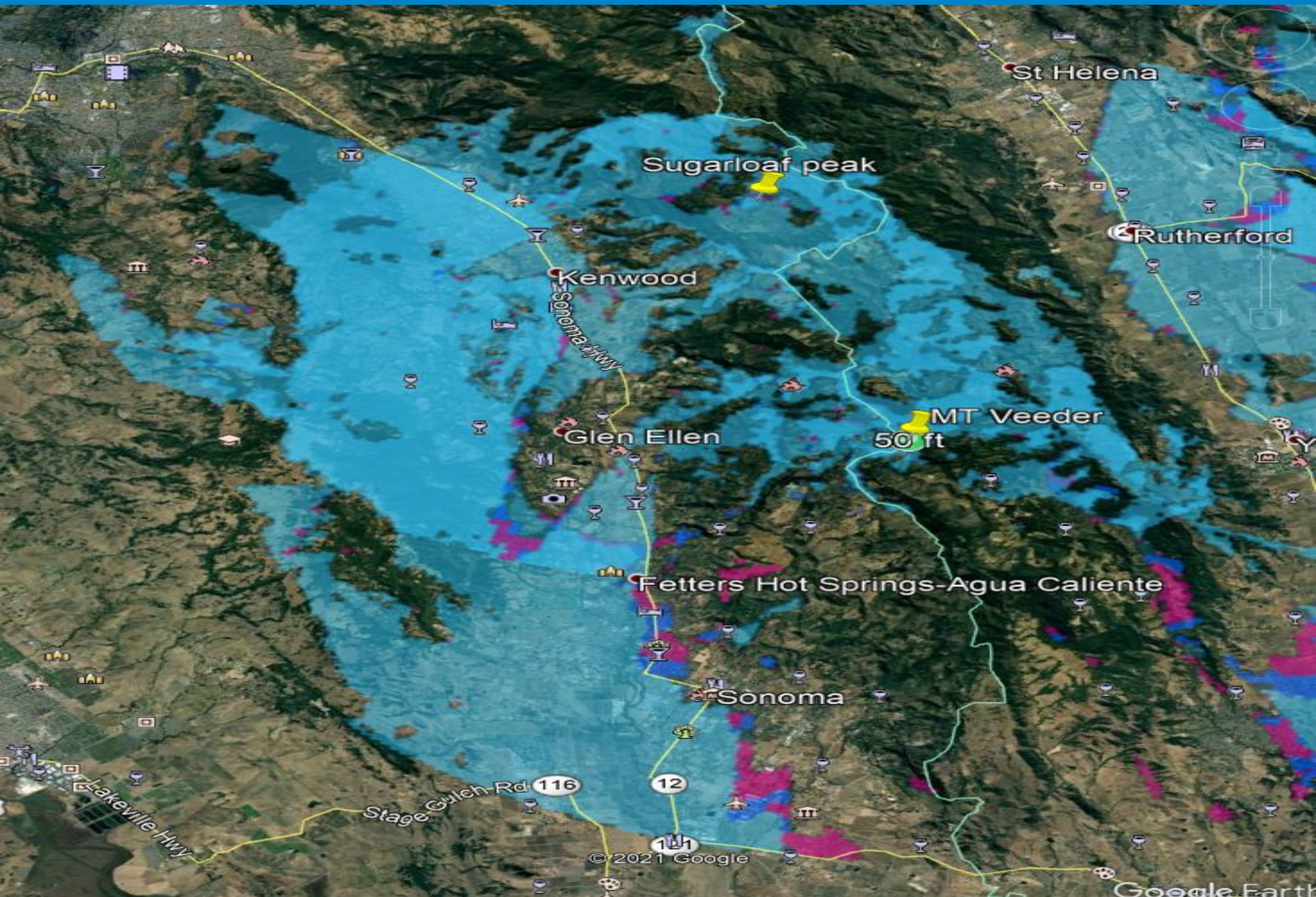


Proposed IQ Fire-Watch locations in Napa County

Sonoma County Coverage from Napa County IQ FireWatch System “overcast”



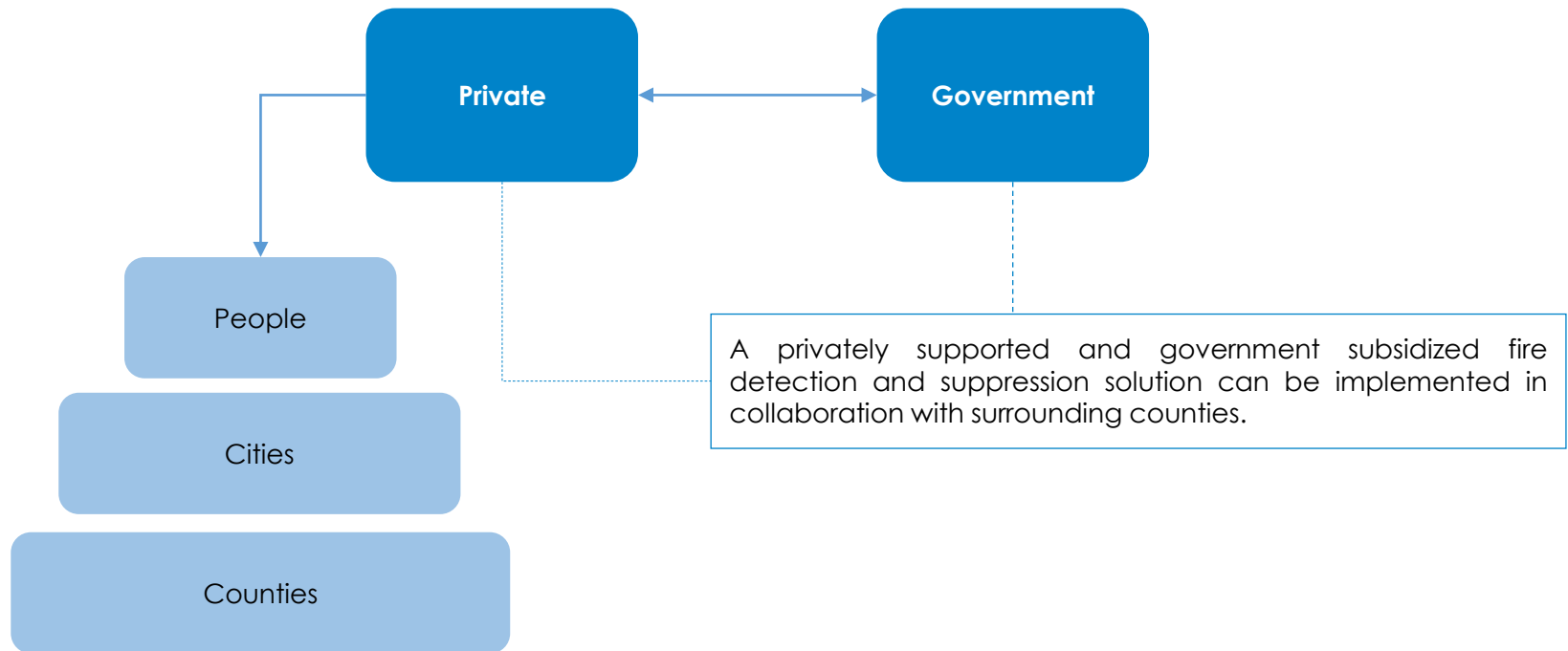
Sonoma County Coverage from Napa County System “overcast”



The Role of the Private Sector

The private sector and government need to work together.

Private initiatives from landowners will contribute to create awareness for the rest of the community. This will have a cascade effect on people, cities and counties.



Example of a collaboration between Private Sector and Government

During wildfires, Insurance companies and Private companies provided the Private Fire Fighting companies on the California System. Calfire was concerned at the beginning but eventually agreed to the resource and the results were very effective.

Contact Information

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