

Quarry Park Eucalyptus Canopy Fire An El Granada Tragedy?



Background

The Paradise fire brought home the devastation caused by high winds, hot temperatures and low humidity.

Quarry Park is more than 1/2 square mile of eucalyptus forest that could make El Granada a synonym for Paradise.

I started this project after a 2017 trip to Portugal when my wife and I saw how closely the area resembled home, with the eucalyptus and broom. A month later massive wild fires killed 60 people in the area we had travelled through.

The last time El Granada had a major fire was in late November 1929 when a wildfire raged from Pescadero to Montara.

So far, we have been very fortunate, but we cannot continue to rely on luck!

History

- We live in a humid coastal fog belt (“Asbestos Coast”)
- We have very rarely sustained a major fire. In the past, the ridgetops and inland areas have experienced major fires. (1929)
- Unfortunately, temperatures are rising, seasonal humidity is decreasing, and the incidence of Red Flag days is increasing.
- We are now a **Very High Fire Hazard Zone!**

What is Unique to El Granada

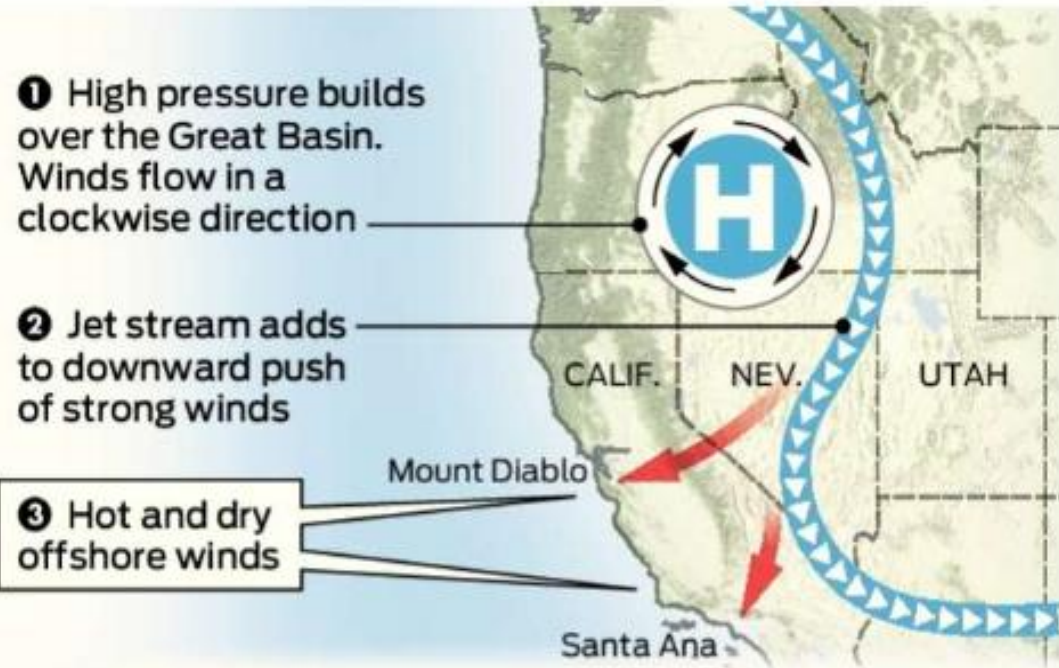
- ½ Square Mile of Dense Eucalyptus Grove
- 30 to 70 % Slopes
- Northeast Fire Wind (most prevalent) would shower embers over entire town in Canopy Fire –
- No Effective Ground Equipment Canopy Fire Suppression
- High Population Density adjacent to Quarry Park Eucalyptus
- No Escape on El Granada Blvd if fire jumps road at San Pedro Blvd. (120 Residences at Risk)

Topography



700 Feet in Elevation with 30%-70% Grades
Ground Fire Equipment unable to Reach Canopy

Hot, Dry Diablo Wind



RED FLAG WARNING

North Bay Hills through 5 PM Thursday

East Bay Hills from 11 PM through 5 PM Thursday

Santa Cruz Mtns from 11 PM through 5 PM Thursday

Mtns of Monterey and San Benito counties from 11 PM through 5 PM Thursday

Impacts:
Any fires that develop will spread rapidly. Outdoor burning is NOT recommended

Winds and Humidity:

- North to northeast winds 20-30 mph with gusts to 50 mph
- 10-20% humidity with nighttime recovery values between 30-40%

The map shows the San Francisco Bay Area with red shaded regions indicating the Red Flag Warning areas. The National Weather Service logo is in the top right corner.

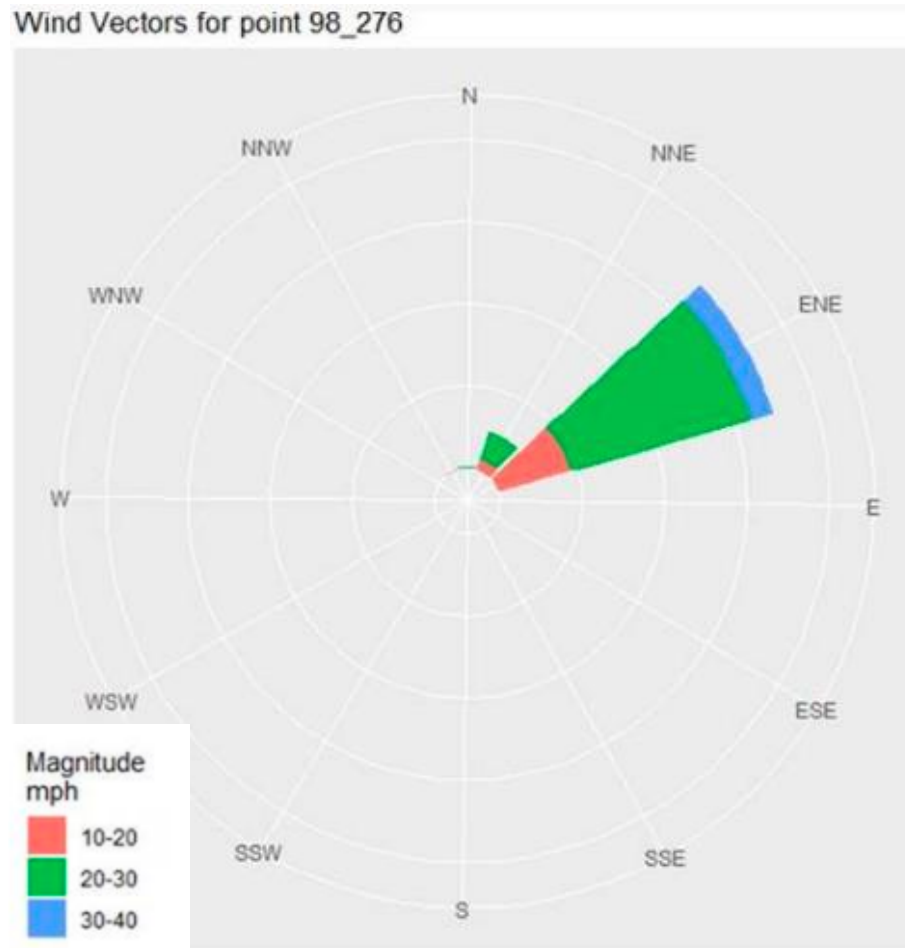
10/15/2020

Temperature 80

Wind 39 MPH

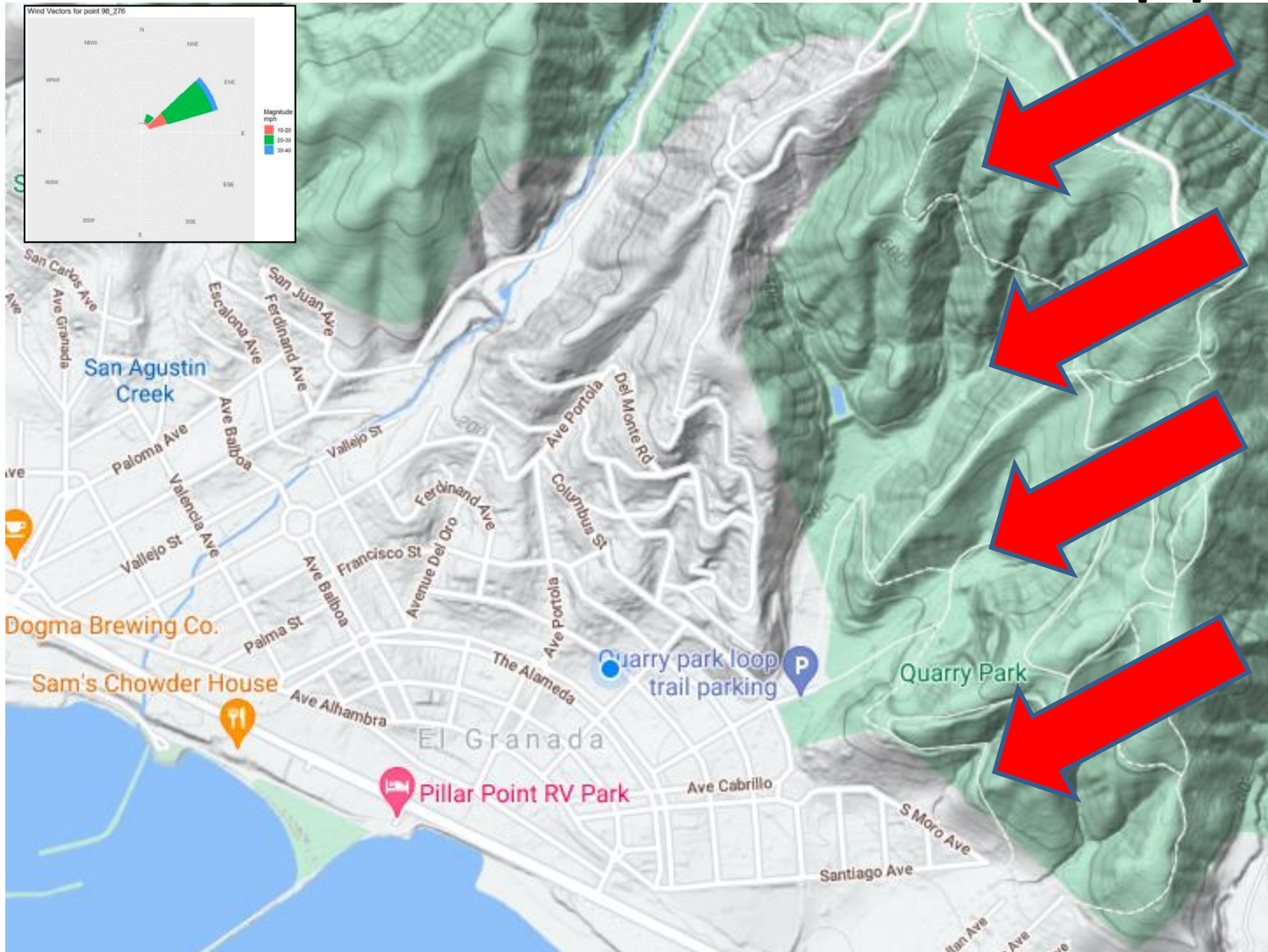
Humidity 12%

Local “Fire Weather” Winds



Local frequency distribution of the ~600 hourly records of the worst fire weather occurring over the period of record (2003-2018). Source: CalFire Fire and Resource Assessment Program

“Fire Weather Wind” Mapped



**Diablo
Wind**

“Worst fire weather” frequency distribution mapped to Quarry Park and El Granada



- **Oils in dry eucalyptus leaves create flammable ground cover**
- **Oils in dry eucalyptus bark create a pathway to the canopy overhead**
- **Eucalyptus canopy fires become firestorms**
- **Embers from burning leaves and bark travel miles in high winds**

How to Burn El Granada – Quarry Park Eucalyptus + Diablo Wind



4



3

Firestorm - Burning Embers over El Granada



Dry Bark & Branches - Pathway to the Canopy



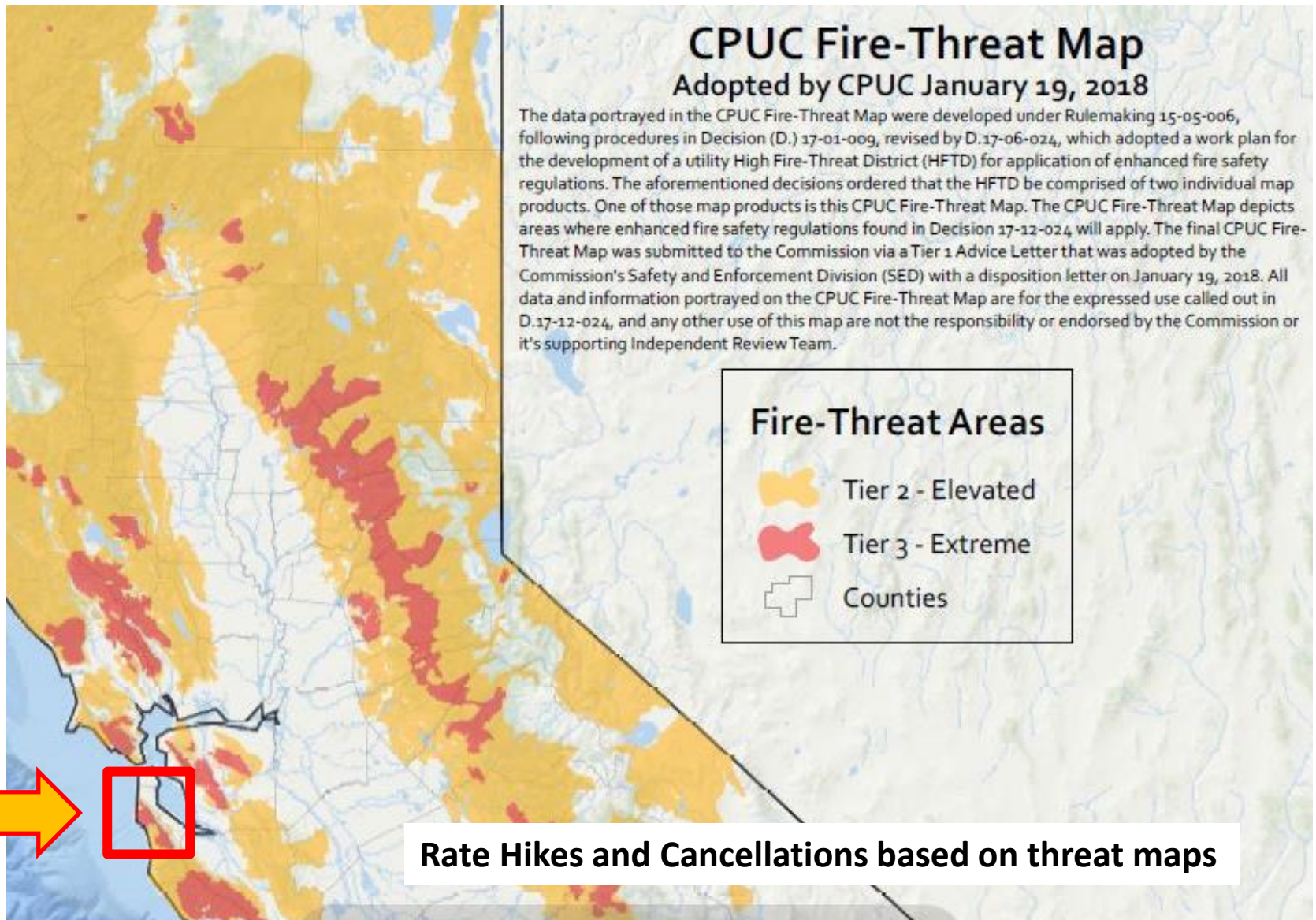
Flammable Ground Cover

1

Ignition Sources

- Urban Boundary Accidents
 - House Wiring, Power Poles, Transformers, etc.
 - Generators (Major Concern!)
 - Automobile Collisions
 - Barbeque Grills, Fire Pits
- Aerial Fireworks & Gasoline Fire *(Quarry Park Rave – August 29, 2020)
- Cigarettes (Anytime)
- Off Road Motorcycles (September 13, 2020)
- Arson
- Power Transmission Lines (1.8 Miles above EG highlands)
- Spread from GGNRA, SFPUC Lands
- Lightning ** (CZU Progression)

Insurance Companies Think So

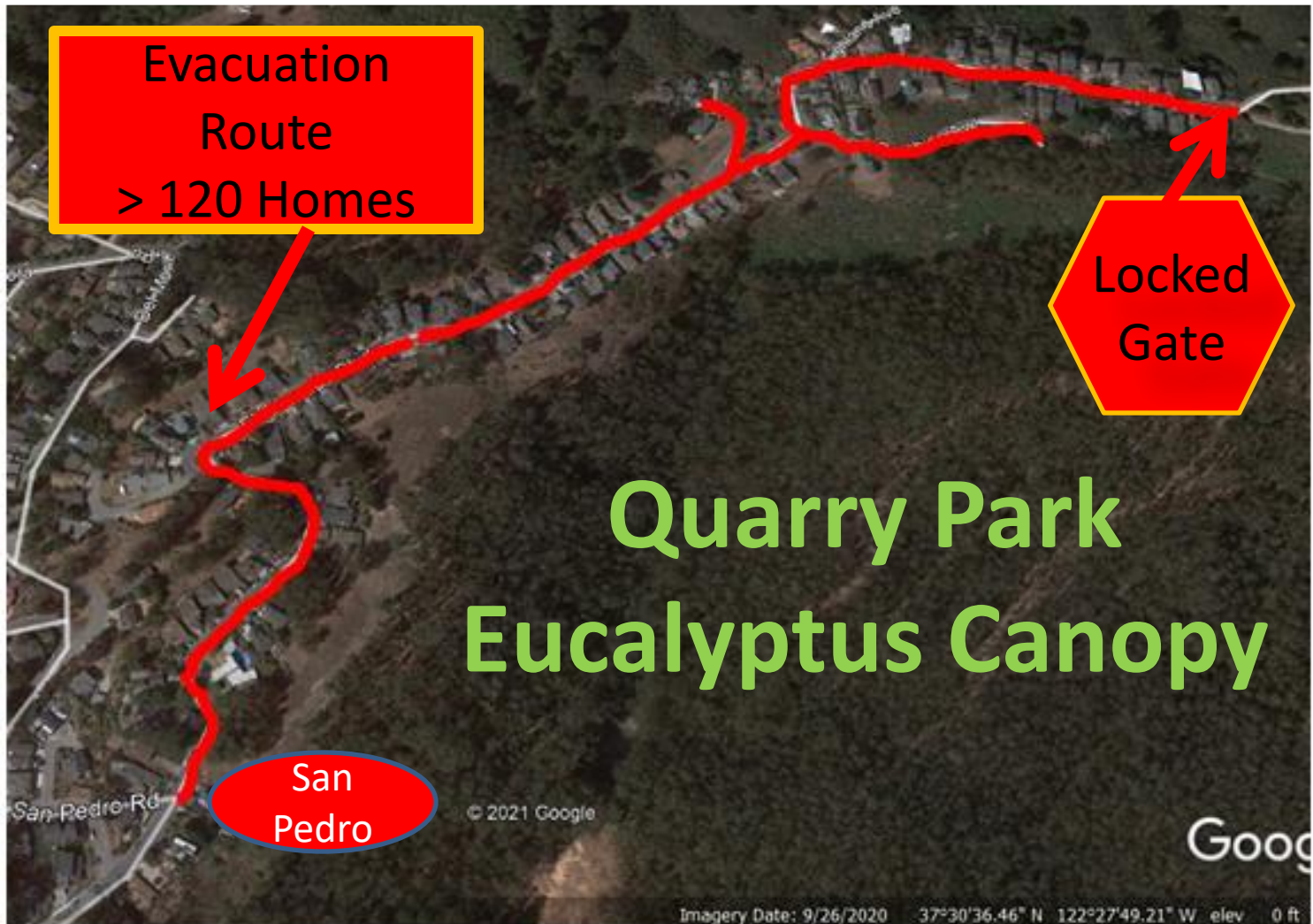


El Granada Highlands – No Exit



CalFire Fire Hazard Map

The Fire Trap on EG Blvd



Fire Probability

We have averaged four Diablo Wind events per year over last 10 years.

- Recently September, October and November have multiple days with 40+ mph winds and temperatures in the upper 80's. With very low humidity, these factors cause high flammability conditions within a single day.
- If a canopy fire occurs in Quarry Park during a Diablo Wind event, it will be unstoppable by ground crews.
- **The consequences are catastrophic, and the probability is increasing, especially with the drought!**

If a Canopy Fire is Unstoppable, How Do We Prevent it?

- Remove Fuel – Removing eucalyptus canopy is the only way to prevent a fire storm.
- Prioritize mature tree removal over ground fuel clearance even if logs remain on the ground. Brush fires can be controlled, canopy fires can not.
- Engage our elected officials to fund efforts to remove mature eucalyptus from Quarry Park!

Liability

Although San Mateo County didn't cause the problem, they now own the problem!

The fuel loads in Quarry Park and pose a clear and increasing threat to human lives and property as documented in US Forest Service, Cal Fire, and California PUC Maps.

The risk increases every year with higher temperatures, low humidity, drought and Diablo Wind events that could make Quarry Park and much of El Granada a firestorm.

Will San Mateo County be liable for the loss of life and property from a firestorm caused by a eucalyptus canopy fire in Quarry Park? Is PG&E the model?

The End?



Oakland Hills Fire Aftermath, 1991

References

LA Times - Paradise

- [Must Reads: Here's how Paradise ignored warnings and became a deathtrap - Los Angeles Times \(latimes.com\)](https://www.latimes.com)

Oakland Hills Fire (FEMA)

- [TR-060 The East Bay Hills Fire \(fema.gov\)](https://www.fema.gov)

California Fire Hazard Maps

- [Defensible Fire Risk Rankings \(defensibleapp.com\)](https://www.defensibleapp.com)
 - <https://www.defensibleapp.com/>
- [Fire Hazard of Every Building in California: An Interactive Map | Geospatial @ UCLA](https://gis.ucla.edu/blog/fire-hazard-every-building-in-california-interactive-map)
 - <https://gis.ucla.edu/blog/fire-hazard-every-building-in-california-interactive-map?fbclid=IwAR0nB4efQipBstyTpPc6hOzqRthgL-mLUex6mODNTBB09fU7AXD6XncRpB>

SMC BOS Wildfire Presentation – Item 4 (et.al.)

- [County of San Mateo - File #: 21-135 \(legistar.com\)](https://legistar.com)
- <https://sanmateocounty.legistar.com/LegislationDetail.aspx?ID=4804510&GUID=47A1599F-8AAA-4EC7-B1B5-41C33DA0E4D3&Options=&Search=&FullText=1>

- Coastsidebuzz.com

- NPR

- [Deepening Drought Holds 'Ominous' Signs For Wildfire Threat In The West : NPR](https://www.npr.com)

- **Contact – keithmangold@hotmail.com**

Supplemental Materials

Action !

- **Obtain funding to ensure that quarry park and the coast side are eucalyptus removal priorities due to:**
 - **Vulnerable population including elderly**
 - **Areas with no evacuation options when exposed to fast moving wildfire.**
 - **Lack of hospitals and effective evacuation routes from coast side (92 & Highway 1 will be at a standstill)**
 - **Property destruction with increasing numbers of uninsured owners.**
 - **Extreme slopes and mature eucalyptus in Quarry Park blocking ground firefighting efforts and raising the risk of a firestorm.**
- **Required**
 - **Multi Agency Funding Co-ordination – Feds (GGNRA & FEMA) , State Parks, County Parks & County DPW, SFPUC are stakeholders.**
 - **MCC letters to local, state and federal government that this is a “pay now or pay later” and that the consequences of inaction are deadly!**
 - **Explore legal action through MCC or GSD, Grand Jury, Class Action Suits (Grand Jury reports did not work in Paradise)**

* * CZU Progression

- 8/16 - Lightning strike ignition (> 100 strikes)
 - NW wind – slow ground fires (mostly unattended due to resource constraints due to higher priority fires)
- 8/19 – Wind shifts to NE – 43,000 acre growth in one day. (65 square miles)
- 9/22 – Fire Contained – 86,000 acres. “The fires continue to actively burn above the marine layer in the heavy timber and thick undergrowth.”

Accountability

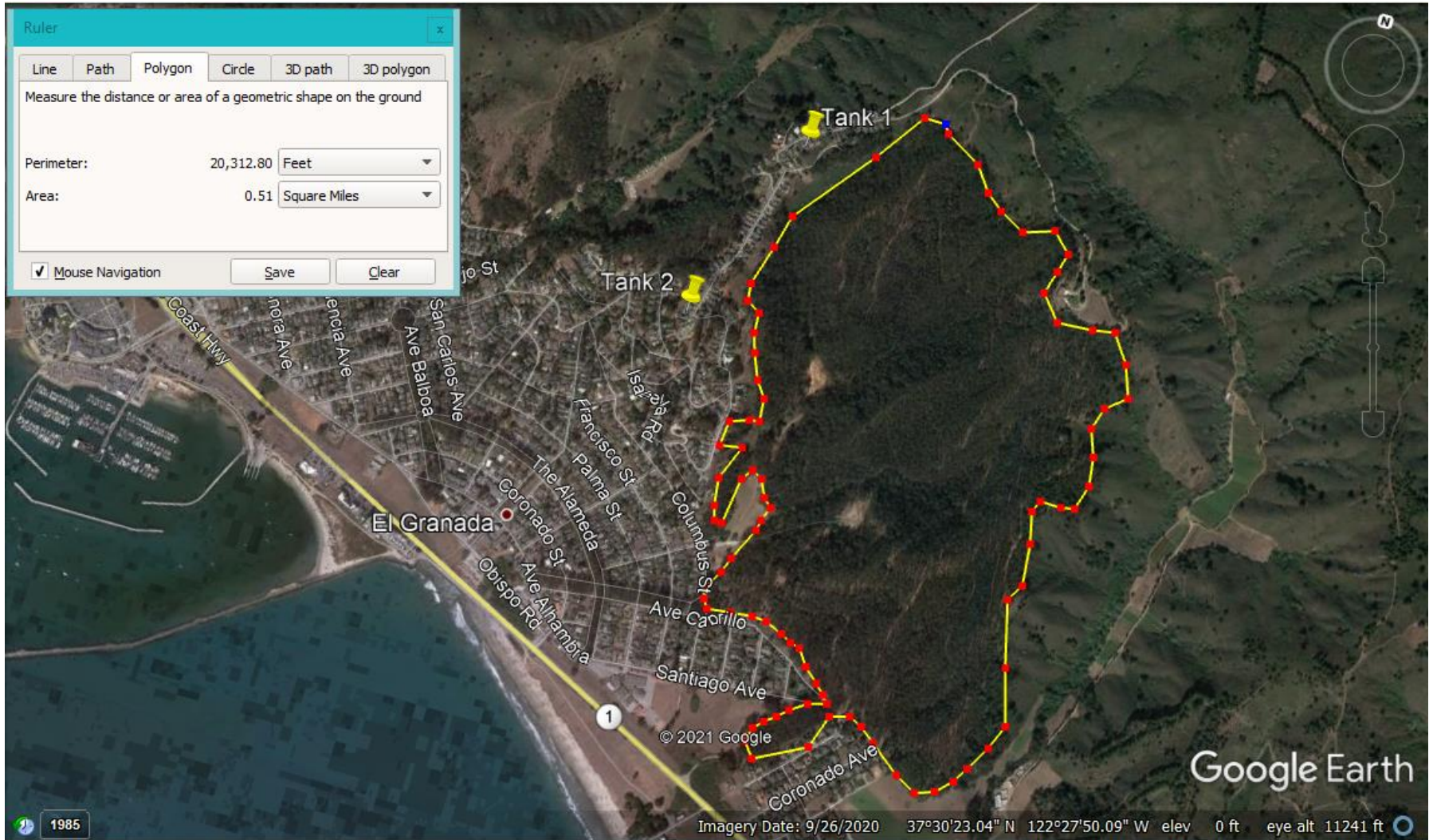
- **The County of San Mateo Owns the Canopy Fire Hazard in El Granada Quarry Park.**
- **Despite this, there are no significant canopy removals planned. Instead resources are being applied to predefined projects which contain little or no threat to life or property.**
- **El Granada currently has a fire risk like that of Paradise or the Oakland Hills fires. We need immediate eucalyptus removal plans to prevent a tragedy !**

Fuel Reduction Priorities

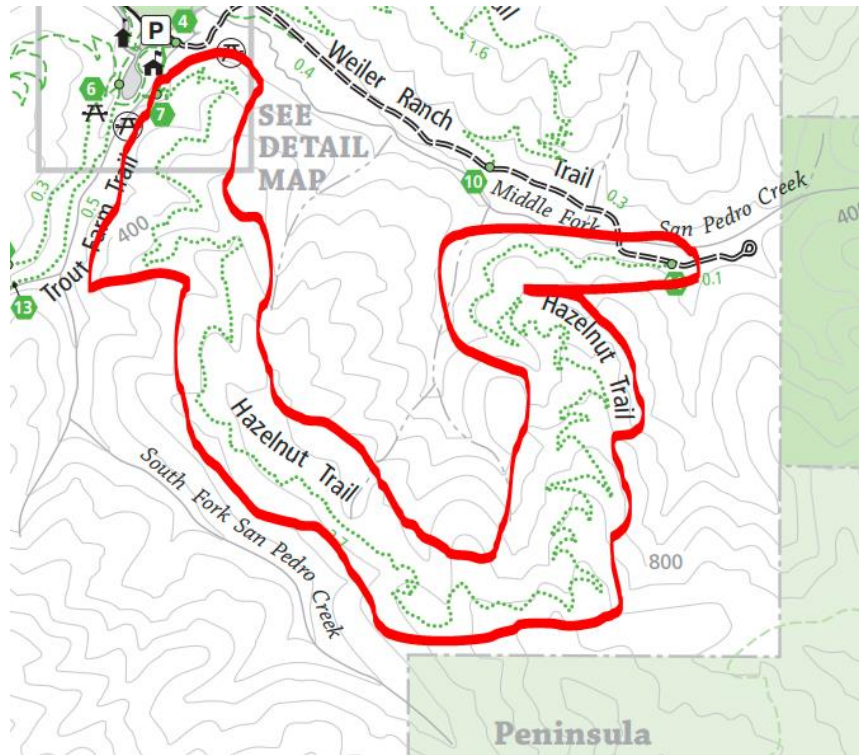
- 1 - Protect Lives - Remove mature eucs along EG Blvd where people have no escape from either a Quarry Park initiation point or a San Pedro intersection crossover.
- 2 - Protect Property - Increase removal of all County eucalyptus bordering EG (Quarry Park and medians).
- 3 - Worry about disposal, replanting, etc.

Project Funding must be proportional to Fire Risk and Potential Liability!

QP Eucalyptus



\$ 3.4 Million - Create and Maintain a Fuel Break along Hazelnut Trail



- Criteria 1: Presence of Private Residences -
- Criteria 2: Presence of Park Building -
- Criteria 3: Wildland Urban Interface -
- Criteria 4: Fuel Type Criteria -
- Criteria 5: Vegetation Treatment Considerations
- Criteria 6: Ecological Considerations
- Criteria 7: Ingress/ Egress
- Criteria 8: Fire Severity Zones
- Criteria 9: Longevity
- Criteria 10: Professional Judgement Criteria
- Criteria 11: Joint Implementation Criteria
- Criteria 12: Size of Project Criteria
- Criteria 13: Funding and Capacity Criteria
- Criteria 14: Permitting and Approval

Hazelnut Trail - \$ 3.4 M



Property and Lives Protected - 0

Upper Quarry Park Fuel Reduction \$170,000



Shaded Fuel Break
Maintenance



Unprotected Property - \$ 2 Billion
Unprotected Lives - > 350 (E G Blvd - No Escape Route)

Shaded Fuel Break Maintenance = No Mature Tree / Canopy Reduction

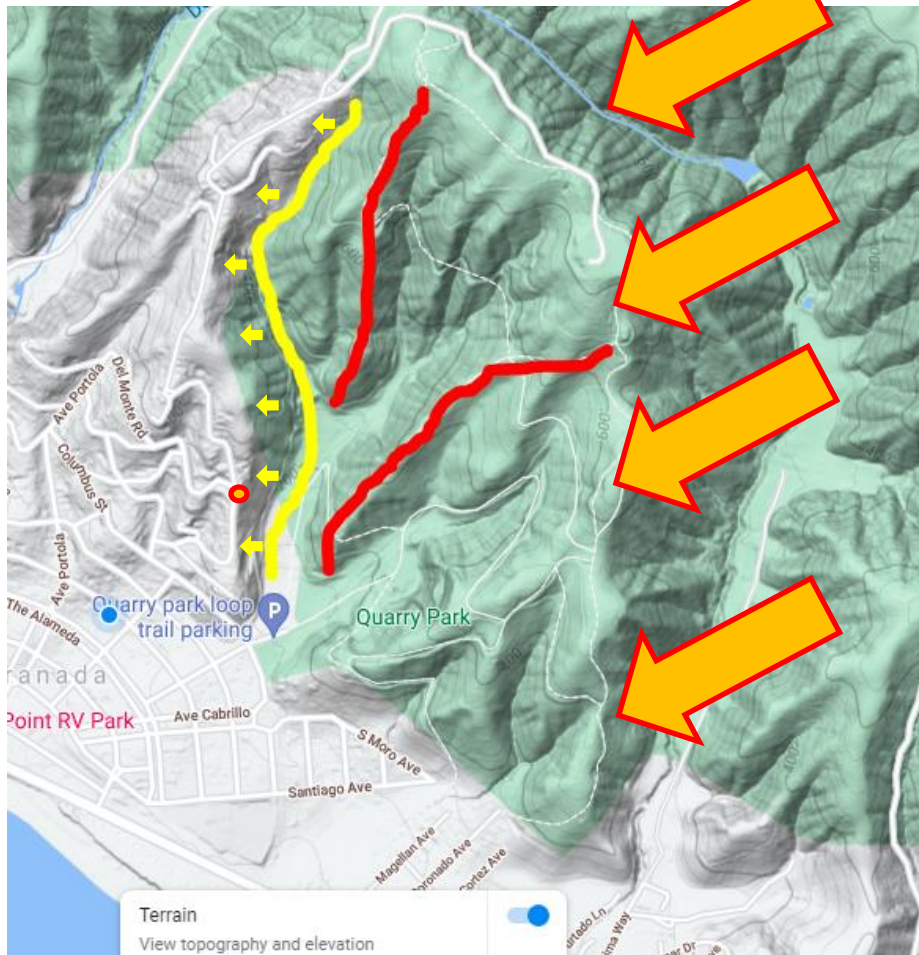


Before



After

Step 1 toward Defensible Space ?



Basis :

- Fire Wind = NE
- Highest Danger = El Granada Blvd (EGB).
- Clear Valley Floor to EGB – No Eucalyptus Zone
- Create 2 Ridgetop Firebreaks
- Break 1 - Keeps Fire Front from jumping valley and cutting off El Granada Blvd.
- Break 2 – Separates 2nd Ridge from most heavily forested and least maintained area

Clear Zone

Dominant Fire Wind

Fire Break – 300 ft wide