

RISK ASSESSMENT FOR CALISTOGA FIRESAFE COUNCIL



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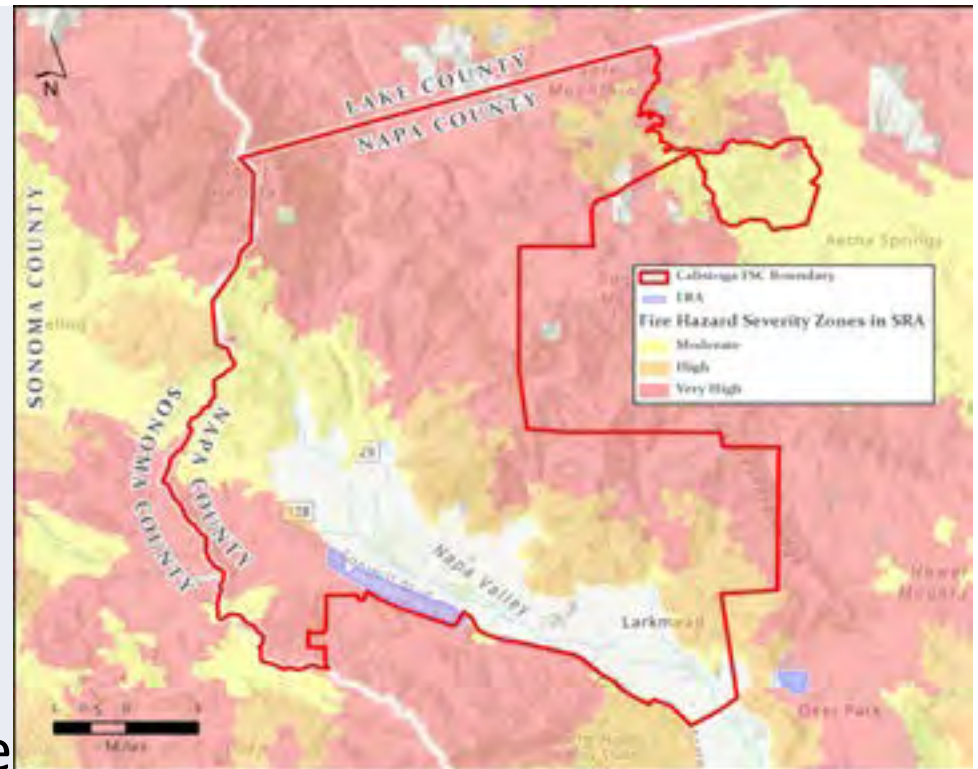
- Helped start up 6+ firesafe councils in Napa
- Forestry, Fire Science degrees
- 40+ years fire management planning, assessments



CALISTOGA

CHARACTERISTICS

- **It's BIG (31,864 acres)**
- **Quite varied in hazard and risks**
 - From valley floor to steep sided slopes
 - Densely packed to big parcels of wildlands
 - New and old structures
 - Includes residences and more commercial entities than other fire safe councils
 - Vegetative fuels span neatly tended yards and vineyards to unmanaged properties



Url of risk assessment

WHY DO RISK ASSESSMENTS?

- **IDENTIFY VULNERABILITIES**
- **POINT TO SOLUTIONS**
- **BUILDING BLOCK FOR A COMMUNITY WILDFIRE PROTECTION PLAN (CWPP)**
 - **Approved by local fire departments and elected officials**
 - **Gateway for many funding opportunities**
 - **Risk assessment is required part of CWPP**

WHAT FACTORS ARE IN A RISK ASSESSMENT?

- **TOPOGRAPHY**
- **WEATHER (especially WIND)**
- **ACCESS**
- **VEGETATIVE FUELS**
- **FIRE HISTORY**
- **DEVELOPMENT PATTERN, DENSITY**
- **BUILDING CONSTRUCTION**
- **WATER SUPPLY, SIGNAGE, FIRE SUPPRESSION SUPPORT**

TERRAIN

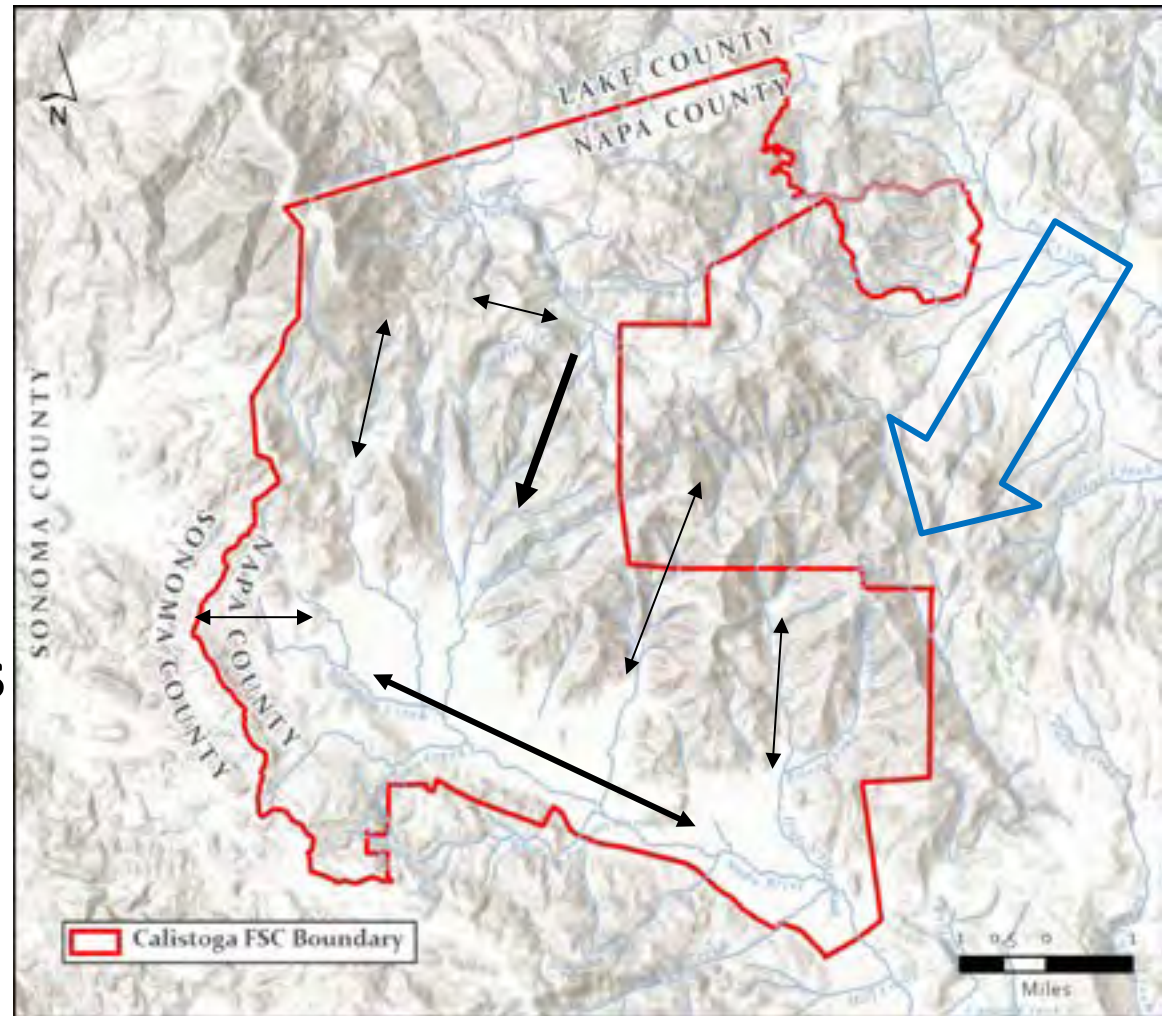


- **Steep slopes, broad valley floor**
- **Narrow canyons**
- **Convolutated in northern part**
- **Constrains roadways on sides**

WEATHER AND WINDS

Guided by topography

- Winds from west (normal) and northeast (hot, dry)
- Spread up and down steep, narrow slopes (chimney effect)
- Convoluted terrain blocks windflow in north and east parts of the fire safe council



VEGETATION (FUEL)

Diverse and Changing

- Vineyards
- Oaks with grass underneath
- Shrublands on west-facing slopes in northeast
- Conifer forests taking over oaks, on east-facing slopes



LOTS of FUEL!

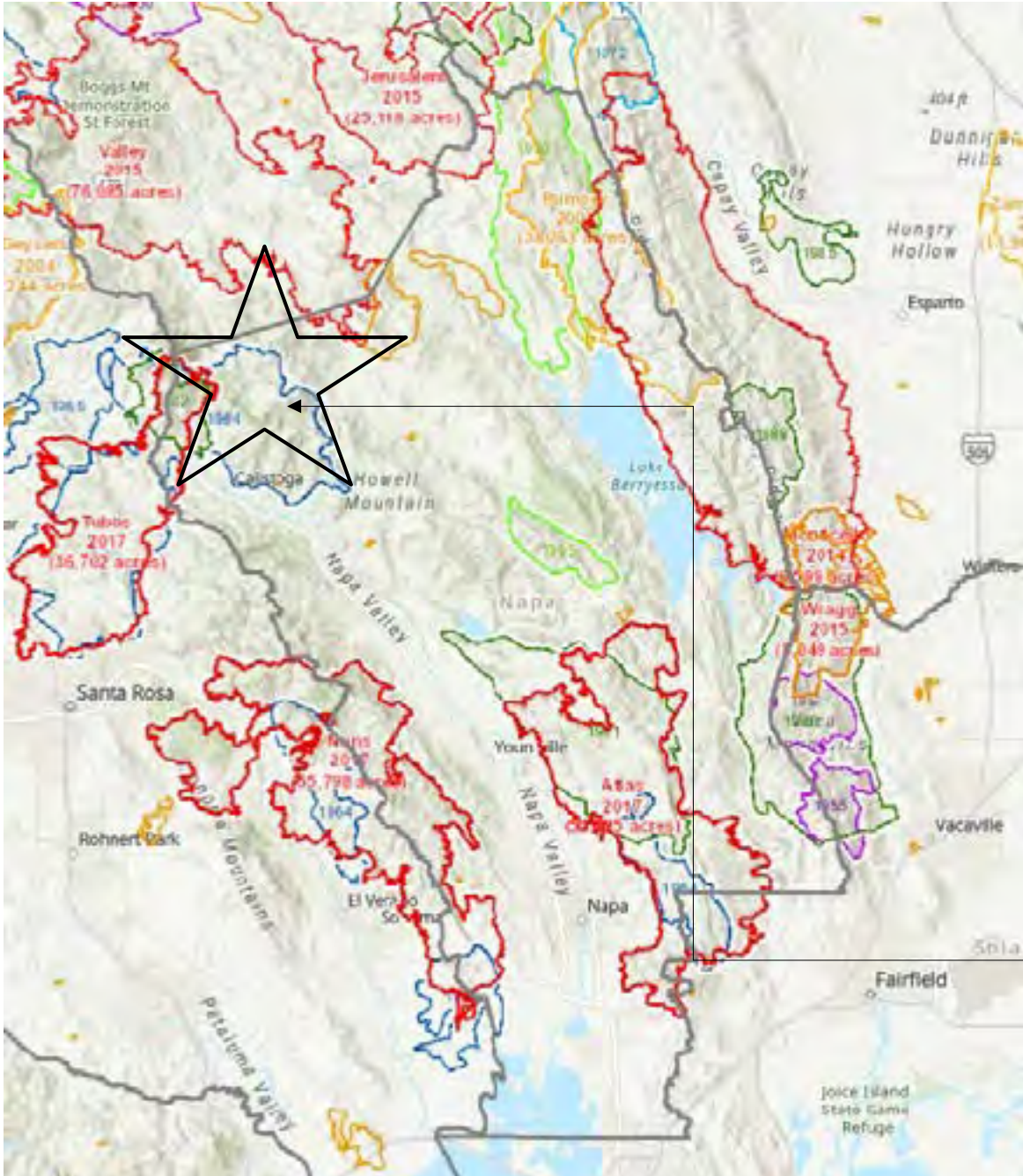


ACCESS

- Access is good on valley floor
- Winding
- Narrow
- Steep
- One way in/one way out
- Gates and bridges



FIRE HISTORY



NAPA COUNTY FIRE HISTORY

Fire Perimeters
1950 to 2018

- RED:** 2015 – 2017
- ORANGE:** Early 2000's
- LT GREEN:** 1995 – 1999
- DK GREEN:** 1980's
- LT BLUE:** 1972
- DK BLUE:** 1964 – 1965
- PURPLE:** 1950's

You are here



DEVELOPMENT PATTERN, DENSITY

- Large lots, vineyards
- Preserved lands
- Dense development in Downtown
- In County Residential parcels ranges from 1 acre – 60+ acres



Category	Parcel Count	Total Area (acres)	Percent
VACANT	461	20,098.06	57.3%
VINEYARD/WINERY	285	7,431.72	21.2%
RESIDENTIAL	1,663	5,759.69	16.4%
OTHER	23	1,259.56	3.6%
COMMERCIAL	167	454.92	1.3%
INDUSTRIAL	9	48.05	0.1%



BUILDING CONSTRUCTION

- Old, wood buildings, & new ignition-resistant buildings
- Class A roofs = the norm
- Decks...
- Mobile homes not ignition-resistant construction



WATER SUPPLY, SIGNAGE, SUPPRESSION SUPPORT

Firefighter Support

- Water supply & more



SIGNAGE

- Better west of Highway 128
- Still more needed
- Address and features



RISK ASSESSMENT SUMMARY

- Looking for threats and vulnerabilities
- Identifying good work already done
- Aimed at future projects (and possible funding)



Preliminary List of Projects

Goals/Priorities:

- **Life Safety**
- **Reduce Damage to Property**
- **Reduce Damage Natural Resources**

Projects to:

- ❖ **Help Evacuation and Access** (11 projects)
- ❖ **Reduce Ignitions** (3 projects)
- ❖ **Reduce Property Damage** (11 projects)
- ❖ **Assist Containment** (12 projects)

Many address multiple goals

Preliminary List of Projects organized Project Type

Sorted into three types

- ❖ **Public Education and Communication** (4 projects)
- ❖ **Vegetation Treatments** (9 projects)
- ❖ **Fire Suppression Support** (4 projects)



PROJECTS

	PUBLIC EDUCATION and COMMUNICATION PROJECTS
Project 1	Call 'em All/Nixle Sign-up
Area	Throughout FSC
Goal	Alert community members of emergencies, and communicate disconcerting non-emergencies
Actions	Obtain phone numbers of volunteers, subscribe to service
Participants	Every resident
Schedule	Now, any time
Project 2	Hold educational presentations or provide material regarding defensible space and fire-resistant landscaping choices, and retrofit options
Area	Throughout FSC, including vacation rental properties.
Goal	Guide vegetation to be more fire-safe, provide residents resources for more ignition-resistant structures, inform visitors of fire safe behavior
Actions	Identify resident's information gaps, gather already-existing material, organize material, publish
Participants	1-3 volunteers
Schedule	Now, any time

	PUBLIC EDUCATION and COMMUNICATION PROJECTS
Project 3	Conduct voluntary parcel-by-parcel evaluations regarding defensible space and fire-resistant landscaping choices, and retrofit options, and distribute educational information, develop database of conditions assisting fire response, update Calistoga evacuation plan
Area	Throughout FSC outside Downtown, including vacation rental properties.
Goal	Provide residents knowledge about how to retrofit structures to be more ignition-resistant, develop database for outreach, update fire response and evacuation plan
Actions	Revise existing evaluation databases (Mt Veeder, Diamond Mtn), have FSCs 'train the trainer', designate volunteer/staff to conduct evaluations, enter into database, transfer data to fire departments, update as needed
Participants	1-3 volunteers or paid staff if grant-funded
Schedule	Now, any time
Project 4	Adopt and distribute ignition prevention material for road-based fire causes
Area	Highly traveled roads, with towing vehicles
Goal	Reduce vehicle-caused ignitions
Actions	Review and revise and/or adopt the One Less Spark material regarding road-based ignitions (www.readyforwildfire.org); place info at intersection of Tubbs Land + 128 and 29, or at Petrified For Rd + 128, contact <u>CalTrans</u> and <u>Co Rds</u> for permission.
Participants	Members of affected FSCs
Schedule	Any time



NAPAFIREWISE

VEGETATION TREATMENT PROJECTS	
Project 1	Remove hazard trees along roads
Area	Roadside, where leaning and/or failing trees exist, especially Old Lawley Toll Rd., Lommel Lane, and Franz Valley School Rd, West of Highway 128
Goal	Provide safe evacuation and response during an emergency
Actions	Encourage / promote vegetation management by County and PG&E to remove hazard trees along roads
Participants	Willing members of FSC
Schedule	Now, any time
Schedule	Now, any time
Project 2	Shift forest species composition to woodland from conifer
Area	Wildland areas with conifers
Goal	Modify fuel characteristics of forest to burn with less intensity
Actions	Contact RCD + CAL FIRE for cost-sharing program (EQIP, CFIP), plant oak trees (with funding from NCRS), thin Douglas fir trees
Participants	Private landowners, private contractors, volunteers
Schedule	Plant oaks in early winter when soil is saturated, thin trees best in fall, but anytime, avoiding nesting season and high fire danger
Project 3	Create shaded fuelbreak on both sides of Petrified Forest Road
Area	50-100 feet on both sides of Petrified Forest Road - especially east of 255/263 Pet Forest Rd
Goal	Calm fire behavior in strategic location, aid containment
Actions	Request permit from landowners, develop treatment Rx agreeable to all, contract work
Participants	Selected parcel owners along border, access routes
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days



	VEGETATION TREATMENT PROJECTS
Project 4	Roadside Treatments
Area	30-ft both sides of Old Lawley Toll Rd, Lommel Lane, Lake County Hwy (if fuelbreak is not installed on Lake Co Hwy)
Goal	Enable passage of evacuees and emergency vehicles, aid containment
Actions	In wildlands, chip all dead material, remove (cut, pull and/or spray) understory shrubs, prune lower branches of trees
Participants	Hand crews (CDC), property owners, +/- vendors for machinery
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days
Project 5	Maintain/expand existing fire breaks created during Tubb Fire
Area	Jericho Canyon vineyards, Lake County Highway (at RLS St Pk+~3800 Hwy 29)
Goal	Facilitate fire containment
Actions	Cut and burn or chip previously cut material, using hand labor or machinery, cut additional 10-30 ft of vegetation to create a shaded fuelbreak
Participants	Owners of land with contingency containment lines
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days. Burn piles in winter.
Project 6	Calistoga Cemetery Maintenance
Area	Calistoga Cemetery
Goal	Provide fire-safe environment for residents in City
Actions	Reduce shrubby fuels (especially French broom) in upper part of Cemetery, with hand tools, or goats
Participants	City, adjacent homeowners
Schedule	Best in the early spring before flowering, OK anytime but avoiding nesting season and red flag days

	VEGETATION TREATMENT PROJECTS
Project 7	Establish ways to reduce <u>creekside vegetation</u>
Area	Top of creek bank on Napa River Biter Creek, Garnett Creek, Horns Creek, Cyrus Creek,
Goal	Reduce fuels without damaging riparian habitat
Actions	Meet with California Department of Fish and Wildlife, get permits or other understanding on boundaries and treatments. Obtain hand crews to reduce fuels in creeks
Participants	Landowners with creeks
Schedule	Discussions and permits can occur any time, work should be done in the fall, when flow is reduced and outside nesting season
Project 8	Work with private ranchers/<u>landowners</u> to pursue cost-sharing programs in order to facilitate management of lands in strategic locations
Area	Large landholdings (Connelly, <u>Montesol</u> , Wagner, Tag, Carlson)
Goal	Enhance containment of wildfires
Actions	Engage landowners with RCD to identify cost-share programs + help fill out forms
Participants	Volunteers of neighborhoods, and large landowners
Schedule	Any time
Project 9	Create shaded <u>fuelbreak</u> on both sides of Lake County Highway
Area	50-100 feet on both sides of Lake County Highway to county boundary
Goal	Calm fire behavior in strategic location, aid containment
Actions	Request permit from landowners, develop treatment Rx agreeable to all, contract work
Participants	Selected parcel owners along border, access routes
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days

SUPPRESSION SUPPORT PROJECTS

Project 1	Install <u>knox-box</u> facilities at base of roads, using Diamond Mountain's as an example
Area	At base of Lawley Toll Rd., <u>Lommel Rd.</u> , <u>Pritchett Rd.</u> , <u>Kortum Canyon</u> , entrance to Solage, and Franz Valley School Rd
Goal	Allow emergency responders to respond and follow directions using aerial observations
Actions	FSC to develop information in binder, purchase box and <u>knox-box</u> , and deliver to Napa Co FD
Participants	Willing members of FSC on the above roads
Schedule	Now, any time
Project 2	Install Signage: Street, addresses, access, water
Area	Entire FSC outside Downtown
Goal	Inform responders of features that encourage entry and successful response
Actions	Purchase signs in bulk + install, customize signs
Participants	All parcels
Schedule	Now, any time

SUPPRESSION SUPPORT PROJECTS	
Project 3	Expand roadside turnouts
Area	Narrow stretches of Franz Valley School Rd, Highway 128
Goal	Provide opportunities for simultaneous evacuation and emergency response, and/or passage past disabled vehicles during evacuation
Actions	Re-grade roadside, consult with County Public Works and CalTrans
Participants	Property owners, CalTrans , Co Rds +/- vendors (for machinery)
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days
Project 4	Map and ensure passage of access roads into and out of the Old Toll Road neighborhood, to allow for quick access for firefighting equipment and emergency exit by residents
Area	Old Lawley Toll Rd Neighborhood
Goal	Provide opportunities for simultaneous evacuation and emergency response
Actions	Map roads, make maps are available to residents and firefighters Make roads passable and free of vegetation and other obstacles
Participants	Property owners, CAL FIRE, Co Rds +/- vendors (for machinery)
Schedule	Best in the fall, OK anytime but avoiding nesting season and red flag days



THANK YOU!



More details.....

- ✓ Call 'em All/Nixel Sign-up



- ✓ Adopt and distribute ignition prevention material for road-based fire causes



As the weather heats up, keep an eye out for ways you can prevent wildfires. Dragging chains can cause a big problem! What are other potential wildfire dangers?
[#FirstDayofSummer](#) [#SummerSolstice](#)



More details.....

- ✓ Hold educational presentations or provide material regarding defensible space and fire-resistant landscaping choices, retrofit options



More details.....

- ✓ Install knock-box facilities at base of road



More details.....

- ✓ Remove hazard trees along roads
- ✓ Roadside Treatments
- ✓ Expand roadside turnouts



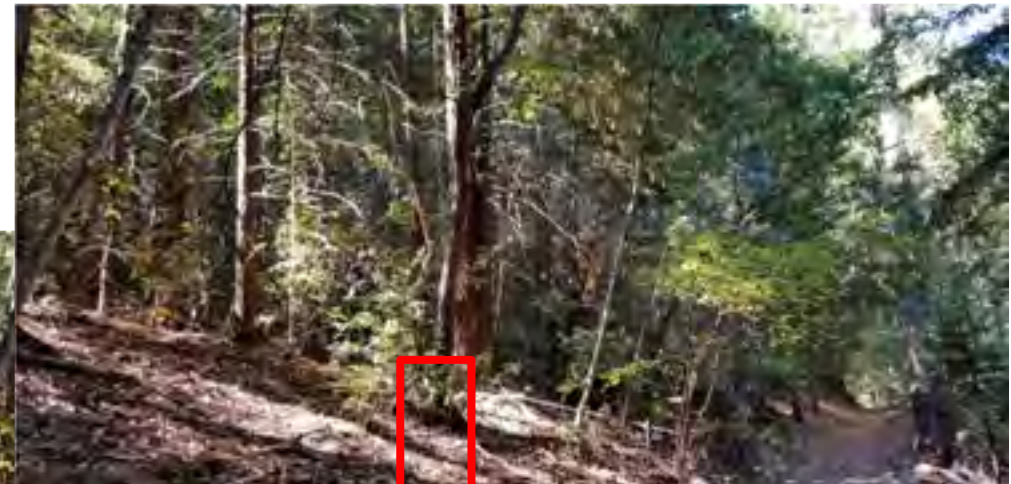
More details.....

- ✓ **Map and ensure passage of access roads into and out of the Old Toll Road neighborhood, to allow for quick access for firefighting equipment and emergency exit by residents**



More details.....

- ✓ Shift forest species composition to woodland from conifer



SUMMARY of Projects

PUBLIC EDUCATION AND OUTREACH PROJECTS

- ✓ **Call 'em All/Nixel Sign-up**
- ✓ **Hold educational presentations or provide material regarding defensible space and fire-resistant landscaping choices, and retrofit options**
- ✓ **Conduct voluntary parcel-by-parcel evaluations regarding defensible space and fire-resistant landscaping choices, and retrofit options, and distribute educational information, develop database of conditions assisting fire response, update Calistoga evacuation plan**
- ✓ **Adopt and distribute ignition prevention material for road-based fire causes**

SUMMARY of Projects

VEGETATION TREATMENT PROJECTS

- ✓ Remove hazard trees along roads
- ✓ Shift forest species composition to woodland from conifer
- ✓ Create shaded fuelbreak on both sides of Petrified Forest Road
- ✓ Roadside treatments
- ✓ Maintain/expand existing fire breaks created during Tubb Fire
- ✓ Calistoga Cemetery maintenance
- ✓ Establish ways to reduce creekside vegetation
- ✓ Work with private ranchers/landowners to pursue cost-sharing programs in order to facilitate management of lands in strategic locations
- ✓ Create shaded fuelbreak on both sides of Lake County Highway

SUMMARY of Projects

FIRE SUPPRESSION SUPPORT PROJECTS

- ✓ **Install knock-box facilities at base of roads, using Diamond Mountain's as an example**
- ✓ **Install Signage: Street, addresses, access, water**
- ✓ **Expand roadside turnouts**
- ✓ **Map and ensure passage of access roads into and out of the Old Toll Road neighborhood, to allow for quick access for firefighting equipment and emergency exit by residents**