



Planning Commission Mtg.
OCT 03 2018
Agenda Item: 7B

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October 2nd, 2018

Kevin P. Block
Block & Block LLP
1109 Jefferson Street
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Subject: Anthem Winery expansion – Fire safety assessment

Dear Mr. Block,

At your request I have reviewed fire/life safety and Code issues associated with the planned expansion at Anthem Winery 3454 Redwood Road in Napa, CA, in particular, those related to access and egress via a proposed driveway modification and increased occupant load. The analysis demonstrates an unjustified reduction in Fire Department access to a facility with higher risk use and occupancy, located in a relatively high fire risk area.

- (1) The Anthem Winery marketing plan describes assembly occupancy characteristics as defined in California Building and Fire Codes wherein the potential for multiple fatalities and injuries from fire is comparatively high.
- (2) Proposed reductions in road access for firefighting has not been supported by a rational engineering analysis demonstrating equivalency to the intent of fire code requirements.
- (3) Anthem Winery is in an area of elevated wildland fire risk as demonstrated by historic fires and risk assessments from Cal Fire and the California State Public Utilities Commission.

The analysis demonstrates that supporters of proposed driveway modifications have failed to consider elements of elevated risk associated with the change in use and occupancy, especially considering the winery location in a region of relatively high wildland fire hazard. Furthermore, they have failed to provide quantitative information or a rational engineering analysis for reducing prescriptive road access requirements found in state and local codes.

Anthem Winery Use and Occupancy

Anthem Winery Project Statement Amended Winery Use Permit, August 29, 2017

- (1) Tours and tastings by prior appointment of 48 people per day on weekends, and 32 people per day on weekdays, for a maximum of 256 guests per week.

- (2) Marketing plan comprised of 2 food and wine events per month with a maximum of 30 people with no more than one of these events in the evening; ten events per year with a maximum of 100 people; one 200 person event per year; one 300 person event per year; and participation in the Wine Auction.

Chapter 2 of the *2016 California Fire Code* provides the following definition:

ASSEMBLY. The gathering together of 50 or more persons for such purposes as deliberation, education, instruction, worship, entertainment, amusement, drinking, dining or awaiting transportation.

International Building Code Commentary 2015 Section 303 provides the following commentary on Assembly occupancies:

Because of the arrangement and density of the occupant load associated with occupancies classified in the Group A assembly category, the potential for multiple fatalities and injuries from fire is comparatively high...In sudden emergencies, the congestion caused by large numbers of people rushing to exits can cause panic conditions. For these and many other reasons, there is a relatively high degree of hazard to life safety in assembly facilities...If a room or space is used for assembly purposes (i.e., gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption...and the occupant load is 50 or more, Group A is likely to be the appropriate designation.

Proposal to Reduce Winery Road Accessibility

Anthem Winery Road Exception Evaluation APN: 035-470-046, Patrick Ryan (Engineering Division) to Don Barrella (Planning Division)

- As part of the Major Modification, the applicant is requesting an exception to the commercial driveway standards.
- The exception request provide (s) existing environmental, physical and legal constraints as the findings restricting the existing access drive from being improved to meet the current NCRSS.
- The access road off Redwood Road is constrained by surrounding steep terrain, dense forest, and narrow access easement corridors restricting improvements.
- The proposed access for Option 2 travels along an existing driveway on the 20-foot wide flagpole section of the northern parcel connecting to Dry Creek Road as summarized in Table 1.
- With respect to Section (3) of the NCRSS as adopted by Resolution No. 2017-156 by the Board of Supervisors on September 26, 2017, this (Engineering) Division has determined the applicant has met the findings for and exception to the NCRSS. Provided the following conditions are met, the proposed roadway design meets the same overall practical effect as the State Responsibility Area (SRA) Fire Safe Regulations.

Table 1. Summary of Option 2 exceptions.

Location	Exception request	Justification
61+16 to 61+35	Vert. curve length reduction 100 to 20 ft.	Extended pavement entrance
61+16 to 62+25	Width reduction from 20 ft. to 17.7 ft.	Extension into easement
61+35 to 63+00	Slope transition zone exception	
61+46	Gate width reduction from 22 ft. to 17 ft.	Turnouts preceding/ensuing segments
62+30 to 63+25	Width reduction from 20 ft. to 16 ft.	Turnouts preceding/ensuing segments
3+25 to 5+00	Width reduction from 20 ft. to 18 ft.	Widening to maximum extent practicable
5+00 to 7+50	Width reduction from 20 ft. to 16 ft.	Turnouts preceding/ensuing segments
7+50 to 9+00	Width reduction from 20 ft. to 18 ft.	Widening to maximum extent practicable
9+00 to 10+00	Width reduction from 20 ft. to 14 ft.	Turnouts preceding/ensuing segments?
10+00 to 11+00	Width reduction from 20 ft. to 16 ft.	Turnouts preceding/ensuing segments
11+00 to 12+00	Width reduction from 20 ft. to 18 ft.	Widening to maximum extent practicable
12+00 to 15+50	Width reduction from 20 ft. to 16 ft.	Turnouts preceding/ensuing segments
76+00 to 78+50	Width reduction from 20 ft. to 14 ft.	
79+25 to 23+90	Slope exception	

Code Requirements – Vehicle Accessibility

The following code documents were reviewed, and relevant sections are summarized in Table 2 below. A detailed list of requirements is given in the Appendix.

- 2016 California Building and Fire Code
- 2015 International Building Code Commentary
- Cal Fire Napa County Fire Department – Fire Marshal’s Office Development Guidelines, Version: November 16, 2016.
- Napa County Road and Street Standards, Department of Planning, Building and Environmental Services.
- California Board of Forestry and Fire Protection, SRA Fire Safe Regulations

Table 2. Summary of Code sections relevant to exceptions requested Anthem Winery Road
Exception Evaluation

Code	Requirement
2016 California Fire Code	503.2.1 Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096mm), exclusive of shoulders,
Napa County Road and Street Standards	15. Design Criteria – Roadway Width All streets and roads, with the exception of agricultural special purpose roads and residential driveways, shall be constructed to provide a minimum of two 10-foot traffic lanes and a minimum of one foot of shoulder on each side of the roadway providing two-way traffic flow. A common drive shall provide a minimum of two 10-foot traffic lanes and provide a horizontal clearance of 22 feet.
	Roadway Turnouts: Turnouts shall be a minimum of 22 feet wide and 30 feet long with a minimum 25-foot taper on each end.
	Appendix D-11, Gated entrance – 14’ min. residential or 2’ wider than road width.
California Board of Forestry and Fire Protection, SRA Fire Safe Regulations	1273.01 – Roadway width All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping
	1273.06. Roadway Turnouts

	Turnouts shall be a minimum of twelve (12) feet wide and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.
	1273.09. Dead-End Roads (b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.
	1273.11. Gate Entrance (a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of fifteen (15) feet.

Fire Risk

Assessment of wildland fire threat/hazard/risk based on existing maps

It is useful to review existing assessments of landscape-scale fire threat, hazard, or risk. Three specific maps and historical fire perimeters are considered here:

1. Fire Hazard Severity Zone (FHSZ) map. In California, for the purposes of promulgating building regulations, land is categorized into one of three Fire Hazard Severity Zones: moderate, high, or very high. Figure 2 shows all project parcels fall within the Moderate Hazard Severity Zone.
2. FRAP Fire Threat Map. CAL FIRE's Fire Resource Assessment Program (FRAP) also published a Fire Threat Map that is a rating of wildland fire threat based on the combination of potential fire behavior and expected fire frequency. Fire threat is categorized as either moderate, high, very high, or extreme. As shown in Figure 3, the project location and most adjacent areas are classified as "high" with localized pockets of "very high".
3. CPUC Fire Risk Map. In 2017-2018, the California Public Utilities Commission (CPUC) adopted a fire risk map that quantifies the potential impact to people and improved property associated with a fire starting at a particular location. This three-tiered map classifies areas as Tier 1 (moderate), Tier 2 (elevated), or Tier 3 (extreme). Figure 4 shows the project location overlaid on this CPUC fire risk map. It is seen that project location falls in the "elevated" classification, and within half a mile of the "extreme" area.
4. Historical Fire Perimeters. Figure 5 shows historic fire perimeters from 1858 to 2015 in the region surround the proposed development. Figures 6 and 7 show the 2017 Nuns and Atlas fire outlines and damaged and destroyed structures respectively.



Figure 1. Satellite image of proposed development area. Line indicates half mile increment.

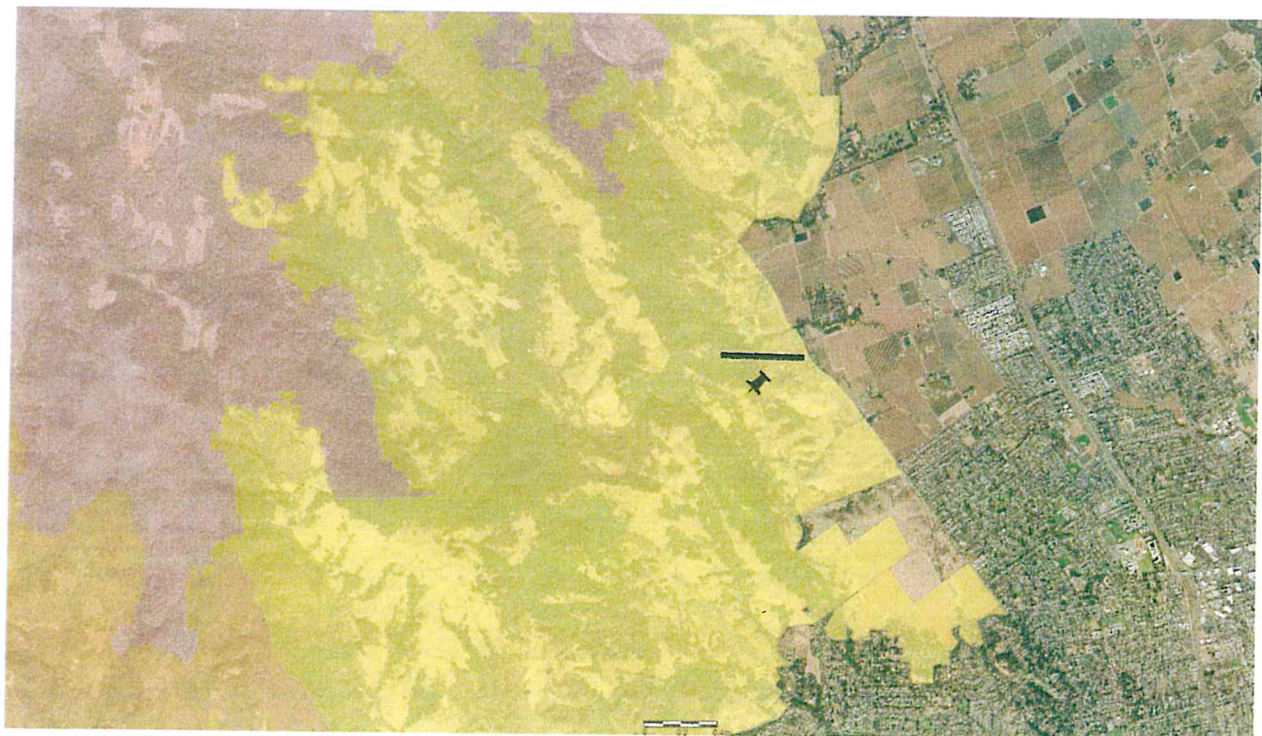


Figure 2. CDF's Fire Hazard Severity Zone (Moderate - yellow and Severe - pink) in the State Responsibility Area (SRA).

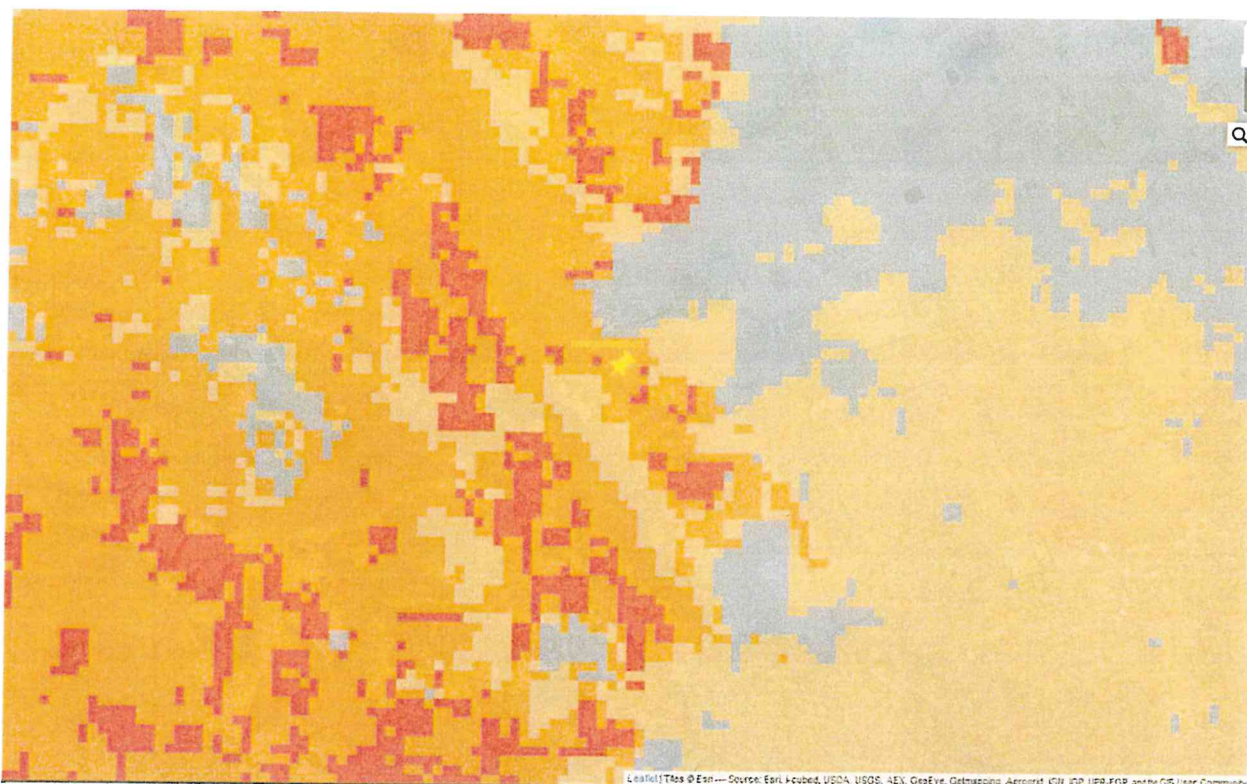


Figure 3. CDF's Fire and Resource Assessment Program (FRAP) Fire Threat Map showing areas of "Very High" (red) and "High" (orange) fire threat areas.

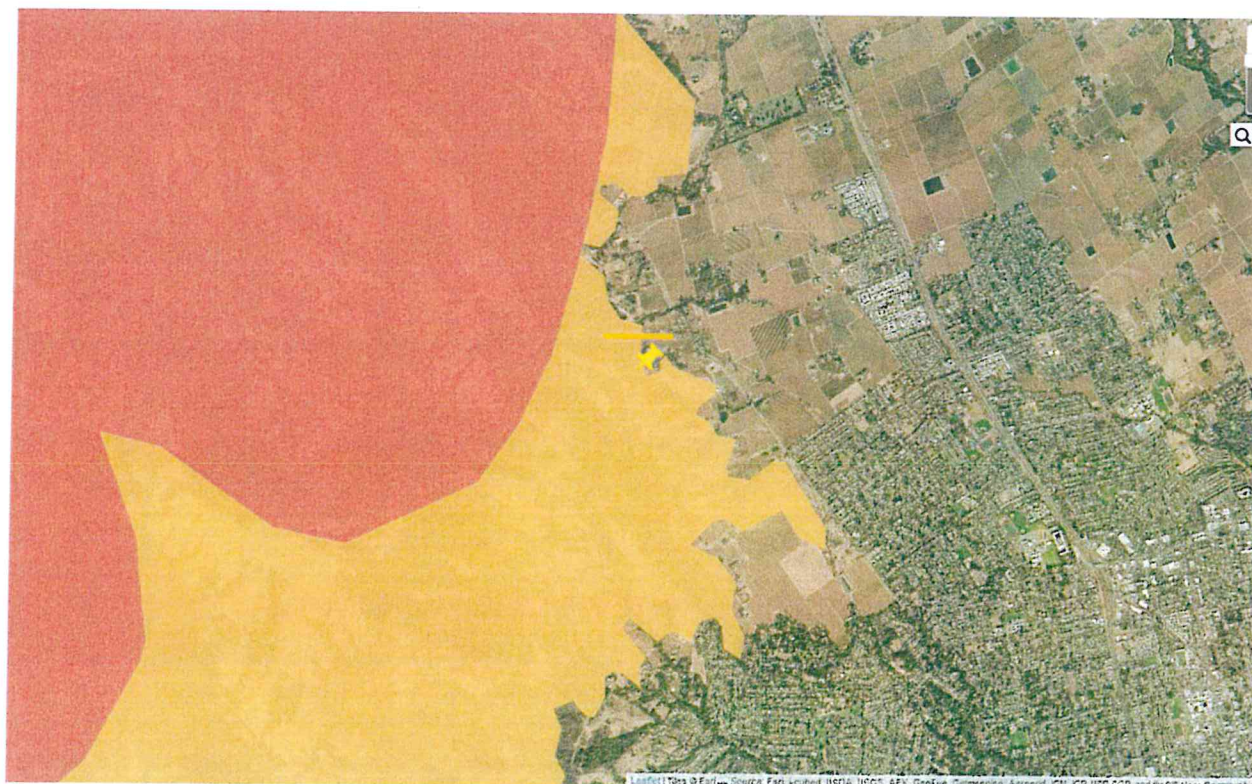


Figure 4. California Public Utilities Commission Fire Threat Map showing areas of "Elevated" (yellow) and "Extreme" (red) fire threat.



Figure 5. Fire Perimeters 1858 to 2015.

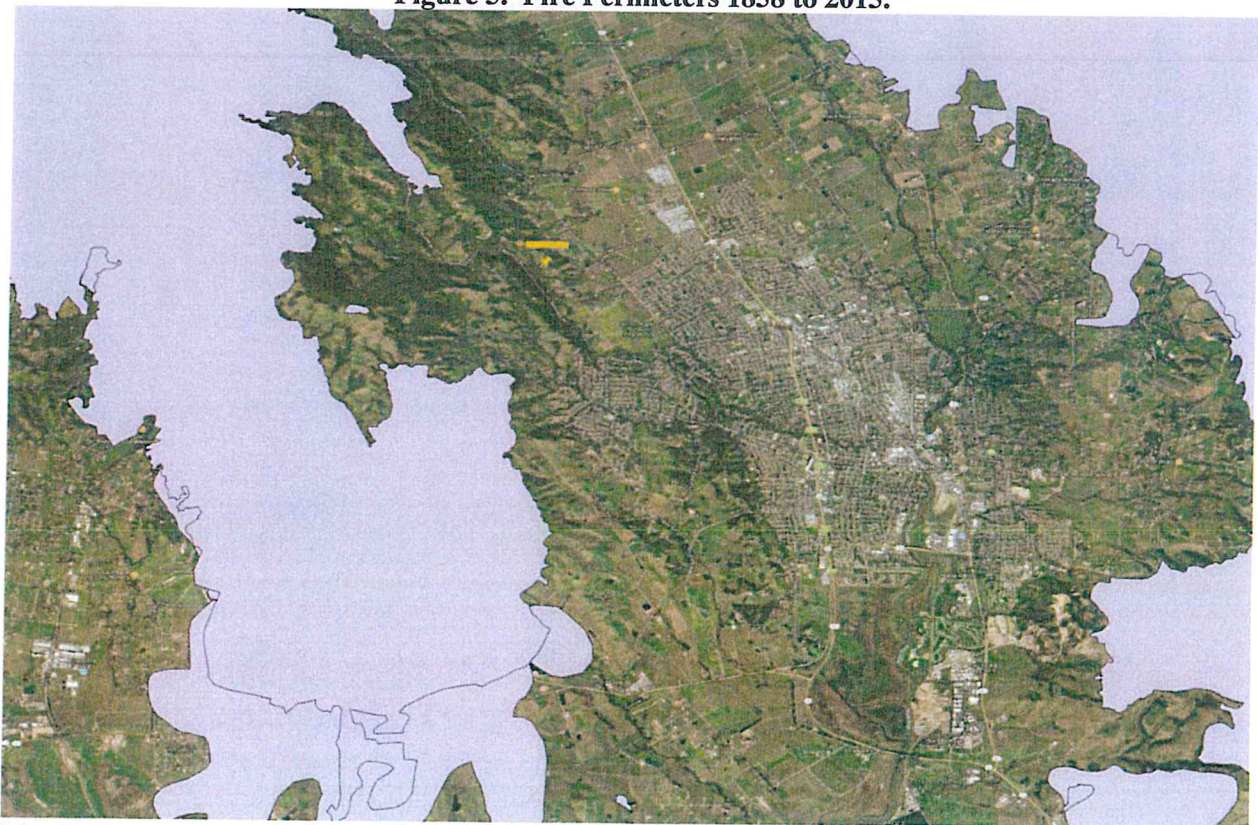


Figure 6. 2017 Napa Fire Complex (Nuns and Atlas) perimeters.

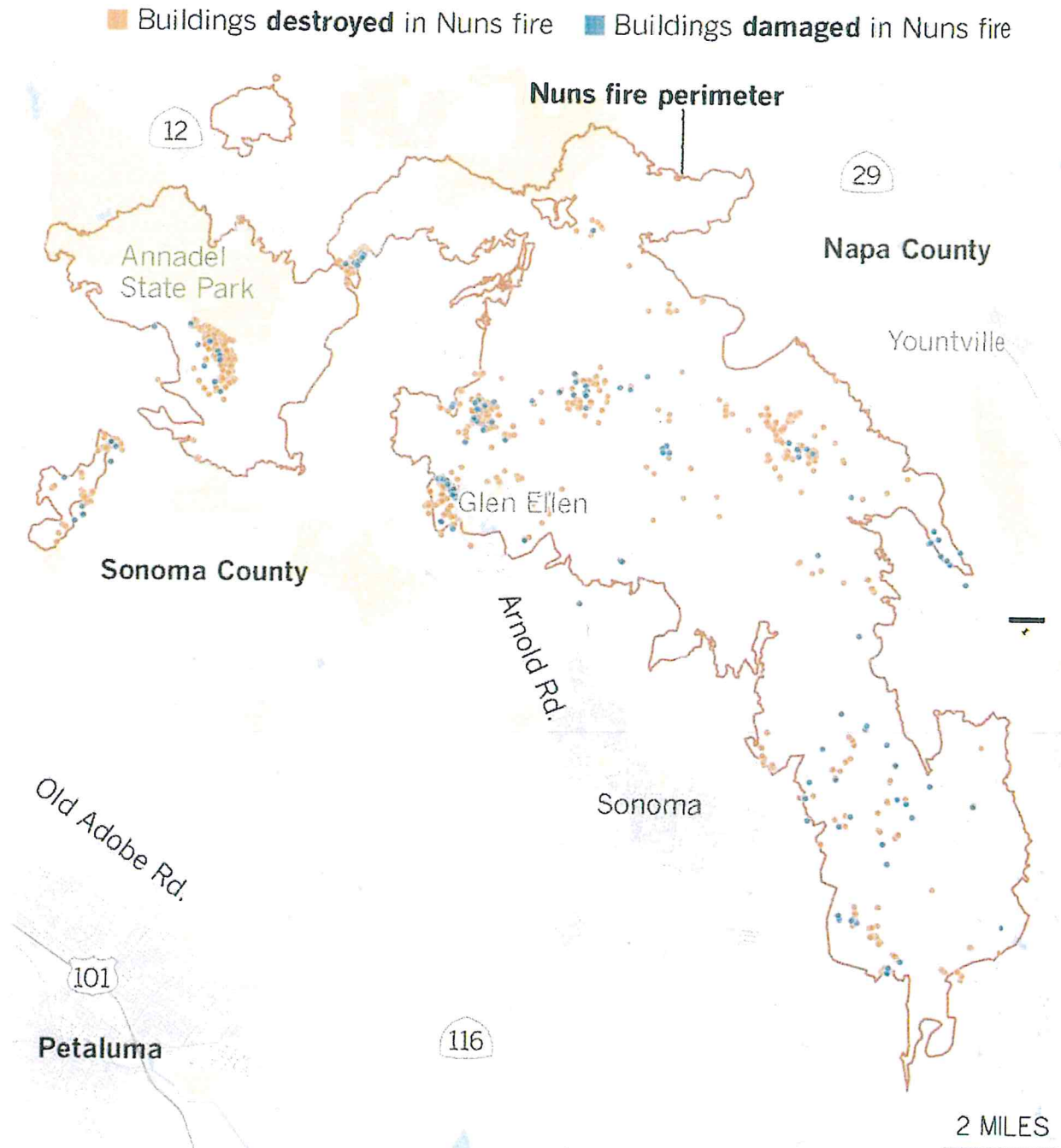


Figure 7. 2017 Napa Fire Complex (Nuns and Atlas) perimeter and buildings destroyed and damaged.

Summary and concluding remarks

The analysis, conducted in three parts, demonstrates the following.

1. The proposed winery use would shift occupant type from a few workers who are familiar with the site, operating largely during daylight hours, and possibly trained in emergency procedures, to large groups of 50 to 300 recreational visitors. These visitors would likely not be familiar with the site, egress routes, or emergency procedures. Groups indoors, in social situations, likely consuming alcohol, may delay egress for significant periods after becoming aware of an emergency, and might be making their escape after dark. The Building and Fire codes anticipate these higher risk elements associated with assemblies and provide extra levels of protection for occupants.
2. The risk of fire at a working winery is likely higher than typical Assembly occupancies. That risk is magnified considerably by this winery's location in a recognized and historically higher fire threat area.
3. Reduction in prescriptive requirements for access and egress have not seen quantitative description of the basis for prescriptive requirements or substantial rational analysis for alternate adoption. This is especially important when referencing local amendments that may be anticipating rural and agricultural uses more common in unincorporated areas.

In their call for reduced accessibility, the proponents have failed to include in their assessment, the greater risk associated with large numbers of recreational guests in an unfamiliar setting and have failed to consider specific hazards, especially those associated with a relatively high threat of wildland fire. Nor has there been an adequate description of the basis for access requirements or demonstrated rational support for numerous and significant reductions in these requirements. As a result, there has not been a demonstration that these changes provide the same overall practical effect as State and Local Standards towards providing defensible space, and consideration towards life, safety and public welfare.

Sincerely,



David B. Rich, PhD