



SAFRR

State Alliance for Firesafe Road Regulations

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Comments on Wildfire Hazards and Risk for Sonoma Development Center DEIR

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The State Alliance for Firesafe Road Regulations (“SAFRR”) works to ensure that California’s road standards provide for safe and concurrent evacuation and firefighter access. SAFRR engages with local and state agencies to address road standards that foster safe evacuation for new residential and commercial development in fire prone communities. SAFRR works with technical experts to develop data-supported CEQA analyses that ensure road and evacuation standards protect public and firefighter safety in areas with high fire risk.

General Comments on Wildfire Hazards and Risk

The DEIR has failed to describe existing conditions of wildfire hazards or to properly analyze potential impacts required by CEQA and the Sonoma County 2020 General Plan. An overriding public safety and environmental issue is that it is impossible to evaluate evacuation safety for a Proposed Project and the associated potential impacts on existing residents and employees when no baseline was provided for evacuation of existing residents and businesses utilizing the same routes. **Before any consideration of additional housing or any other development for the Sonoma Development Center (SDC) can be evaluated, the county must establish the existing conditions as a baseline and properly analyze the potential impacts of the Proposed Project.** Highly relevant to baseline and potential impact analyses, we know from real-life experience from several wide-scale evacuations (2017 Nuns Canyon Fire; 2019 Kincaid Fire) and even smaller scale evacuations (2020 Glass Fire), that Highway 12 became completely blocked, with traffic often at standstill for hours. We simply cannot justify increasing wildfire hazardous conditions that are not mitigated to an acceptable level of risk, exacerbating an already dire and unsafe condition. Moreover, these unmitigated hazards are compounded by the increase in rapidly moving wildfires due to climate change, often with only an hour or less advance notice before mandatory evacuation. We cannot continue with ‘business as usual’ and promote economic development, new housing, and new businesses in fire-prone rural areas that are served by inadequate road infrastructure. Any new large-scale development needs to provide for evacuation onto major roads such as Highway 101 and be situated in existing cities and towns to increase evacuation safety and reduce wildfire risk.

In 2019, Former State Fire Marshal, Kate Dargin outlined critical needs for land use best management practices to the Senate Governance and Finance and Natural Resources and Water Committeeⁱ. *“The Fire Hazard Severity Zone (FHSZ) methodology accurately describes hazard and is suitable for a zoning*

overlay but it is not a risk analysis. To understand risk, you need to measure the fire hazard PLUS the mitigations that reduce the hazard. This combination is risk. This will become an increasingly apparent gap if development approvals become tied to fire hazard zones. Using CEQA as an example, consider the process of evaluating a development for environmental impact. The core of the CEQA decision is based on whether the project can meet a defined need for mitigation so that the project impact is either negligible or acceptable. To do this for wildfire, we must define the wildfire mitigations that result in negligible or acceptable risk to lives, homes, and communities. The FHSZ's do not have this capability but risk assessment does. We need to extend the concept of fire hazard into the more mature evaluation of fire risk and this assessment must be enabled at the parcel scale to be useful for land use decision-making."

Specific Comments on Wildfire Hazards and Risk:

16.1.1.3. Regional and Local Regulations.

The Sonoma County 2020 General Plan Goal PS-3 provides: "Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires;" Objective PS-3.2 provides: "Regulate new development to reduce the risks of damage and injury from known fire hazards to acceptable levels;" Policy PS-3b provides: "Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with the Public Safety Element in the review of projects."

The DEIR fails on all the above requirements by not establishing a baseline and not properly addressing the increased risk of wildfire from an increased number of residents and businesses, not properly addressing the increased frequency, severity, intensity and spreading speed of wildfires due to climate change, and not properly analyzing the actual evacuation times and risks in conjunction with all existing residents and businesses that utilize the same evacuation routes.

Furthermore, the DEIR erroneously applies the Sonoma County Code Chapter 13 (p499) in the unincorporated State Responsibility Area (SRA). The Board of Forestry and Fire Prevention refused to certify Chapter 13 because it concluded it was not equal or more stringent than the state Title 14 SRA Fire Safe Regulations. Thus, those stricter state regulations govern the entire SRA as well as VHFHSZ of the Local Responsibility Area (LRA) as required by PRC 4290 and the implementing law, Title 14, Division 1.5, Chapter 7, Subchapter 2, SRA Fire Safe Regulations. Section 1270.04(d) of those regulations states "The Board's regulations supersede the amended local ordinance(s) when the amended local ordinance(s) are not re-certified by the Board."

Although the DEIR acknowledges that 95% of wildfires are caused by human activity (p500), it fails to provide any analysis of how the 2,500+ additional residents as well as hotel guests and businesses will exacerbate this ignition risk. It provides no mitigation of the known increase in wildfire risk. Realistically, there is no way to mitigate this increased wildfire risk other than to reduce the number of people and vehicles in the area. The DEIR must adequately analyze and mitigate wildfire hazards and risks and the issues identified above to prevent more loss of lives in Sonoma Valley and beyond.

There is a growing body of scientific literature regarding wildfire hazards and risks, and specifically evacuation scenarios. Dr. Thomas Covaⁱⁱ describes how recent extreme wildfires are motivating

unprecedented evacuation planning. He defines a scenario as “dire” if the required time to clear an area is greater than the time available (i.e., lead time). A critical need is to consider dire scenarios that allow less time to clear an area than required. This occurred in Paradise in 2018 with only one exit route available, resulting in over 85 lives lost. Although these scenarios often begin with an ignition near a community, any scenario can become dire due to weather conditions such as high winds, human response, technology, cascading events, and community design. Although research has widely addressed scenarios with ample time and favorable conditions, protecting people in dire scenarios is much more challenging. Dr. Cova, et al. provide a framework for generating dire scenarios that includes difficult starting conditions, delayed decision-making, variable fire spread rates, limited warning technology, and random adverse events. The goal is to move beyond favorable scenarios and generate challenging ones that inspire novel protective planning.

3.16.1.3. Impact Analysis

16.1.3.1 Significance Criteria. CEQA Criteria from Appendix G, any of which would create a significant impact, are:

Criterion 1: Substantially impair an adopted emergency response plan or emergency evacuation plan;

Criterion 2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

Criterion 3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

Criterion 4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes.

16.1.3.2 Methodology and Assumptions

The DEIR relies on FHSZ mapping, assessment of existing conditions, and an unrealistic evacuation analysis. Its evaluation ignores that areas downwind from or adjacent to a high or very high fire hazard zone are likely targets of the wildfire, as proven in recent fires in Sonoma County. The 2017 Nuns fire consumed many areas that were only rated as moderate fire hazard in the vicinity of the SDC lands, and this same outcome has been documented across California. Saying that much of the area is only in a moderate fire hazard zone is not based on fact, policy or reality. As noted above, former State Fire Marshal Kate Dargin asserts that the FHSZ methodology accurately describes hazard and is suitable for a zoning overlay, but it is not a risk analysis. The DEIR must be revised to adequately describe, analyze and mitigate this reality in an accurate way.

Proposing building a microgrid within the Core Campus is positive (p510). However, the microgrid is stated as only a future proposal, only for emergency use and does nothing to mitigate that this will be connected to PG&E’s grid, or that existing PG&E powerlines may spark fires in adjacent lands. Increased energy demand increases transmission needs with increased fire risk. All existing and new PG&E lines should be buried to mitigate risks.

16.1.3.4 Impacts (p511)

To state that the proposed development would not substantially impair an adopted emergency response plan or evacuation plan is an unsupported assertion and defies all data from experience.

Firstly, as discussed above, stating that since the addition of low to medium density residential housing as well as commercial uses is not in a high fire hazard zone, it will not increase fire hazard, itself defies even statements in the DEIR (p500) that humans are the ignition source for 95% of wildfires. The discussion of evacuation routes to Highway 12 completely ignores that fact that Highway 12 already gets rapidly congested with vehicles during mass evacuations, turning it into a parking lot with traffic inching along for hours. Oakmont's 5,000 residents, Kenwood's 1,000 residents, Rincon Valley's 5,600 residents, Skyhawk's 1,800 residents, Los Alamos Rd's 500 residents plus Glen Ellen's 1,200 residents all exit onto Highway 12 during fire evacuations. This already results in huge delays and inchworm traffic on Highway 12. Depending on the direction of the fires, residents may either need to evacuate South, thus combining with additional traffic from Boyles Hot Springs and Sonoma, or North, with additional traffic from eastern Santa Rosa. The analysis ignores an additional 400+ future new residents in the new low-income apartment complex approved to be constructed at the intersection of Calistoga Road and Highway 12. To state that adding thousands more people from the new SDC development proposed would not impair existing evacuation is incomprehensible and unsupported.

The evacuation analyses shown in Figures 3.16-3 and 3.16-4 are completely unrealistic. Under a mandatory evacuation from a fast-moving fire, why would only a maximum of 65% of residents evacuate in the first hour? The fire may be upon them within the hour. And what about the additional ~14,000 thousand people discussed above, coming from north of Glen Ellen and evacuating south on Highway 12 in scenario 1 (Figure 3.16-3)? For scenario 2 (Figure 3.16-4) for a northwest progressing fire, the 3,000 residents from Bennett Valley would also ultimately feed into the evacuation routes.

The suggestion that occupants and visitors could be directed to a shelter-in-place facility is not explained nor supported. Shelter-in-place planning requires incorporation and analysis of fire behavior factors, codes and anticipation of reactions of occupants and visitors during a wildfire scenario. Essential information and analysis are notably absent from the DEIR. Human behavior is challenging to manage, especially during a conflagration. Shelter-in-place is never a first choice; studies have shown that people want to flee a fire, not let it burn over them. Many fire professionals suggest that shelter-in-place only serves as a last resort and emergency plans cannot rely upon sheltering to mitigate fire risks. Furthermore, even last resort sheltering requires detailed planning, professional staffing, coordination, equipment, air quality testing, communication capabilities and practice drills. Visitors will not be able to participate in practice drills. Limited emergency responders and resources are diverted to sheltering, taking away from other critical efforts for fire suppression and evacuation of civilians.

Many wildfire experts, researchers, building and code officials, and fire officers have explored sheltering options to hold people trapped in a wildfire. Fire professionals grasp that fires not only kill people via flames, but also via smoke and removal of oxygen. Significant research is required to determine building construction requirements for shelters because simply following recent building codes does not ensure safe refuge. No state-of-the-art master planned community is safe from wildfire, and evacuation is the safest first option. Sheltering plans have not been tested under the increased fire severity, intensity and unpredictable behavior occurring recently and which are not completely understood. In summary, the SDC Proposed Project has not mitigated the potentially significant impacts related to wildfire.

The DEIR mentions evacuation from the 2019 Kincaid Fire (incorrectly listed as in 2018, p516). That evacuation order was not as imminent as for other closer, fast-moving fires, with residents evacuating over a period of many hours, not all in the first hour. Yet there were still very blocked roads. The DEIR calculates that the evacuation times would only be increased by 1-5% (Table 1.16-1, p517) from the additional development proposed for SDC. These calculations defy all reality from evacuations on Highway 12 from recent fires and defy all logic and scientific methods to calculation evacuation times (e.g., see body of scientific work of Dr. Thomas Cova, University of Utah, on scientific analysis of evacuation timesⁱⁱ).

The DEIR does conclude that the Proposed Plan would increase wildfire risk to new residents and visitors, and that new utility lines would also increase fire risk (p520), but then only 'proposes policies' for 'future consideration' (p519-520) such as managed landscape and banning wooden fences, burying utility lines, building a microgrid for emergency use. But these mitigations are only listed as 'future considerations, not requirements and hence not a part of the proposed project. The DEIR states that no mitigation measures are required.

Only two mitigations are possible:

- 1) To significantly reduce the number of new housing units, eliminate the hotel and other commercial development and to widen Highway 12.
- 2) To maintain this only as open space and preserved historical buildings, with very limited new low-income housing.

The County of Sonoma needs to face the new reality of increased wildfire risk and voracity and limit new development in fire-prone rural areas. The SDC DEIR and Specific Plan must be revised to reflect these new realities. By ignoring wildfire issues at the onset, the life safety risks become insurmountable, not only to the SDC occupants, but also to surrounding communities. The assumptions and determinations in the DEIR related to wildfire safety are unequivocally inadequate. The DEIR ignores current and potential wildfire risk factors and assessment methods, and dismisses them as insignificant, failing to identify or mitigate the potentially significant impacts of the proposed project.

SAFRR appreciates the opportunity to present our concerns regarding the Sonoma Developmental Center DEIR. If you have any comments or questions regarding this letter, please contact Deborah Eppstein by email (deppstein@gmail.com) or phone (801-556-5004).

Sincerely,



Deborah A Eppstein, PhD

Director

State Alliance for Firesafe Road Regulations (SAFRR)

ⁱ Dargin, Kate. 2019 Living Resiliency in the New Abnormal: The Future of Development in California's Most Fire Prone Regions. Presented to Senate Governance and Finance and Natural Resources and Water Committee

ⁱⁱ Cova, T. J. et al. 2021. Toward Simulating Wildfire Scenarios. Natural Hazards Review. DOI: 10.1061/(ASCE)NH.1527-6996.0000474. © 2021 American Society of Civil Engineers.