



December 22, 2017

Santa Clara/Mojave/L.A. River Rangers District  
Attn: Diane Travis, District Ranger  
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[Comments-pacificsouthwest-angeles@fs.fed.us](mailto:Comments-pacificsouthwest-angeles@fs.fed.us)

Re: Administrative Sites Defense Zones and Evacuation Routes Project

Dear Ms. Travis,

We sincerely appreciate the commitment of Angeles National Forest staff members to establish a collaborative approach in developing and implementing vegetation management programs. We acknowledge that taking such an approach involves a lot of time and effort, and we are grateful for the opportunity to participate in this process. We hope the Forest Service finds our suggestions valuable, and we are looking forward to further collaborating with staff members on the Administrative Sites Defense Zones Project.

With the recent devastation brought to the southwestern portion of the Angeles National Forest by the Creek Fire, we would like to stress the importance of properly addressing the real problem in this situation—bad community planning and the flammable conditions of structures themselves. Rather than spending valuable time and funding on habitat clearance (especially exceeding a property's immediate surroundings) the project must prioritize its efforts around the factors that are stated in its objective—protecting infrastructure and communities. Richard Halsey, the director of the Institute, addressed this point in a recently-published article in the *Los Angeles Times*:

The standard procedure to reduce wildfire risk is to clear habitat. We have spent millions of dollars doing this for nearly a century. Nevertheless, our homes keep burning. That's because while vegetation management such as fuel breaks and prescribed burns can help during non-extreme fire events, they do little to suppress extreme events. But if anyone questions vegetation management in the backcountry, the typical response is that the projects will work as designed for 90th percentile weather conditions. That's absurd. Imagine if we designed buildings to withstand only 95th percentile earthquake movements, or what you would feel as a result of a magnitude 2.5. We need to protect

communities from fires that actually do the damage. (<http://beta.latimes.com/opinion/op-ed/la-oe-halsey-socal-fires-why-20171207-story.html>)

As the Forest Service “proposes to reduce the fire risk on and adjacent to administrative sites by reducing fuel loading,” such an aim only offers a single solution to the complex fire problem—the removal of native vegetation in the name of “fuel.” While fuel modifications are a crucial component to risk management—especially within and immediately surrounding threatened communities—it alone fails to account for the entire scope of variables that promote wildfire behavior.

If the project’s objective “to provide for community and infrastructure protection” is to be achieved, it is essential that such protective measures do not rely on fuel reduction alone. By focusing only on the removal of vegetation as the solution, the proposal overlooks the most important factor attributing to fire risk—the structures themselves. Rather, a comprehensive approach must be taken—one that collectively focuses on improving community planning, reducing structural flammability through retrofitting, and creating and maintaining defensible space within the communities at risk.

Therefore, to properly address the issue at hand, we strongly recommend a combination of some fuel reduction treatments in addition to the improvement and modification of building structures to be more fire-safe. However, we recommend that the focus of such fuel reduction treatments remain within the 100 feet of the “primary buffer” immediately surrounding structures. Improving the fire-safety of structures within communities at risk may be achieved by correcting any existing flammable components of the structures themselves, along with educating homeowners on how to maintain these fire-safe conditions on their properties. These conditions include, but are not limited to: the replacement of wood shake roofing and siding; the installation of ember-resistant attic vents; the removal of flammable landscaping plants; the removal of leaf litter from gutters and roofing; the removal of flammable materials near the home such as firewood, awnings or umbrellas, trash disposal bins, wooden fences, and so on; and, lastly, the implementation of roof/under eave low-flow exterior sprinklers supplied by an independent water supply.

We are aware of the desire to preserve the historical quality of the cabins within the project so there are multiple solutions to addressing shake cedar shingle siding issue. These include the application of flame resistant substances at the beginning of the Santa Ana wind season, or the possible replacement with shingles with a similar appearance that are made of Class A materials.

Without sufficiently addressing the largest, most dangerous source of fuel—the structures themselves—a project that focuses solely on fuel reduction for fire prevention may ultimately prove to be a waste of time, effort, and funding. Additional information about our recommended comprehensive approach to protecting homes and communities is available on our website: <http://californiachaparral.org/bprotectingyourhome.html>.

In discussions with Ben Fitzsimmons, the President of the Big Santa Anita Canyon Permittees Association, there appears to be significant concern by the owners of the cabins that the project as currently proposed is excessive and does not take into consideration the needs and desires of

the Canyon community. Mr. Fitzsimmons has expressed a desire to work with the Forest Service to approach the fire risk issue in a more comprehensive manner.

An array of current scientific literature—including examinations of recent wildfires in southern California—validates our suggestions that are mentioned above. Clinical examinations from the 2007 Grass Valley Fire in San Bernardino NF (Cohen and Stratton 2008; Rogers et al. 2009), the 2003 Cedar Fire in San Diego County (Keeley et al. 2014), and the southern California firestorm of 2007 (Keeley et al. 2009a), illustrate the failures of fuel treatments alone to protect vulnerable communities from wildfire. In addition to these published examinations, the extent of destruction caused by the recent 2017 wildfires of northern and southern California—including those that continue to burn at this moment—also illustrate the failures of fuel treatments (especially within the Tubbs Fire perimeter), despite the general increase in fuel reduction practices.

Moreover, there are many recent scientific studies that further the lessons learned from the devastating fires in California's past. Syphard et al. 2017 highlights the importance of approaching the fire problem with a comprehensive, community-based solution, in order for the given project to be the most cost-effective. This solution illustrates that, if we are trying to protect homes and communities from the threat of wildfire, we must prioritize our focus in the vulnerabilities of the structures that we are trying to protect. With a handful of cross-references to other scientific literature, Syphard et al. 2017 states that:

Historically, fuels-based hazard assessments and the use of fuels management for protecting communities have been the central focus of study [Finney and Cohen, 2003; Stratton, 2004], but recent research has contributed to a growing recognition that community safety is a function of a large suite of variables, which when considered together, may lead to the most effective management [Gill and Stephens, 2009; Moritz et al., 2014; Calkin et al., 2014]. For example, studies now show how land use decision-making [Syphard et al., 2012; Syphard et al., 2013; Bustic et al., 2017], defensible space and homeowner preparation [Cohen, 2000; Syphard et al., 2014; Cao et al., 2016], and ignition prevention strategies [Cary et al., 2009; Prestemon et al., 2010; Syphard and Keeley, 2015], can complement traditional management actions of fire suppression and fuels management.

Another factor that is broadly recognized as critical for preventing structure loss to fire is the design and materials used in the building's construction. That is, the physical attributes of a structure confer ignitability either through flames and heat [Cohen, 2004] or via embers produced during wind events, which can blow 1–2 km ahead of a fire front [Quarles et al., 2010]. In fact, it is these embers that are most responsible for homes igniting during wildfires [Koo et al., 2010; Maranghides and Well, 2009; Quarles et al., 2010; Ramsay et al., 1987].

Regarding the creation of defensible space around communities, another study, Syphard et al. 2014, highlights the importance of integrating a “suite of prevention measures” through a comprehensive, community-based approach, in order to achieve the most effective results in risk-management. In particular, this study focuses on how defensible spaces exceeding 100 feet from a structure clearly lack any additional protection to the structure itself:

Structures were more likely to survive a fire with defensible space immediately adjacent to them. The most effective treatment distance varied between 5 and 20 m (16–58 ft) from the structure, but distances larger than 30 m (100 ft) did not provide additional protection, even for structures located on steep slopes. The most effective actions were reducing woody cover up to 40% immediately adjacent to structures and ensuring that vegetation does not overhang or touch the structure. Multiple-regression models showed landscape-scale factors, including low housing density and distances to major roads, were more important in explaining structure destruction. The best long-term solution will involve a suite of prevention measures that include defensible space as well as building design approach, community education and proactive land use planning that limits exposure to fire.

As the “most effective treatment distance varied between 5 and 20 m (16-58 ft) from the structure,” we recognize the importance of creating defensible space around structures. However, it also must be recognized that defensible spaces with “distances larger than 30 m (100 ft) did not provide additional protection” from fire. Thus, while defensible space is a key component to proper fire-risk management, it must be recognized that we don’t have to destroy more native habitats to achieve the most effective results. In order to provide the most cost-effective solution, along with effective defensible space practices, funding should be allocated to protecting structures themselves.

One final study, Calkin et al. 2014, illustrates the importance of prioritizing risk management practices within and surrounding the Home Ignition Zone (HIZ), rather than limiting practices to fuel reduction alone:

Wildfires are inevitable, but the destruction of homes, ecosystems, and lives is not. We propose the principles of risk management to provide land management agencies, first responders, and affected communities who face the inevitability of wildfires the ability to reduce the potential for loss. Overcoming perceptions of wildland-urban interface fire disasters as a wildfire control problem rather than a home ignition problem, determined by home ignition conditions, will reduce home loss.

Because wildfire is a natural part of the California ecosystem, we strongly suggest that risk management activities are tailored towards adapting human society to the threat of wildfire—not the other way around. In recent years, although the main objective is to protect homes and communities, it seems as if the focus has been more on clearing vegetation than protecting actual homes. This point is illustrated by Calkin, as “Overcoming perceptions of wildfire-urban interface fire disasters as a wildfire control problem rather than a home ignition problem...will reduce home loss.”

In order to effectively address the fire problem in southern California, we strongly recommend pursuing this project as well as future ones with a comprehensive approach that accounts for all variables that exacerbate fire behavior—not just that of native vegetation. As also recommended by both recent scientific literature and post-fire examinations, we strongly recommend that this proposal focuses on what its objective is trying to protect—properties, communities, and homes themselves. By focusing on *protecting* structures—through retrofitting flammable components

and maintaining fire-safe conditions—rather than *stopping* the inevitability of wildfire, taking such a comprehensive approach to the California fire problem would be the most effective in terms of saving funding, homes, and lives.

On a final note, whenever we comment on a fuel reduction project, one of the often-repeated responses to our plea to approach the fire risk problem more comprehensively, is that such an approach is beyond the scope of the project. Considering the losses we have suffered from wildfires over the past three months, it are hopeful the Forest Service will begin to tailor projects to address the factors that can lead to the loss of life and property in wildland fires.

Thank you again for including us in this process. We are looking forward to future collaboration with Angeles National Forest staff members on this project.

Sincerely,



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