

Law Offices of  
**Stuart M. Flashman**  
5626 Ocean View Drive  
Oakland, CA 94618-1533  
(510) 652-5373 (voice & FAX)  
e-mail: [stu@stufash.com](mailto:stu@stufash.com)

**Delivery via email to: [planning@berkeley.edu](mailto:planning@berkeley.edu)**

October 5, 2020

UC Berkeley, Physical & Environmental  
Planning  
Attention: Raphael Breines, Senior  
Planner  
300 A&E Building  
Berkeley, CA 94720-1382

Re: Draft EIR Comments: WVFMP

Dear Mr. Brienens:

This letter is provided on behalf of my client, the Claremont Canyon Conservancy (“Conservancy”), to provide comments on the University’s Draft Environmental Impact Report (“DEIR”) for the above-referenced Wildland Vegetation Fuel Management Plan (“Plan”) for the University of California, Berkeley’s Hill Campus, located in the Oakland-Berkeley hills above and east of the University’s main campus. The Conservancy will also be writing separately to provide its comments on the Plan itself, which still needs significant improvements if it is to meet the Plan’s intent of significantly reducing the risks from wildfires in the Plan area.

In our view there are impacts that have not been adequately addressed in the DEIR, and some of these impacts should cause the University to reconsider the range of alternatives analyzed in the EIR. In particular, the EIR should accurately analyze the long term environmental and fire risk benefits of the proposed Alternative A, submitted by Professor McBride, including that alternative’s recommendation that the Plan’s fuel reduction approach should commit to removing eucalyptus and Monterey pine (“pine”), rather than simply ‘thinning’ these species that pose such a high degree of fire risk. Based on the flaws to be identified in this letter, the Conservancy feels it is imperative that the University consider options beyond those identified in the DEIR. Because that will significantly affect the analysis presented in the DEIR, the Conservancy suggests that a revised EIR adopting a more complete and robust eucalyptus/pine removal strategy as the preferred alternative will need to be recirculated for additional public comment.

**A. The DEIR Fails to Adequately Describe the Environmental Setting.**

A central CEQA requirement is that the environmental review document contain a full description of the ‘environmental setting’ in which the project will occur. 14 Cal. Code Reg. § 15125; *San Joaquin Raptor v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722, 726 (“[I]nadequate consideration and documentation in the EIR of existing environmental conditions rendered it impossible for the [EIR] to accurately assess the impacts the project would have...”)

In this case, the overall description of the environmental setting in the DEIR is inadequate in two key respects.

First, the DEIR fails to discuss adequately the existing setting that is being currently and will in the future be shaped by accelerating climate change. Due to this failure, the DEIR's analysis fails to fully consider the impact of the Plan in conjunction with reasonably foreseeable future effects of climate change on the Plan area. It is far past debate that global climate change is no longer just a theory about potential future changes. Climate change is already happening, and its effects are evident on almost an every day basis to even the casual observer. Those effects, as they apply to the Plan area include a shorter, but likely more intense, winter "rainy season." Conversely, they also include a longer, warmer, and drier summer/fall "dry" season.

Wet winters and dry summers are well-established characteristics of the Bay Area's Mediterranean climate regime. Climate change is making those seasonal changes more extreme, and tilting them in the direction of a longer and hotter dry season. In particular, the earlier end to the rainy season and the warmer, drier conditions during the summer/fall dry season will predictably mean that vegetation in the Plan area will become drier and more combustible than it has in the past. In addition, plant species that are not well adapted to warm and very dry conditions ("drought tolerant" plants) will not be able to maintain their health and will therefore be more subject to stress, disease, and potential early death. The DEIR does not take these reasonably foreseeable changes into account in evaluating the future fire risk of allowing the current mix of plant species to remain "as-is" in the Plan area. It should be noted that the "future" here is not fifty or a hundred years ahead. As the events of the past few years have shown, significant climate change is already happening, and can only be expected to increase in speed and severity over the next twenty years, well within the timeframe of this Plan's implementation<sup>1</sup>.

Of particular concern are species that are currently present as large populations and could provide large amounts of fuel for wildfires. The most significant of these is the blue gum eucalyptus. While this introduced species, coming from Australia, is well adapted to warm climates, it is not particularly drought tolerant. (See, <https://plants.usda.gov/java/charProfile?symbol=EUGL> [accessed 9-19-2020 "drought tolerance = low"]). Further, its moisture use is high (*Id.*), so it will tend to dry out the soil around its roots. (See, K.M. Wolf and J.M. DiTomaso, Management of blue gum eucalyptus in California requires region-specific consideration, Calif. Agriculture 70(1):39-47- <http://calag.ucanr.edu/archive/?article=ca.v070n01p39> at p. 43.) (hereinafter " Management of blue gum eucalyptus in California.")

Second, the DEIR fails to adequately describe the past history and resulting current occurrences of eucalyptus and pine in the project area, including but not limited to 1) the specific density and size of eucalyptus and pine groves in the project area; and 2) the relevant success or failure of past efforts to limit eucalyptus and/or pine through thinning versus removal, and how those past efforts relate to the present distribution of these high fire risk species within the project area. For example, the DEIR (p. 2-9) states that treatments "would be primarily implemented in areas where eucalyptus trees were previously removed but regrowth occurred because of ineffective follow-up treatments." This raises a substantial question not addressed in the DEIR as to how and why prior efforts to thin or remove eucalyptus have or have not been successful, including a lack of discussion about which 'follow-up treatments' were utilized and why these treatments were 'ineffective'<sup>2</sup>.

---

<sup>1</sup> An additional factor not addressed in the DEIR is fire ignition by lightning strikes. While heat lightning (lightning not accompanied by heavy rain) has been uncommon in the Bay Area, this summer's devastating lightning strikes indicate a new risk from climate change – the migration of tropical storms north from Mexico, accompanied by an abundance of lightning. Such lightning strikes are most prevalent on ridgelines, and especially to tall trees like eucalyptus and Monterey pine. This is an additional reason to make removal of these species from ridgelines a top priority.

<sup>2</sup> Presumably, an ineffective treatment is one that allows the removed species to quickly re-establish themselves.

Together, these deficiencies in describing the Project setting skew the DEIR's impact analysis and selection of a preferred project alternative. As discussed below, although the Plan targets eucalyptus and pine in the project area for removal as a fire hazard, it also provides UCB with the option of simply thinning these species, which will likely not be effective in reducing fire risk and may even increase such risk over the long term as these species – particularly eucalyptus – fill in the spaces created by the project's removal of other understory vegetation identified as a fire risk. With the expected increase in summer temperature and decrease in moisture availability, that will be an even more important factor in the future. Further, given its susceptibility to drought, eucalyptus' value for the permanent sequestration of CO<sub>2</sub> is questionable compared to other tree species – particularly long-lived and non fire-prone species such as oak and redwood – especially because its high oil content and ease of ignition when dry make it highly susceptible to incineration and CO<sub>2</sub> release in a wildfire. (See Management of blue gum eucalyptus in California at p. 42.)

## **B. The DEIR Does Not Provide An Adequate Project Description.**

CEQA requires a full and accurate description of the project to ensure a meaningful evaluation of environmental impacts. See e.g., *Mira Monte Homeowners Assn. v. County of Ventura* (1985) 165 Cal. App.3d 357, 366; *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal. App.3d 818, 829-831; *County of Inyo v. UCB of Los Angeles* (1977) 71 Cal. App. 3d 185; 14 Cal. Code Reg. § 15124. As the County of Inyo court noted:

Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e. the "no project" alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR.

71 Cal. App. 3d at 192.

The DEIR does not provide adequate information about the project, including the nature of treatment being proposed. For example, the DEIR states that fire hazard reduction treatments would focus on reducing hazardous fire conditions in the Plan Area, and that UCB "would evaluate trees and shrubs for vertical and horizontal spacing; remove tall, unhealthy, structurally unsound or highly flammable trees that are likely to torch and distribute embers; and remove short understory trees," including a host of 'criteria' that essentially provide UCB unlimited discretion as to which trees to remove, or whether to focus on thinning as opposed to removing the high fire risk eucalyptus and pine. See DEIR, p. 2-9. Elsewhere, the DEIR proposes 'vegetation treatment activities' including manual treatment, mechanical treatment, prescribed broadcast burning, managed herbivory (livestock grazing), and targeted ground application of herbicides, each of which may be used to implement treatment types within the Plan Area. *Id.* The DEIR states that 'vegetation treatment types would be implemented using various combinations of the treatment activities, which "would be those that are most likely to achieve the desired treatment objectives for the specific site, protect natural resource values, and meet the overall Plan objectives,' and which 'best match the operational needs and treatment constraints on the landscape.' *Id.*

This type of open-ended description of how fuel reduction activities will be conducted does not meet CEQA's requirements of an adequate project description, as discussed above, which in turn undermines the DEIR's analysis of impacts and alternatives, as well as the Plan's ability to achieve the project objectives to avoid or substantially lessen fire risks in the future.

In *Stopthemillenniumhollywood.com v. City of Los Angeles* (2019) 39 Cal. App. 5th 1, an EIR for a development project state did not adequately identify the project that would eventually be constructed. Instead, the EIR

presents different conceptual scenarios that Millennium or future developers may follow for the development of this site. These concepts and development scenarios—none of which may ultimately be constructed—do not meet the requirement of a stable or finite proposed project. The development regulations that were incorporated into the project description provide the public and decision makers little by way of actual information regarding the "design features" or the "final development scenario."

*Id.* at 1. *Stopthemillenniumhollywood.com* rejected the EIR's approach, noting that the "problem with an agency's failure to propose a stable project is not confined to 'the informative quality of the EIR's environmental forecasts...Rather, a failure to identify or select a project at all 'impairs the public's right and ability to participate in the environmental review process.'" *Id.* (citing *Washoe Meadows Community v. Department of Parks & Recreation* (2017) 17 Cal.App.5th 277, 286-287.)

Here, as described below, the lack of parameters about how the project ultimately will treat eucalyptus and pine raise the possibility of significant impacts that may be caused by this project as compared to the existing environmental conditions, as well as skewing the DEIR's alternatives analysis by never comparing a project option that requires eucalyptus and pine removal, as opposed to one (the proposed project) which hedges on its commitment to remove these highly flammable species from the landscape.

### **C. The DEIR Does Not Analyze the Potential Adverse Impacts of Leaving Eucalyptus and Pine on the Landscape within the Project Area.**

The DEIR does not provide adequate information about the potentially significant adverse effects due to increased fire risk over time, as well as impacts to existing native vegetation communities, of retaining eucalyptus and pine on the landscape following completion of the largely discretionary fuel reduction activities proposed for this project.

Here, as discussed, the Plan provides UCB with considerable discretion to retain eucalyptus and pine on the landscape, based on a series of essentially standardless criteria relating to tree size, health, flammability etc. However, neither the Plan nor the DEIR discuss the foreseeable likelihood that retaining these invasive species on the ground, in conjunction with substantial removal of native understory vegetation, will lead over time to an *expansion* of these species within the project area, thereby increasing fire risk in the future while also reducing habitat for wildlife species that depend on native vegetative communities<sup>3</sup>.

As the DEIR acknowledges, without substantive discussion, prior attempts to reduce the prevalence of eucalyptus or pine through thinning or even removal have failed. The DEIR provides no discussion, however, regarding the success of these efforts or how the Plan's undisclosed approach to reducing the proliferation of these high fire risk species will be successful. In particular, the DEIR does not acknowledge the foreseeable result that retention of a percentage of eucalyptus or pine leads to significant impacts due to the ability of these species particularly blue gum eucalyptus to spread as an invasive species:

[E]stablishment of blue gum in undisturbed forests and scrub has been observed repeatedly in coastal areas of California (Cal-IPC 2015), and young trees can produce seeds within 2 to 5 years of germination, although not in great quantities (Burns and Honkala 1990; Metcalf 1924). ... Vegetative reproduction can also contribute to invasive potential, making control or removal difficult. Blue gum sprouts readily from stumps of all sizes and ages, as well as from the lignotuber (woody swelling of the root crown at or below ground level) and roots. Blue gum

---

<sup>3</sup> Particularly when considering listed species, such as the Alameda whipsnake, maintaining the ecosystem to which it is adapted is far preferable to disrupting that ecosystem with alien species, particularly when those species have allelopathic effects.

lignotubers can survive for many years in the soil after stems die back (Esser 1993; Skolmen 1983). If a tree is cut down, lignotubers become active and each bud may produce many new shoots, commonly known as “sucker growth” or coppice shoots (Bean and Russo 2014; Davidson 1993), which may be even more vigorous and difficult to control than the original growth (Farmer 2013)

See Management of blue gum eucalyptus in California at pp. 40-41.

Any retention of eucalyptus or pine will occur within the overall Plan's scope of removing substantial amounts of existing understory and/or competing trees, which will create relatively unoccupied habitat for eucalyptus or pine to occupy over the next decade and beyond. The potential in particular for blue gum eucalyptus to spread into adjacent habitats is well known:

In most cases, establishment of new populations in California wildlands is dependent on proximity to previously planted or otherwise established, seed-producing stands. Ritter and Yost (2012) noted that blue gum of the same genotype can be invasive in some areas... invasiveness ...appear[s] to be related to ...environmental conditions, particularly reliable access to water. In the Central Valley, where blue gums were cultivated as a source of fuel, timber and windbreaks, they do not receive enough moisture to propagate from seed (HEAR 2007) and, as such, spread into wildlands is generally rare. Under ideal conditions where moisture is not limited, once a tree matures it can produce a large number of progeny in a few years, doubling stand area within 10 years, or spreading at a rate of 10 to 20 feet (3 to 6 m) in diameter per year (Boyd 1997; Esser 1993). Coastal California ... is most at risk for the continued spread of blue gum.

*Id.* at p. 45. See also McBride, J.R., N. Sugihara and D. Amme. 1987. Vegetation Assessment. In: D. Boyd (Ed.) Environmental assessment for Eucalyptus Removal on Angel Island. California Dept. Parks and Recreation, Sacramento, CA. pp 23 (eucalyptus expansion increased on road cuts where competition from annual grasses had been eliminated.)

Given that the DEIR does not define or set the parameters for how or in what percentage eucalyptus and pine may be removed, one may assume for purposes of impact analysis the possibility that a not unsubstantial portion of these species may be retained on the landscape. In combination with the understory vegetation removal that will occur, this creates the significant and foreseeable potential for these species -- particularly eucalyptus -- to expand both in density and land occupied, thereby causing significant impacts on the environment:

[B]lue gum appears to alter historical abiotic conditions and ecosystem. Without removal of blue gum, plant community composition is not likely to support historic community composition. Even with removal, treatments must be repeated multiple times due to resprouting or new flushes of blue gum seedlings (LSA Associates 2009), resulting in continued disturbance.

Management of blue gum eucalyptus in California at 43-44. As discussed, and as recognized in the DEIR and other Plan documents. This spread of highly flammable and invasive species may greatly increase fire risk as well as displacement of native vegetation and wildlife within the project area:

In addition to being generally more ignitable and highly flammable in comparison with some species, blue gum accumulates more fuel for wildfires than grasslands and native tree species. Blue gum can accumulate 68,000 pounds per acre (lb/ac) of dropped limbs, bark and leaves (76,000 kilograms/hectare [kg/ha]), compared to 42,000 lb/ac (47,000 kg/ha) for California bay (Umbellularia californica (Hook. and Arn.) Nutt.) and 26,000 lb/ac (29,000 kg/ha) for coast live oak (*Quercus agrifolia* Née; also called “California live oak”) (NPS 2006). As a result, blue gum stands are particularly susceptible to fire during the

dry season in California. The flammability of blue gum leaf litter may be exacerbated by rare deep freezes, which cause die-back of the trees and contribute to fuel loads ([Rejmánek and Richardson 2011](#)).

Blue gum also has a tendency to propagate fires via open tree crowns and long swaying branches that encourage maximum updraft ([Esser 1993](#); [LSA Associates 2009](#)). Multiple stems originating from a single trunk create a basket structure that catches dead materials, which burn easily and intensely ([Burns and Honkala 1990](#); Landrum 2013). When ignited, leaves and bark of blue gum are lofted into the air, sending firebrands (fragments of burning wood) “kilometers” from the fire front to ignite new spot fires. Because leaves and bark firebrands are large, embers are generally still burning when they land, which can rapidly increase fire spread ([Rejmánek and Richardson 2011](#)).

Overall, blue gum has a high fire hazard rating in comparison with native grass and tree species, which have low to moderate ratings (LSA Associates 2009). In summary, blue gum is highly ignitable and flammable, accumulates high fuel loads, propagates fire quickly, and can increase rate of fire spread to adjacent areas. In fact, the National Park Service (2006) estimated that 70% of the energy released through combustion of vegetation was due to blue gum in the deadly 1991 Oakland hills fire.

*Id.* at pp. 41-42.

**D. The DEIR Properly Rejects Alternative B, Which Calls for the Retention of Large Eucalyptus and Pine on the Landscape within the Project Area.**

Alternative B proposes the retention of large eucalyptus and pine on the landscape based on the theory that these non-native species provide habitat for native wildlife. However, substantial evidence demonstrates that forests dominated by these species are depauperate in wildlife diversity ranging from invertebrates to vertebrate species ranging from reptiles and amphibians to native songbirds<sup>4</sup>.

Alternative B also does not address the build-up of brush and plant detritus (e.g., dead leaves, dropped branches, shed eucalyptus bark strips, etc) that will be exacerbated by the future effects of climate change in the Plan area. During the dry summer and fall months, these greatly increase fuel load and, when very dry, greatly increase fire intensity, leading to damage and death of mature trees even when the trees are not actually consumed by the fire.

The Plan calls for removal of this fuel build-up by a variety of treatments, ranging from hand clearance to controlled burns. The former can only provide limited control because it is slow and expensive. The latter, while potentially fast and effective, is of limited value because it cannot be applied safely when the fuel load is already high. In other words, it may be effective for maintaining areas that already have low ground fuel load, but cannot safely reduce the ground fuel load in areas with a high ground fuel load.

As the Plan notes, mechanical clearance can be effective in reducing ground fuel load. Given the need to reduce ground-level fuel as climate change continues to increase the summer and fall fire risk in the Plan area, mechanical clearance of areas with high levels of ground fuels, particularly those most at risk for wildfire ignition or spread during periods of Diablo winds, should be given high priority. From that standpoint, Alternative B, the reduced treatment alternative, will be even more ineffective in reducing future fire risk than is stated in the DEIR.

As the DEIR notes, Alternative B would only employ manual treatment activities to remove high fire risk fire fuels – primarily ground-level fuels. It would not involve

---

<sup>4</sup> This may well relate, in part, to the well-known allelopathic effect of blue gum eucalyptus on the understory plant community of eucalyptus groves and forests.

removal of eucalyptus except perhaps those in the immediate vicinity of evacuation routes where they might interfere with use of the evacuation route in an emergency.

The DEIR notes that because it would reduce the intensity of fuel removal treatments, Alternative B would reduce the impacts associated with those activities. However, as the DEIR also notes, the reduced activities would also reduce the effectiveness of Alternative B in reducing the risk of wildfires and their spread, particularly wildfires associated with Diablo wind conditions. Consequently, under Alternative B, such fires would continue to occur, and as climate change effects on the Plan area continue to increase, so would Diablo wildfires and their impacts.

As discussed, because Alternative B would remove only fine fuels and ground fuels, but would not remove eucalyptus, new eucalyptus would continue to sprout in and around areas of current eucalyptus groves where their growth might have been inhibited by existing ground fuels and brush, causing those groves to increase in density of eucalyptus growth and spread even more than would happen under the No Project Alternative.

Further, because the denser eucalyptus groves under Alternative B would consume more soil moisture than under the No Project alternative, over time, with the intensification of climate change, Alternative B would result in drier conditions in areas of eucalyptus, increasing the fire risk of those areas compared to the No Project Alternative. Because the increased eucalyptus density, especially smaller diameter immature trees, would increase the fuel load in eucalyptus areas, fires in those areas would also be more intense than under the No Project Alternative, and that intensity would increase as the intensity of climate change effects increased over time.

As a result, Alternative B, over time, would result in more intense and larger wildfires, especially wildfires occurring under Diablo wind conditions. This, in turn, would result in more severe fire-related impacts, including loss of animal and plant species and their habitat, destabilization of soils and increased erosion, and potentially increase frequency and intensity of landslides due to loss of the stabilizing effects of root systems in holding soils in place and absorbing rainfall. Consequently, Alternative B would have vastly increased indirect impacts compared to the No Project Alternative.

A further concern raised by the foreseeable increasing effects of climate change in the Plan area is that trees not well-adapted to the longer and warmer dry season will be placed under increased stress, particularly in the Fall, at a time when the fire risk reaches its maximum with the occurrence of Diablo winds. It is well known that drought stress increases trees' susceptibility to disease and insect damage. Such damage often increases a tree's flammability and susceptibility to fire damage.

As discussed, to address this risk, the EIR should discuss a more directed replacement of removed tree species with species expected to be well adapted to the effects of climate change. Both the coastal live oak and the California bay tree are reasonably drought tolerant, with leaves that can reduce transpiration during dry conditions.

**E. The DEIR's Rejection Of Alternative A Does Not Account For The Adverse Fire Risk And Ecological Effects Of Retaining Eucalyptus And Pine Within The Project Area, Thereby Allowing For The Spread Of These High Fire Risk Species.**

The DEIR errs in its rejection of Alternative A in that it does not address the critical difference between this alternative and the proposed project (as well as Alternative B). Here, unlike the Plan or Alternative B, Alternative A calls for replacement of virtually all eucalyptus in the Plan area with lower fire-risk vegetation. It also calls for improvements in fire protection infrastructure, notably, placement of on-site water tanks for use in fire control and purchase of two "Type 3" fire trucks capable of traversing fire roads within the Plan area after their improvement to handle these trucks. In addition, it

calls for establishing fire detection cameras capable of monitoring the entire Plan area to detect ignition events.

Treatments under Alternative A would be similar to those under the Plan, with the exception that no controlled burns are proposed. However all biomass created by treatment methods would be removed from the treatment sites and disposed of at a central location. While this might, under some circumstances, increase the amount of smoke produced, it would reduce the risk of left-behind chipped wood waste drying out and increasing the fuel load and fire intensity. That risk will only increase over time as climate change progresses. Balancing those two potential impacts, a risk of somewhat higher smoke production during tree waste disposal is greatly outweighed by the risk of more intense wildfires (which would also produce intense smoke.) A major difference from the Plan is that the removal and replacement of eucalyptus and other high fire risk and invasive plant species would be *required*, whereas under the Plan, such removal would not be required, but only optional, based on an ill-defined and often subjective set of criteria, thereby leading to the potentially significant impacts described above in Section C.

Because it would fully eliminate areas of eucalyptus and Monterey pine, and would include wider firebreaks less likely to be jumped under Diablo wind conditions, Alternative A would be superior to the Plan in reducing wildfire risk, particularly under Diablo wind conditions. Alternative A would also be superior to the Plan through its commitment to removing the allelopathic eucalyptus and pine that greatly reduce habitat value and native wildlife and plant diversity where these species become established.

While some aspects of Alternative A go beyond simply vegetation management (e.g, purchase of fire trucks and video surveillance equipment) the DEIR disregards these additional proposed activities. However, the question is whether the purpose of the Plan is solely to conduct vegetation management activities or if it to improve the protection of the Plan area from the risk of wildfire. Here, the Plan's objectives include:

- Increase the Plan Area's resistance to catastrophic wildfire to reduce the potential for loss of human life and property damage from wildfire;
- Enable UC Berkeley staff to make informed and adaptive management decisions that are cost effective and environmentally sustainable.
- Maintain an active role in regional efforts to reduce wildfire hazard in the East Bay hills,

These additional components to Alternative A are appropriate and clearly within the scope of the project objectives to reduce wildfire risk and ensure public safety. Because Alternative A would reduce fire risk by eliminating eucalyptus and pine within the project area, thereby also avoiding the spread and increased fire risk of these species, as well as improving native habitat for wildlife, it should be considered the environmentally superior alternative and adopted as the preferred alternative for this project.

In addition to these general comments on the DEIR, the Conservancy has the following more specific comment on the Plan and its DEIR:

**Wildfire Modeling** – The Plan upon which the DEIR is based was developed using computer modeling to predict the characteristics of a potential wildfire under varying conditions. (Plan at pp. 35-56.) Modeling was done using both a fuel model (Plan at pp. 35-38) and fire behavior modeling using FlamMap 6.0 (Plan at pp, 38-56). However, the DEIR never examines the accuracy of the modeling upon which the Plan is based. It merely assumes the methodologies specified in the Plan and evaluates impacts from applying those methodologies.

The fuel modeling characterized the vegetation in the Plan area as falling within one of a number of different "fuel types," each of which is associated with a set of fire characteristics, depending on the conditions for the fire (e.g., slope, temperature,



relative humidity, wind speed and direction). However, neither the Plan nor the DEIR provide any evidence supporting validation of the modeling results – that is, checking model predictions under a certain set of conditions against actually observed fire characteristics under those conditions. Equally important, no evidence or data is presented showing that if validation was done, it was done under conditions similar to those that would actually occur in the Plan area.<sup>5</sup> Without this kind of validation data, it is impossible to know whether the modeling gives accurate predictions, and therefore whether the expected effectiveness of different treatment methodologies actually bears any relationship to what would happen in reality.

### **Conclusion**

The Conservancy requests that UCB address the issues raised above, particularly its decision not to commit to the full removal of blue gum eucalyptus and Monterey pine in the project area. This analysis should clarify the project description with respect to the removal of these invasive and high fire risk species, assess the impacts of not doing so, and reconsider the DEIR's rejection of Alternative A in the context of this discussion.

Sincerely

  
Stuart Flashman

---

<sup>5</sup> It should be noted that most of the references to modeling of fire behavior date to 2006, and do not appear to be specific to the Plan area.