VOLUME I: FINAL ENVIRONMENTAL IMPACT REPORT, RESPONSES TO COMMENTS

UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan

State Clearinghouse No. 2019110389

Prepared for:

Berkeley
UNIVERSITY OF CALIFORNIA

University of California, Berkeley
Capital Strategies – Physical &
Environmental Planning

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LIST OF ABBREVIATIONS

BAAQMD	Bay Area Air Quality Management District
CAL FIRE	California Department of Forestry and Fire Protection
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
DBH	diameter at breast height
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
EPM	environmental protection measure
FB	fuel breaks
FEMA	Federal Emergency Management Agency
FHR	fire hazard reduction
Final EIR	final environmental impact report
GGNRA	Golden Gate National Recreation Area
HCN	Hills Conservation Network
HEF	Hills Emergency Forum
LBNL	Lawrence Berkeley National Laboratory
NOP	Notice of Preparation
Plan Area	UC Berkeley Hill Campus
PRC	Public Resources Code
SBI	Swaim Biological Inc.
SMP	smoke management plan
TRA	temporary refuge area
UC Berkeley or university	University of California, Berkeley
UC Regents	Regents of the University of California
VHFHSZ	Very High Fire Hazard Severity Zone
WPS	Worker Protection Standard
WVFMP or Plan	Wildland Vegetative Fuel Management Plan

1 INTRODUCTION

The Regents of the University of California (UC Regents), as the lead agency, and in cooperation with the University of California, Berkeley (UC Berkeley or university), prepared this final environmental impact report (Final EIR) in accordance with the requirements of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines (Section 15132). This Final EIR presents comments received on the Draft EIR for the proposed Wildland Vegetative Fuel Management Plan (WVFMP or Plan), responses to those comments, and revisions to the Draft EIR resulting from comments, minor project modifications, and updates to the analysis.

1.1 SUMMARY OF THE WILDLAND VEGETATIVE FUEL MANAGEMENT PLAN

The WVFMP is proposed by UC Berkeley to treat vegetation that could become fire fuel within the UC Berkeley Hill Campus (or Plan Area). The WVFMP includes implementation of four vegetation treatment types across the Hill Campus: (1) evacuation support treatments, (2) temporary refuge areas (TRAs), (3) fuel break (FB) treatments, and (4) fire hazard reduction (FHR) treatments. Five different vegetation treatment activities would be used to implement the four vegetation treatment types: (1) manual treatment, (2) mechanical treatment, (3) prescribed broadcast burning, (4) managed herbivory (livestock grazing), and (5) targeted ground application of herbicides. UC Berkeley would implement vegetation treatment activities on an average of 200 acres per year within the Plan Area. Up to 600 acres of the 800-acre Plan Area would be treated under the WVFMP because 200 acres are inaccessible (i.e., in Hamilton Gulch) or are not expected to carry fire, because they lack vegetative fuel.

UC Berkeley is also proposing specific vegetation treatment projects in the Plan Area: two FB projects, four TRAs, and three FHR projects. FBs are proposed on Claremont Ridge (the East-West FB) and between the Hill Campus and the Hearst Gate to Lawrence Berkeley National Laboratory (the Hearst Gate FB). TRAs 1–4 are proposed adjacent to Claremont Avenue, in two areas along Jordan Fire Trail, and adjacent to Centennial Drive in the Lawrence Hall of Science parking area. The FHR projects are vegetation treatments in Strawberry Canyon (Strawberry FHR Project), Claremont Canyon (Claremont FHR Project), and areas along Frowning Ridge (Frowning FHR Project). These nine specific projects are collectively referred to as the "Identified Treatment Projects."

The four treatment types and five treatment activities are reviewed for use throughout the Plan Area at a programmatic level, and the nine Identified Treatment Projects are studied at a project level of detail in the EIR. The near-term implementation of the Identified Treatment Projects along with the longer-term implementation of treatment activities studied at a program level together comprise the proposed "project," as defined in State CEQA Guidelines Section 15378.

1.2 PURPOSE OF THE RESPONSES TO COMMENTS DOCUMENT

CEQA requires a lead agency that has prepared a Draft EIR to consult with and obtain comments from responsible and trustee agencies that have jurisdiction by law with respect to the project, and to provide the public with an opportunity to comment on the Draft EIR (State CEQA Guidelines Sections 15086 and 15087). The Final EIR is the mechanism for responding to these comments. This Final EIR for the proposed WVFMP comprises two volumes:

- Volume I: Responses to Comments Document, which includes responses to all comments received on the Draft EIR and a summary of revisions made to the Draft EIR.
- Volume II: Final EIR, which presents a complete reproduction of the Draft EIR with text corrections, revisions, and other clarifications made in response to comments received during the public review period.

Sections 15088(a) and (c) of the State CEQA Guidelines state that the lead agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare written responses to comments raising significant environmental issues. Responses are not required for comments regarding merits of the proposed project or regarding issues not related to the project's environmental impacts. Several of the comments on the Draft EIR state the commenter's preference about whether the WVFMP should be approved or provide general statements concerning the content of the Draft EIR. Detailed responses are not warranted or required by CEQA for comments that do not address the environmental issues related to the proposed Plan and whether they were properly addressed in the Draft EIR. Such instances are noted in the responses. The UC Regents will review all comments, including those that do not warrant a response under CEQA, before considering certification of the Final EIR or approval of the proposed WVFMP.

1.3 ENVIRONMENTAL REVIEW PROCESS

Acting as lead agency under CEQA, the UC Regents distributed a notice of preparation (NOP), on November 20, 2019, to responsible agencies, trustee agencies, interested parties and organizations, and individuals who could have interest in the Plan. The NOP indicated that a Draft EIR would be prepared and requested comments on its scope and contents. The NOP was available online at https://capitalstrategies.berkeley.edu/resources-notices/public-notices. UC Berkeley also held a public scoping meeting on December 2, 2019, to provide information on the proposed WVFMP and solicit public input on the scope and content of the EIR. The scoping meeting was held in Julia Morgan Hall at the UC Berkeley Botanical Garden. All comments on environmental issues received during the NOP public comment period and at the scoping meeting were considered and addressed via the analysis in the Draft EIR.

The UC Regents circulated the Draft EIR for public review and comment for a period of 52 days (longer than the 45 days required by CEQA), from August 14, 2020, through October 5, 2020. Written comments on the Draft EIR were received from one local agency, as well as nongovernmental organizations and members of the public. Chapter 2, "Comments and Responses to Comments on the Draft EIR," of Volume I of this Final EIR identifies the entities that commented, presents their respective comments, and provides responses to these comments.

Before adopting the WVFMP, the UC Regents, as the lead agency, are required to certify that the Final EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.4 SUMMARY OF REVISIONS TO THE DRAFT EIR

Volume II of this Final EIR presents the Draft EIR, as modified by responses to comments or minor project modifications. Modifications were made to the Draft EIR text to respond to comments; to amplify, clarify, or make minor corrections to EIR contents; or to reflect minor modifications or updates in the environmental analysis. Changes in the text are signified by strikeouts (~~strikeouts~~) where text is removed and by underline (<u>underline</u>) where text is added. None of the information added to the Final EIR constitutes "significant new information" as defined by CEQA (State CEQA Guidelines Section 15088.5); therefore, recirculation of the Draft EIR is not warranted.

The following Draft EIR chapters, sections, and appendices contain text revisions. Refer to Volume II of this Final EIR to review the text revisions to these elements of the Draft EIR:

- Executive Summary;
- Chapter 2, "Project Description"
- Section 3.3, "Air Quality"
- Section 3.4, "Archaeological, Historical, and Tribal Cultural Resources"
- Section 3.5, "Biological Resources"
- Section 3.6, "Geology and Soils"

- Section 3.7, "Greenhouse Gas Emissions"
- Section 3.10, "Noise and Vibration"
- Chapter 4, "Cumulative Impacts"
- Chapter 5, "Other CEQA Considerations"
- Chapter 6, "Alternatives"
- Appendix A, "Wildland Vegetative Fuel Management Plan"
- Appendix E, "Biological Resources Assessment"
- Appendix F, "Air Quality and Greenhouse Gas Emissions Modeling Data"

As explained above, modifications were made to the Draft EIR text to respond to comments; to amplify, clarify, or make minor corrections to EIR contents; or to reflect minor modifications or updates in the environmental analysis. If a revision was warranted because of a comment, the revision is explained in the applicable response to the comment that prompted the revision. The following text summarizes the revisions to the Draft EIR that are not tied to any comment made on the Draft EIR:

- UC Berkeley concluded consultation with the Northern Valley Yokuts tribe pursuant to Public Resources Code (PRC) Section 21083. This warranted text revisions to update the description of tribal consultation in Section 3.4, "Archaeological, Historical, and Tribal Cultural Resources," included revising Impact CUL-2 (Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource) from a significant and unavoidable impact to a less-than-significant impact. The reduction in the severity of the potential impact also warranted revisions in the Executive Summary; Chapter 4, "Cumulative Impacts"; Chapter 5, "Other CEQA Considerations"; and Chapter 6, "Alternatives."
- Mitigation Measure BIO-2i (Conduct Focused Noninvasive Surveys for Mountain Lion Dens and Implement Avoidance Measures) in Section 3.5, "Biological Resources" was revised to reflect updates to the best available science on avoiding and minimizing impacts on mountain lion.
- Late-season rare plant surveys and San Francisco dusky-footed woodrat nest surveys were completed for all the Identified Treatment Project areas. No additional rare plants were identified, but additional woodrat nests were identified in previously unsurveyed areas. The results were incorporated into Section 3.5, "Biological Resources," and updated survey reports are included in Appendix E of Volume II of this Final EIR.

None of the information added to the Final EIR constitutes "significant new information" as defined by CEQA (State CEQA Guidelines Section 15088.5).

1.5 ORGANIZATIONAL STRUCTURE OF THE RESPONSES TO COMMENTS DOCUMENT

Volume I of this Final EIR is organized as follows:

- **Chapter 1, "Introduction,"** describes the purpose of the Final EIR, summarizes the proposed WVFMP, provides an overview of the CEQA public review process, summarizes revisions to the Draft EIR, and describes the content of this Final EIR.
- **Chapter 2, "Comments and Responses to Comments on the Draft EIR,"** contains a list of all the commenters who submitted written comments on the Draft EIR, reproductions of all the comments received on the Draft EIR, and written responses to each comment received. The chapter begins with three master responses that were prepared to respond comprehensively to multiple comments that raised similar issues. References to the master responses are provided, where relevant, in responses to individual comments.
- **Chapter 3, "References,"** identifies the sources of information cited in Volume I of this Final EIR.

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2 COMMENTS AND RESPONSES TO COMMENTS ON THE DRAFT EIR

This chapter presents comments received during the public review period for the Draft EIR, which concluded on October 5, 2020. In conformance with Section 15088(a) of the California Environmental Quality Act Guidelines (State CEQA Guidelines), responses are provided to comments on environmental issues.

References to "Volume II of this Final EIR" in the responses to comments below refer to the Draft EIR text as modified by responses to comments or minor project modifications and updates.

2.1 LIST OF COMMENTERS ON THE DRAFT EIR

Table 2-1 presents the list of commenters, including the numerical designation for each comment letter received, the author of the comment letter, and the date of the comment letter. Each comment letter is included in Appendix A of Volume I of this Final EIR.

Table 2-1 List of Commenters

Letter No.	Commenter	Date
	AGENCIES	
A1	East Bay Municipal Utility District Scott Hill, Manager of Watershed & Recreation	September 29, 2020
	ORGANIZATIONS	
O1	Oakland Firesafe Council	August 31, 2020
O2	Claremont Canyon Conservancy	September 3, 2020
O3	East Bay Pesticide Alert Maxina Ventura, Chronic Effects Researcher	September 12, 2020
O4	Hills Emergency Forum David Brannigan, Fire Chief, City of Berkeley	September 14, 2020
O5	San Francisco Forest Alliance	September 14, 2020
O6	Claremont Canyon Conservancy Jerry D. Kent, a Conservancy Board Member	October 3, 2020
O7	Claremont Canyon Conservancy Stuart M. Flashman, LLP	October 5, 2020
O8	Claremont Canyon Conservancy	October 5, 2020
O9	Hills Conservation Network Michael Lozeau, Lozeau Drury LLP	October 5, 2020
O10	East Bay Pesticide Alert Maxina Ventura, Chronic Effects Researcher	October 5, 2020
	INDIVIDUALS	
I1	Bronwyn Ayla, LAc.	August 14, 2020
I2	Kevin Ma	August 14, 2020
I3	Nadesan Permaul	August 14, 2020
I4	Alfred Twu	August 14, 2020
I5	Mike Vandeman, Ph.D.	August 15, 2020
I6	Emmerich Anklam	August 16, 2020

Letter No.	Commenter	Date
I7	Jordan Burns	August 16, 2020
I8	Dana Kilian	August 16, 2020
I9	Sam Mountain	August 16, 2020
I10	Emily Pothast	August 16, 2020
I11	David Ying	August 16, 2020
I12	Scott Owades	August 20, 2020
I13	Henry DeNero	September 3, 2020
I14	Sara Baldwin	September 14, 2020
I15	Isis Feral	September 14, 2020
I16	Anastasia Glikshtern	September 14, 2020
I17	Marg Hall	September 14, 2020
I18	Mary Sue Meads	September 14, 2020
I19	Henry DeNero	September 15, 2020
I20	Bev Von Dohre	September 18, 2020
I21	Kate Bernier	September 19, 2020
I22	Sheryl Drinkwater	September 21, 2020
I23	Tamia Marg	September 29, 2020
I24	Joe R. McBride	October 2, 2020
I25	Bev Von Dohre	October 4, 2020
I26	Ariane Eroy, Ph.D.	October 5, 2020
I27	Isis Feral	October 5, 2020
I28	Anastasia Glikshtern	October 5, 2020
I29	Stephanie Thomas	October 5, 2020
COMMENTS RECEIVED OUTSIDE OF REVIEW PERIOD		
Z	Joe R. McBride	August 4, 2020

2.2 COMMENTS AND RESPONSES

2.2.1 Master Responses to Comments

Several comments raised similar issues. Rather than respond to each comment individually, master responses have been developed to address the comments comprehensively. Master responses are provided for the following topics: consideration of eucalyptus, economic considerations, and herbicide use. References to the master responses are provided, where relevant, in responses to individual comments.

MASTER RESPONSE 1: CONSIDERATION OF EUCALYPTUS

Several comments expressed opinions about the fire risk posed by eucalyptus, the consideration of this species in the WVFMP and EIR, and the extent to which it should be removed from the Plan Area.

Disagreement exists among Bay Area residents, environmental organizations, and academics, including commenters on the Draft EIR, regarding the treatment of eucalyptus. Some are opposed to any removal of eucalyptus because of their habitat, aesthetic, and carbon sequestration value and because of the application of herbicides that would be

necessary to maintain their removal. Others are in favor of removing all eucalyptus because they are non-native and outcompete native species and because they pose a fire hazard near residences. In addition, some advocate for an approach to wildfire risk reduction that retains some eucalyptus.

The approach to treatment of eucalyptus depends on the goals and objectives for a treatment area. Goals to retain habitat, aesthetic, and carbon sequestration value and reduce wildfire risk are not mutually exclusive. In consideration of the WVFMP's primary objective to reduce wildfire risk, the WVFMP proposes the targeted removal of eucalyptus within the Plan Area, pursuant to the principles of variable density thinning. Treatments identified in the WVFMP are not based on whether a plant is native or non-native but rather on the physical attributes of the plant and its immediate environment that contribute to wildfire risk. Variable density thinning is also influenced by the condition of adjacent vegetation. Gaps in canopy cover and tree density will be created. In some areas, a closed tree canopy will remain. The gaps and wind blockage have been shown to limit fire spread in tree crowns and slow wildfire's advance. At the same time, this strategy has been used elsewhere to restore forest structure and species composition. There is no set tree density, because experience and on-site observation in the Hill Campus has shown that after the trees that are unhealthy, structurally unsound, and prone to torching are removed, a canopy of variable density is likely to exist. Throughout the Plan Area, including within each Identified Treatment Project area and as later vegetation treatment projects under the WVFMP are developed, vegetation will be modified according to the criteria stated in the WVFMP to promote a less hazardous wildfire condition.

Fire Risk of Eucalyptus

The fuel characteristics of volume, arrangement, and chemical content are important in the consideration of fire hazard posed by eucalyptus. Eucalyptus stands pose a fire risk because of the high volume of dead debris they produce, their typical arrangement of fuels, and their oily foliage.

Volume

Eucalyptus trees can grow large. In the Hill Campus, eucalyptus trees average approximately 25 inches in diameter at breast height (DBH), and the largest trees in the Plan Area exceed 45 inches DBH. Wildfire burns small material most readily and almost disregards material larger than 3 inches in diameter (Rothermel 1983). Notwithstanding the trunks and larger branches, there is still a high volume of dead fuel in the foliage, bark, and debris of eucalyptus. Measured dead fuel loads of eucalyptus in Sibley Volcanic Regional Preserve, the Golden Gate National Recreation Area (GGNRA), and Angel Island range from 29–50 tons per acre. Agee et al. (1973) measured approximately 29 tons per acre of fuel in nearby Sibley Regional Preserve, with roughly one-half composed of a thick layer of decomposing leaf and organic material (duff). The National Park Service measured dead fuel loading (volume) in the GGNRA totaling approximately 31 tons per acre (not including duff but including larger-diameter branches), and Martin et al. (1988) found 44–50 tons per acre of litter and duff on Angel Island. By comparison, the fuel load in grasslands ranges from 1 ton to 5 tons per acre, and north coastal scrub rarely exceeds 5 tons per acre (Rice 1985). Higher fuel load results in increased heat produced by the wildfire (Rothermel 1983).

Arrangement

The arrangement of combustible biomass is an important factor in determining the fire hazard of any vegetation type. Eucalyptus branches, leaves, and bark slough off in long pieces that end up draped on one another, creating a near optimum mixture of oxygen and fuel—not too dense and not too airy—while providing close enough contact for the fire to burn and transfer heat easily to the next piece of vegetation.

Near-ground fuels in unmanaged eucalyptus stands tend to be continuous horizontally, further facilitating fire spread. But the most significant aspect of fuel arrangement is vertical continuity. If the lowest branches are high (10–20 feet off the ground), and if the surface-level fuels are short and sparse, fire is not likely to reach the tree crown. However, the stringy bark of *Eucalyptus globulus* provides a readily available pathway for fire to climb into the tree canopy. Predicting crown fire potential also considers the tree crown base height, moisture content of the leaves, and fire intensity.

Removing surface fuels and all shorter trees and pruning lower branches generally prevents crown fires. The legacy of cutting eucalyptus trees but allowing regrowth, however, can be disastrous. It results in dead debris suspended between multiple stems and/or understory shrubs and a low branch height in a nearly continuous arrangement of fuels—horizontally and vertically. This equates to nearly certain torching and crown fire.

Chemical Content

The oil in eucalyptus leaves has approximately three times the energy as cellulose, so eucalyptus trees burn hotter than other plants (Byram 1959). Eucalyptus leaves also release terpenes and phenolic acids; these volatiles are released as flammable gases at lower temperatures and ignite easily. Combustion is the burning of gases just outside the solid material; volatiles act as catalysts, and eucalyptus has more of them. Studies of crude fat content in eucalyptus find that it ranges from about 10 to 20 percent of its dry weight (whereas typically 3 percent of the dry weight of tropical leaves is crude fat content). Mutch (1970) noted "a high crude fat content…sets the state potentially for a more intense fire with greater flame heights." Agee and Biswell (1973) found that eucalyptus had the highest percentage of oil found of all plant sources measured, even higher than chamise, which is called "greasewood" because of the flammability of its oily leaves.

Consideration of Fire Risk in the WVFMP and EIR

The WVFMP and EIR acknowledge the fire risk posed by eucalyptus. As explained under "Wildfire Conditions" in Section 3.12, "Wildfire," in Volume II of this Final EIR, the East Bay Hills surrounding the Plan Area have been transformed from a native California grassland dominated by perennial bunchgrasses to one dominated by European annual grasses and forbs. The annual plants contribute to the current fuel load because the aboveground biomass dries out and persists into the dry season. In the absence of regular small burns over time, shrub species and oak and bay seedlings proliferated, and the landscape was further transformed into a mosaic of grassland patches within a shrub-tree matrix (FEMA 2014). The complex mosaic of native and introduced vegetation presents a severe fire hazard for residents and structures in the wildland-urban interface. The most dramatic change in the fire regime is the result of the introduction of non-native blue gum eucalyptus (*Eucalyptus globulus)* to the East Bay Hills. Historically, fire has played an integral part in North American ecosystems, helping to shape vegetation structure and biological diversity. In the last 100 years, the act of fire suppression, particularly near urban areas, has reduced, and in many cases removed, the influence of fire on the landscape. No major wildfire has burned in the Hill Campus in the last 100 years. The most recent fire in the area was the 1923 Berkeley Fire. Because of the elimination of fire and the coincidental increase in non-native species, vegetative fuels have accumulated to higher levels than would have existed with more frequent fires. In the East Bay Hills, non-native trees, such as blue gum eucalyptus and Monterey pine, also produce greater fuel loads because the plants themselves are bigger (FEMA 2014).

Section 3.4, "Vegetative Fire Hazard," of the WVFMP (see Appendix A of Volume II of this Final EIR) notes that the spotting potential of eucalyptus forests is "unparalleled in terms of both density and distance as a result of the abundance and aerodynamic properties of the tree bark" (McArthur 1967, cited in Scott et al. [2015]). (Spotting is the transfer of embers ahead of a fire front, which can ignite smaller fires. It has been identified as critical to the spread of some of the most destructive wildfires [Koo et al. 2010].) Eucalyptus tree bark peels and remains draping, hanging and/or loosely attached and curled inward toward the tree bole, and it may act as a ladder fuel that enhances torching and ember production. The bark eventually falls and creates a deep layer of combustible litter that decomposes very little, which may also contribute to crown fire (fire that has burned upward into the tree canopy) under mild conditions.

Secondary spot fires and roof ignitions from these eucalyptus firebrands substantially increase the spatial extent of risk, potentially causing an urban conflagration involving far more than the 2,200 structures currently considered at risk within and adjacent to the Plan Area. A huge number of structures lie downwind of eucalyptus groves, many of which have not been retrofitted to meet modern building code requirements designed to withstand fire. With a high density of urban ignitions, a mass fire could occur, whereby the coalescence of the individual spot fires increases fire spread and intensity, such as occurred in 2017 in Coffey Park, Santa Rosa. These factors may help explain the devastating effects of the Diablo-wind-driven 1991 Tunnel Fire in the Oakland hills and the 1923 Berkeley Fire. Prevention of crown fire in eucalyptus in the Berkeley/Oakland hills, and elsewhere in the East Bay is of paramount importance to the fire safety of a

very large population. The proposed WVFMP is one component of regional wildland vegetative fuel management planning efforts underway to reduce wildfire risk in the East Bay Hills.

Proposed Treatment of Eucalyptus

The potential fire risk posed by eucalyptus is clearly high, as described above; however, eucalyptus stands can be made more fire-safe through repeated intervention to reduce the fuel volume and alter the forest structure (arrangement). As described in Section 2.4.3, "History of Eucalyptus Management in The Hill Campus," of Appendix A (and summarized under "Past Vegetation Treatments" in Section 3.12, "Wildfire," of Volume II of this Final EIR), the University of California, Berkeley (UC Berkeley or university) has managed eucalyptus in the Plan Area for fire hazard reduction for decades. While certain eucalyptus stands in the Hill Campus have been actively managed, others have been neglected. In 1974 a multi-jurisdictional fuel break (FB) that covered the East Bay Hills was created that focused on removing eucalyptus trees that were top-killed from a freeze in 1973. Almost all of the eucalyptus trees that were cut have resprouted. Approximately 50 acres of the eucalyptus sprouts were cut again between 1988 and 1991 in Strawberry Canyon and on top of Chaparral Hill. Most of the eucalyptus trees in Strawberry Canyon resprouted. In the 2000s, efforts focused on eucalyptus removal in Claremont Canyon. Approximately 90 acres of eucalyptus in Claremont Canyon were cut between 2001 and 2011, with no resprouting as a result of effective herbicide application. Approximately 2 acres of 24-year-old eucalyptus resprouts near signpost 18 were cut and left to sprout again. Some eucalyptus stands within the Plan Area have been treated three times, most have been cut twice, and some small stands of eucalyptus have never been removed. Resprouting has occurred in most eucalyptus stands cut before 2005. Generally, eucalyptus resprouting is prevented by herbicide application, which extends the length of time before a resprout, or manual removal of sprouts, which requires frequent maintenance because sprouts return more quickly.

UC Berkeley maintains an approved and ongoing program of vegetation treatment and maintenance activities in the Plan Area to reduce fire risk to the UC Berkeley campus, Lawrence Berkeley National Laboratory (LBNL), neighboring properties, recreational amenities, and adjacent park and watershed lands. The activities include defensible space and roadside treatments, evacuation support treatments, roadside turnout and signpost treatments, exotic plant removal, hazard tree removal, and tree planting (i.e., replacing flammable vegetation with more fire-resistant vegetation). For exotic plant removal, UC Berkeley pulls or cuts eucalyptus, Monterey pine, and French broom seedlings and applies herbicides to the cut exotic plants according to recommendations of a Pesticide Control Advisor. Hazard tree removal involves removing dead and hazardous trees or limbs, including those of eucalyptus, that pose a public safety risk.

Under the proposed WVFMP, the university would increase active management of eucalyptus as a component of its fire hazard reduction (FHR) treatments. As described under "Fire Hazard Reduction Treatments" in Section 4.1.2 of the WVFMP in Appendix A (with information summarized in Section 2.5.1, "Description of Vegetation Treatment Types") in Volume II of this Final EIR, FHR treatments would be implemented in areas where treatments to remove eucalyptus were performed in the 1990s, but regrowth occurred because of ineffective herbicide application. In these locations, a robust understory of California bay and, to a lesser degree, coast live oak grew at the same time as the eucalyptus trees regrew. Currently, because of the eucalyptus, these areas pose significant fire hazards in terms of flame lengths, ember production, and spotting distribution. Treatments will consist of removing or pruning those trees most likely to torch and produce embers afar, potentially near the Campus Park or along the Jordan Fire Trail or near research and education facilities on campus.

UC Berkeley 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 and shrubs. Criteria for tree removal would include consideration of tree health, structure, height, potential for failure, flammability/fire hazard, high fuel volume production of small-diameter fuels, and competition with other trees (including for water, space, and light). Criteria for retention of trees include fuel characteristics, consideration of ability to slow spreading of invasive species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, erosion prevention, and cost of removal. Near roads, trails, and buildings, lower limbs of trees would be pruned, understory vegetation shortened, and grass mowed.

In response to requests by commenters for additional detail on the criteria for tree removal and retention in FHR treatments, clarifying information was added under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this EIR, as follows:

> Criteria for tree removal would include consideration of tree health, structure, height, potential for failure, flammability/fire hazard, high fuel volume production of small diameter fuels, and competition with other trees (including for water, space, and light). Dead, unhealthy, and structurally unsound trees would be removed, as would trees prone to torching or burning with high fire intensity. The selection of trees for removal would be based on the management principle of variable density thinning, which is influenced by the condition of adjacent vegetation. For example, if two trees are adjacent and one is prone to torching, the tree that is prone to torching would be removed. Shrubs would be removed from under the tree that is to be retained. Shrubs would be removed from under and within 6 feet of the tree canopy. There is no set tree density, because after trees that are unhealthy, structurally unsound, and prone to torching are removed, a canopy of variable density will result. Variable canopy cover and tree density would be created to help reduce canopy fire spread.
>
> Criteria for retention of trees includes fuel characteristics (flammability, fuel volume, amount of dead material) ~~species type~~, consideration of ability to slow spreading of invasive species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, erosion prevention, and cost of removal. Near roads, trails, and buildings, lower limbs of trees would be pruned, understory vegetation shortened, and grass mowed. Shrubs and short trees under tall trees to be retained would be removed such that a vertical separation of 2.5 times the height of understory tree or shrub and the overstory tree canopy would be created.

Treatment intervals and any ongoing maintenance activities that would occur after the initial treatments would be based on the results of the monitoring program described in Section 8, "Maintenance and Monitoring," of the WVFMP (see Appendix A of Volume II of this Final EIR). As described in Section 8.5, "Adaptive Management," resprouted eucalyptus stumps would be treated with differing methods until 100-percent mortality is achieved. The eucalyptus latent seed stock is expected to require between 5 and 10 years of continuous treatment to ensure that any naturally germinating exotic trees are removed.

MASTER RESPONSE 2: ECONOMIC CONSIDERATIONS

Several comments raised issues pertaining to costs, including requests to include information on treatment cost in the WVFMP and EIR, or made assertions that the university is unaware of or not considering the costs associated with treatment.

Information regarding the cost of initial treatment and treatment maintenance is not relevant to the EIR. CEQA is an environmental protection statute that is concerned with foreseeable physical changes on the environment from the project and requires the consideration of economic information to the extent that it informs the analysis of physical environmental effects. As described below, treatment costs are considered in the university's internal budgeting process but are not relevant to the analysis of physical environmental effects. The Identified Treatment Projects in the proposed WVFMP are within the UC's capabilities and available funding from California Department of Forestry and Fire Protection (CAL FIRE) California Climate Investments grants. The university considered the total relative costs of treatment and maintenance, as well as the continuity of costs, given the uncertainty of funding in future years. These projects would have a direct and an immediate impact on reducing risks to life, safety, and property. Subsequent to implementation of the Identified Treatment Projects, the university would continue to design and prioritize projects to reduce risks in consideration of available funding.

The university is committed to attaining the objectives of the WVFMP, as listed in Section 2.3, "Objectives of the Plan," in Volume II of this Final EIR, and it recognizes that effective maintenance would maximize the long-term effectiveness of initial vegetation treatments to responsibly use CAL FIRE California Climate Investments grant funds. The WVFMP presents a detailed monitoring and maintenance program that ensures the long-term effectiveness of initial treatments (refer to Section 8, "Maintenance and Monitoring").

The conditions of the CAL FIRE grant require detailed information on allocated California Climate Investments dollars and leveraged funds throughout the duration of the grant. The university would report cost information to CAL FIRE, as required. The university has been managing vegetation in the Hill Campus for decades; it is well informed of the costs associated with initial and maintenance treatments of the vegetation within the Hill Campus. Ongoing maintenance costs and cost projections for future vegetation treatments in the Hill Campus are considered in the university's internal budgeting process. The campus has a base budget that covers the current ongoing vegetation treatments and maintenance of the projects identified in the WVFMP. With the uncertainty of future funding, later treatment projects under the WVFMP would be designed and proposed as funding is identified.

MASTER RESPONSE 3: HERBICIDE USE EFFECTS ON HUMAN HEALTH AND THE ENVIRONMENT

Several comments raised issues related to the impacts of herbicide use on human health, plants and wildlife, and water quality. Issues included expressions of opposition to herbicide use and inquiries about the measures that would be implemented to avoid and minimize adverse effects.

Herbicide Use Effects on Public Health

As described under Impact HAZ-2 in Section 3.8.3, "Impact Analysis and Mitigation Measures," of Section 3.8, "Hazards and Hazardous Materials," in Volume II of this Final EIR, UC Berkeley would adhere to all of the laws and regulations related to the use of herbicides. The U.S. Environmental Protection Agency oversees pesticide use and health and safety through the Worker Protection Standard (WPS). The WPS is a regulation for pesticides and herbicides that is aimed at reducing the risk of pesticide poisonings and injuries among workers and pesticide handlers. The WPS contains requirements for pesticide safety training, notification of pesticide applications, use of personal protective equipment, restricted-entry intervals after pesticide application, decontamination supplies, and emergency medical assistance. In addition, the California Division of Occupational Safety and Health Administration promulgates safety standards and practices regarding workplace safety and providing a safe and healthy environment for workers, and the California Pesticide Regulatory Program regulates the sale and use of pesticides in California. The California Department of Pesticide Regulation is responsible for reviewing the toxic effects of pesticide formulations and determining whether a pesticide is suitable for use in California through a registration process. The herbicide label includes instructions for ensuring the product is applied only to intended target pests and includes precautions the applicator should take to protect human health and the environment. These include weather parameters, such as wind speed to avoid drift and precipitation to minimize unintended runoff. The Resource Conservation and Recovery Act and the California Hazardous Waste Control Act, as enforced by the California Department of Toxic Substances Control, include regulations applicable to the packaging, storage, and disposal of specific hazardous materials. UC Berkeley would adhere to all of the required regulations and label instructions (Environmental Protection Measure [EPM] HAZ-3), which would minimize risks to workers and herbicide handlers as well as to the public.

In addition, the UC President has established specific requirements for herbicides that are classified as Tier 1/high hazard by the UC Task Force. Because glyphosate and triclopyr have been designated as Tier 1/high hazard, they cannot be used without approval from the UC's Integrated Pest Management Committee. If approved for use, all approved uses must adhere to more stringent regulations than what is currently required by state law. Compliance with all laws, regulations, and herbicide label instructions, along with use of proper personal protective equipment, would prevent significant risks related to human exposure to herbicides. Furthermore, EPM HAZ-2 and HAZ-4 through HAZ-6 have also been incorporated into the WVFMP to further minimize the potential for environmental and human health risks from herbicide use under the WVFMP. These EPMs require UC Berkeley or the licensed Pesticide Control Advisor to prepare a Spill Prevention and Response Plan before beginning herbicide treatment activities to prevent spills and to have a planned response if one occurs (EPM HAZ-2); provide triple rinsing of herbicide and adjuvant containers with clean water at an approved site and dispose of rinsate per 3 California Code of Regulations Section 6684, which includes required procedures for rinsing and draining empty pesticide containers, and dispose of all herbicides following label requirements and waste disposal regulations (EPM HAZ-4); employ techniques during herbicide application to minimize

drift outside of areas containing target vegetation, such as prohibiting spray applications when winds exceed 7 miles per hour and configuring spray nozzles to produce the largest droplet size (EPM HAZ-5); and include informational signage at each pedestrian entry point before and at least 24 hours after herbicide application (EPM HAZ-6). These EPMs, in combination with the multiple regulations governing the use of pesticides, would minimize risks to the public and workers from herbicide use under the WVFMP. In addition, herbicides would be applied only by hand and directly to target vegetation, which would minimize the amount of herbicides that would be used and the geographic area to which herbicides would be applied.

To further examine the potential for impacts on human health and the environment from the herbicides proposed for use under the WVFMP, an Herbicide Risk Assessment was prepared for the WVFMP (presented in Appendix G of Volume II this Final EIR). As described in Appendix G, the evaluation of an herbicide's risk to human health is based on the toxicity of the herbicide and possible methods of exposure. This is a standard method used to provide an estimated risk of chemicals to humans. The toxicity evaluations provided are conservatively based on the results of animal studies where laboratory animals are directly exposed to these chemicals. None of the herbicides proposed for use were found to pose significant risks to applicators or the public based on application techniques and safety precautions included in the WVFMP.

Herbicide Use Effects on Biological Resources and Water Quality

As described under "Herbicide Application" in the discussion of Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Section 3.5, "Biological Resources," in Volume II of this Final EIR, herbicide treatments could result in adverse effects on special-status wildlife if an animal consumed vegetation or other prey items that have been exposed to herbicides, consumed contaminated water, or came into direct contact with herbicides, because some herbicides may be toxic to these species. The effect of herbicides on wildlife depends on various factors, including the herbicide used, concentration of the herbicide, weight of the animal, amount of contaminated material consumed and duration of consumption, amount of animal body area exposed, and rate of absorption.

Special-status wildlife could be exposed to herbicides through consumption of insects (e.g., insect-eating birds, bats, reptiles) or plant materials (e.g., granivorous birds, San Francisco dusky-footed woodrat) exposed to the chemicals during herbicide application. These species could also be exposed through direct spray or spray drift if animals are present within a treatment area. Data regarding the effect of herbicides on most special-status species that may occur within the Plan Area are not available, because most studies use laboratory animals (e.g., mice) to determine the effects of chemicals on different classes of animals. As explained in the Herbicide Risk Assessment provided in Appendix G of Volume II of this Final EIR, most of the herbicides proposed for use under the WVFMP and Identified Treatment Projects have low toxicity or are considered non-toxic to wildlife. Three of these herbicides—oryzalin, isoxaben, and trifluralin—are moderately or acutely very toxic to fish and aquatic invertebrates. However, EPM HYD-2 would restrict certain applications of herbicides in the vicinity of aquatic habitat or riparian areas, prohibit use before or during precipitation events, and require using only herbicides labeled for use in aquatic environments when working in riparian habitats. As further explained in the Herbicide Risk Assessment provided in Appendix G of Volume II this Final EIR, the herbicides proposed for use are not known to significantly bioaccumulate in animal tissue, so secondary exposure by predatory animals or scavengers (e.g., raptors, mountain lion, American badger, Alameda whipsnake) is not expected to occur. After application, herbicides generally are rapidly absorbed through the leaves and roots of the target plant and may also absorb into surrounding soil. Wildlife exposure to residual herbicides through contact with soil, leaves, or other plant materials is expected to be limited (i.e., chronic exposure would not occur) because of the targeted nature of the herbicide application. Additionally, the herbicides proposed for use would break down over time as a result of ultraviolet radiation exposure, air exposure, and other factors and will not persist in the environment. As a result, adverse effects on wildlife from incidental contact with vegetation treated by herbicides would not occur.

As described under "Herbicide Application" in the discussion of Impact BIO-3 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, application of herbicides during treatments could damage or kill non-target vegetation through inadvertent direct application or through herbicide drift. Herbicide application would be achieved using targeted methods, including paint-on stem application and hand spray methods. These methods are more precise than other application methods (e.g., aerial spray) and would limit inadvertent application of

herbicides on non-target vegetation. Additionally, as presented in Table 2-2 in Section 2, "Project Description," four of the six herbicides proposed for use are selective, which would reduce the risk of adverse effects to non-target vegetation. To avoid and minimize adverse effects from herbicide application on riparian habitats, which occur near water, EPM HYD-2 requires that herbicides that are not approved for aquatic use would not be used, stored, or mixed within 60 feet of any surface waters or wetlands. In addition, EPM HYD-2 specifies that herbicides cannot be applied when rain may rinse them off plants and into soil or water. EPM HAZ-5 would prohibit spray applications of herbicides when wind speeds are 7 miles per hour or greater and requires the use of low-pressure spray nozzles kept within 24 inches of the target vegetation to reduce the risk of herbicide drift. Additional information on the use of herbicides proposed under the Plan and the protection of surface water and groundwater quality is provided under Impact HYD-4 in Section 3.9.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR.

Herbicides would be applied in a targeted manner, by hand, and according to the manufacturers' label directions and consistent with EPMs that limit herbicide use in sensitive areas or under conditions that could lead to misapplication and that require each project to be prepared to respond to a spill. Because projects implemented under the WVFMP would integrate these protective measures into treatment design, including for the Identified Treatment Projects, risk of substantial degradation to surface water or groundwater quality or to soils, or adverse effects on human health or wildlife from herbicide application, would be avoided or minimized.

2.2.2 Agencies

Letter A1 East Bay Municipal Utility District

Scott Hill, Manager of Watershed & Recreation
September 29, 2020

Comment A1-1

The East Bay Municipal Utility District supports the University of California, Berkeley's *Wildland Vegetative Fuel Management Plan (WVFMP), Draft Environmental Impact Report* and *Appendices*.

The identified two fuel break projects, four temporary refuge areas, and three fire hazard reduction treatments, totaling approximately 600 acres, will expand efforts to reduce wildfire hazards in the East Bay. The projects' locations throughout the East Bay hills make them an important link in the chain of fuel reduction projects that protect not only the campus, but also the residents of Berkeley, the City of Oakland, East Bay Municipal Utility District's critical San Pablo watershed and East Bay Regional Park District's environmentally sensitive parklands.

We encourage the University of California to finalize the Draft EIR and begin implementation.

Response A1-1

The commenter's expression of support for the proposed WVFMP will be provided to the UC Regents for consideration in their decision-making process regarding the WVFMP.

2.2.3 Organizations

Letter O1 Oakland Firesafe Council

August 31, 2020

Comment O1-1

The Oakland Firesafe Council was created in 2014 to offer education, outreach and advocacy on wildfire prevention for not only the City of Oakland, but for high fire severity risk zones throughout Alameda County. As such we take a special interest in UC Berkeley's efforts to reduce the spread of wildfire because the successful implementation of such a program greatly impacts the safety of adjacent and nearby residential neighborhoods in the Berkeley/Oakland hills.

Response O1-1

The comment provides background on the Oakland Firesafe Council and expresses interest in successful wildfire risk reduction efforts and programs. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by decision makers.

Comment O1-2

We agree with the Claremont Canyon Conservancy that the plan should spell out a comprehensive approach to vegetation management on the UC hill property and not be contingent on current available funding. Given the speed, severity and voracity of recent wildfires, a plan that only partially addresses the wildfire safety need will not keep people and property safe.

Response O1-2

This comment addresses the merits of the proposed project and not its environmental impacts. CEQA requires evaluation of the physical environmental impacts of a proposed project, a determination of the significance of those impacts, and recommendations of mitigation or alternatives to reduce or avoid such effects. While the responses herein focus on this CEQA requirement, general explanations surrounding project design are provided to inform readers with details regarding why some elements were included and others were not.

The comment suggests that the WVFMP should provide a comprehensive approach to vegetation management and not be contingent on currently available funding. Although the implementation of treatments would be contingent on the availability of current and future funding, the WVFMP presents a comprehensive approach to the long-term management of vegetation in the Hill Campus.

In 2019, CAL FIRE awarded UC Berkeley a California Climate Investments Fire Prevention Grant exceeding $3.6 million for the purposes of implementing hazardous fire fuel reduction projects in the Hill Campus, as explained in Section 1.1, "UC Berkeley Hill Campus Background," in Volume II of this Final EIR. It is anticipated that Facilities Services will use a portion of this grant funding for ongoing treatment and maintenance activities currently conducted in the Hill Campus (i.e., defensible space and roadside treatments, evacuation support treatments, roadside turnout and signpost treatments, exotic plant removal, hazard tree removal, and selective tree planting), as explained in Section 2.4, "Past and Current Vegetation Treatments," in Volume II of this Final EIR. The remaining portion of the grant funding will be used for the near-term implementation of the Identified Treatment Projects.

In addition to the Identified Treatment Projects, the WVFMP includes implementation of four vegetation treatment types across the Hill Campus, which are referred to as evacuation support treatments, temporary refuge areas (TRAs), FB treatments, and FHR treatments. Five types of vegetation treatment activities are proposed to implement the four vegetation treatment types: manual treatment, mechanical treatment, prescribed broadcast burning, managed herbivory (livestock grazing), and targeted ground application of herbicides. These vegetation treatment types and activities would be selected in designing future vegetation treatment projects, depending on site-specific conditions and treatment objectives. The proposed treatment types and treatment activities in the WVFMP are reviewed in the EIR for long-term implementation throughout the Plan Area.

Comment O1-3
Additionally, given the many years of drought and the new reality of wind driven and lightning strike wildfires generating crown fires, the plan should be expanded to include efforts to prevent canopy fires on the Hill Campus. The alternative approach proposed by UC Forestry Professor Emeritus Joe McBride offers sound, scientifically-based recommendations.

Response O1-3
This comment addresses the proposed project and not its environmental impacts.

As explained in the response to comment O6-16, the alternative developed by Professor Joe McBride (Alternative A) has significant overlap with the WVFMP in both locations and types of treatments. The treatments in the proposed WVFMP target areas where crown fire initiation (torching) is predicted to be widespread. As shown in Figures 17 and 21 of the WVFMP, those areas are generally where the FHR projects are located (refer to Appendix A in Volume II of this Final EIR).

Lightning is a possibility; it is difficult to plan for given its rare occurrence and unpredictable locations. The removal of tall trees that are easily ignited on ridgetops, such as proposed as part of the FHR projects, is one action that reduces the chance that a lightning fire turns into a damaging event. In addition, ongoing maintenance projects along Panoramic Hill, plus changing the composition of fuels along ridgetops, such as proposed as part of the East-West FB and the Hearst Gate FB, would diminish the potential for an intense fire should lightning strike there.

Comment O1-4
And finally, the time frame for maintenance needs to be expanded so that the efforts to reduce the fuel load on the Hill Campus so that the vegetation doesn't resort to a high fuel load due to lack of attention.

Response O1-4
UC Berkeley will continue maintenance of the treated areas, as indicated by the results of monitoring, for longer than 10 years. Section 8.3, "Annual Reporting," in the WVFMP (Appendix A in Volume II of this Final EIR) has been updated with this clarification.

Comment O1-5
We appreciate the fact that UC is committed to making its property more fire safe, for the work you do on your property has a major impact on nearby neighborhoods.

Response O1-5
The comment expresses appreciation for the UC's efforts to reduce fire risk on its property. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by decision makers.

Letter O2 Claremont Canyon Conservancy

September 3, 2020

Comment O2-1
The New Reality
The increased number and severity of wildfires in California over the past three years illustrates that we are in a new reality. Evacuation strategies are essential. The Hill Campus Plan makes evacuation routes safer.

The need for evacuation underscores the importance of preventing wildfires from starting. In our new reality much more vegetation management is required than the University plans. The Plan should be a prescription for what is needed. It should prioritize what work is funded under the CalFire grant and what will await additional resources. If a fire spreads from the Hill Campus to homes, businesses, and University facilities downwind, the damage and the liability to the University will be in the billions of dollars. The Plan must be a guide for the future, not simply for the grant.

Response O2-1

The comment states that more vegetation management is needed than the university proposes and recommends that the WVFMP prioritize the work funded under the CAL FIRE grant. The university would use a portion of the grant for current and ongoing vegetation treatment and maintenance activities in the Hill Campus, with the remainder of the grant funding applied toward implementation of the Identified Treatment Projects, which would be implemented in the near term after approval of the Plan. Therefore, the university is prioritizing the current and proposed treatments that would be implemented using grant funding. The WVFMP and EIR also consider future vegetation treatments and the long-term management of vegetation in the Hill Campus, as explained in the response to comment O1-2.

Comment O2-2

Wind Speed

Wildfire wind speeds have been calculated at 60 to 100 miles per hour. Winds in the 1991 Tunnel Fire were clocked at 70 mph. Yet, the Plan states the rate of fire spread "is expected to be slow to moderate", 1.4 to 28 mph, or very strong winds at 40 mph. The plan should adopt a more realistic scenario.

Response O2-2

This comment addresses the proposed project and not its environmental impacts.

Fire behavior modeling in the WVFMP used two wind speed scenarios: 20 miles per hour and 40 miles per hour (see Figure 14 of the WVFMP). In both scenarios, the wind speeds are sustained at these values. In the science of fire meteorology, wind gusts are normally 50–100 percent stronger than a sustained wind, so a sustained windspeed of 40 miles per hour may have gusts of 60 miles per hour, similar to those observed during the 1991 Tunnel Fire. Accordingly, modeling a fire with sustained wind speeds of 40 miles per hour effectively captures stronger wind gusts that may occur during a fire event. In addition, modeling wind speeds of 40 miles an hour is testing the limits of the model's capabilities; model outputs using winds stronger than 40 miles per hour cannot be relied upon.

Comment O2-3

Thinning and Canopies

The Plan details how thinning and removing the understory can prevent wildfires. However, in the new reality two sources of wildfire fuel must be considered. Removing the understory prevents only ground fires.

Thinning fails to address fires that start in canopies through wind driven embers. The Plan notes the potential for damage to campus facilities from canopy fires but does not discuss what may occur if fire spreads beyond the campus.

Canopies of the most flammable trees must be eliminated to prevent or at least reduce the likelihood of these fires. The 1991 Tunnel fire started locally on the ground but it was spread by wind driven embers from eucalyptus canopies. So, eliminating both ladder fuel and canopies is necessary in the new reality. While a case can be made that trees on ridgelines are the top priority, in the new reality all eucalyptus and pine trees should be removed from the Hill Campus.

Response O2-3

This comment addresses the proposed project and not its environmental impacts.

The comment states that treatment of the understory, as well as the tree canopy, should be considered. The term "understory" applies to any vegetation that is under the tallest layer of tree canopy. In the Hill Campus, the understory may include a shrub or a tree as tall as 20 feet if it is under a taller tree. The WVFMP targets the production of and distribution of embers. The main process for ember production and distribution is through torching (also called crown fire initiation). Fires rarely start in the canopy of trees, especially during high winds, because those same winds blow the ember from the canopy into a place it can lodge, such as the ground. Crown fire initiation happens when the flames are long enough to reach the bottom branches of trees. Creating conditions that limit (minimize) flame length and raise the base of the tree canopy are common practices that are also applied in the WVFMP. Treatments in the WVFMP would minimize flame length through the removal of dead material and dry, small woody foliage. The treatments in the WVFMP would minimize the chance of torching through the reduction of

ladder fuels and would further minimize the distance of ember distribution through the removal of trees prone to torching in the FHR treatments and the Hearst Gate FB Project.

The comment states that the Plan does not address the potential for fires to spread beyond the Plan Area. The WVFMP considers the potential for spotting outside the Plan Area. Because of this concern, the WVFMP considered a buffer of almost one-quarter mile outside the Plan Area in its modeling analysis (refer to Figures 10–22 in the WVFMP). Eucalyptus in the Tunnel Fire did torch and distribute embers, but the fire did not start in the tree canopy. When torching occurs under a strong wind, embers can be cast great distances. The fire behavior modeling included an output of "Maximum Predicted Spot Distances."

The comment states that all eucalyptus and pine trees should be removed from the Hill Campus. Removal of all eucalyptus and pines would not prevent ember production and distribution. Instead of removing these species entirely, the WVFMP identifies treatments to modify fuels in the highest-priority locations to effectively change fire behavior. The WVFMP proposes variable density thinning in fuel hazard reduction treatment areas to modify canopy density and forest structure. Resulting gaps in tree canopy would limit crown fire spread. Refer also to Master Response 1, regarding eucalyptus treatment.

Comment O2-4

Lightning

Lightning is another cause of wildfires that the Plan must address. Lightning strikes the canopies, creating another reason for canopy removal on a far wider scale than the Plan proposes. With climate change, we we dare not assume the 2020 lightning caused fires were a one-time occurrence.

Response O2-4

Refer to the response to comment O1-3, regarding the WVFMP's consideration of lightning.

Comment O2-5

Maintenance

The Plan suggests that maintenance will occur over a 10-year period. Based on the Conservancy's work in Claremont Canyon, 10 years is not sufficient. Today, 15 years following the removal of eucalyptus trees from Claremont Canyon and treating the stumps, we continue to find new eucalyptus sprouts.

If the Plan's prohibition on trail maintenance in Claremont Canyon would continue beyond the CalFire funding, the University should be prepared to explain itself to the many users of the trails and to state that it accepts liability if an accident happens.

Response O2-5

Refer to the response to comment O1-4, regarding the timeframe for maintenance.

Emergency access to university property in Claremont Canyon is provided by fire trails/roads; the university annually surveys fire roads for hazards and removes high-risk vegetation to ensure ongoing emergency access. As explained in the response to comment O6-13, the WVFMP is limited to addressing vegetative fire hazards and does not address other aspects of fire management, such as trail maintenance. Implementation of the WVFMP would not preclude trail maintenance by UC Berkeley, but it is beyond the scope of activities addressed in the WVFMP.

Letter O3 East Bay Pesticide Alert

Maxina Ventura, Chronic Effects Researcher
September 12, 2020

Comment O3-1

Every tree is a fire mitigation factor according to the experts who produce the National Fire Protection Association Handbook, found in every fire station.

David Maloney, Retired Oakland Fire Department; Chief, Fire Prevention, Oakland Army Base, appointed to 1991 Oakland-Berkeley Mayors' Task Force on Emergency Preparedness and Community Restoration to report on causes of the '91 East Bay Hills conflagration, and make recommendations for the future, referenced the NFPA:

"Dried grass provides the most flammable ground fuel," and, "There's no if's, and's, or but's... every single tree is a wildfire mitigation factor... trees block wind, drip fog onto grasses, and block sun so grasses stay moist."

On Angel Island deforestation resulting in 2008 catastrophe, he said:

<<These are the same people and institutions that are advocating the removal of trees from the East Bay Hills, which will make the East Bay Hills become like the dry, flammable, grassy terrain in Lake County where large, destructive grass fires destroyed Middletown (summer, 2015). >>

That was a human-made Climate Fire. Eucs were keeping soil moist, fire mitigation.

His 2016 EB Hills update, attached, and here: http://www.eastbaypesticidealert.org/wildfire.html

After UC's EB Hills clearcuts-to-grasslands early/mid-00's, we saw mudslides. Predictable. UC's plans to keep destroying Eucs and other tall trees adapted to our climate, is reckless.

Tall trees transpire significant water per year, and sequester carbon while giving off oxygen especially needed in the crowded Bay Area.

Response O3-1

The comment asserts that every tree mitigates wildfire and provides quoted text and links regarding vegetation management and wildfire risk. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by decision makers. Refer to Master Response 1 regarding wildfire risks posed by eucalyptus trees, the consideration of fire risk in the WVFMP and EIR, and the treatment of eucalyptus trees proposed in the WVFMP and evaluated in the EIR.

Comment O3-2

You must not use any pesticides, whether herbicides or others such as fungicides which have been weakening oaks, making them vulnerable to Sudden Oak Death. The fungicide use was UCB's Garbaletto's dangerous response to Sudden Oak Death which also was a manufactured climate catastrophe borne of drought conditions, particularly Wine Country over-use of water in conventional grape growing that was coming to a head in the mid-90's in Sonoma. Around that time Marin was hit, too, after which SOD followed wine grape growing regions and even moved into citrus-growing regions across the state, and beyond.

Native, as people like to refer to Oaks, they are not able to survive our climate-changed environment and habitats. They're expected to be all gone by about 20 years from now in the EB Hills, and would not be expected to fare much better in SF in these times. But Eucs thrive, as can Monterey Pines.

Stop the needless destruction of life-giving trees and toxic pesticide use in the hills, and in People's Park, under continual UC attack. UC-educated USFS's David Nowak is all over the news about the need for urban forests like this.

Response O3-2

The commenter's expression of opposition to herbicide use is noted but no environmental issues associated with its use are raised in the comment. This comment will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 3 regarding the proposed use of herbicides under the proposed Plan and the measures that would be implemented to avoid and minimize adverse effects to non-target vegetation. People's Park is outside the Plan Area; therefore, the application of pesticides in People's Park is beyond the scope of the WVFMP and EIR.

Comment O3-3

UC's a leader of Climate Change. We respectfully request that UC stop the destruction of the EB Hills and Mt. Sutro, and replant at least 5 Eucalyptus trees for every tree you've destroyed on any UC land. We need their help.

Response O3-3
The greater East Bay Hills, beyond the Hill Campus, and Mt. Sutro are outside the Plan Area and therefore outside the scope of the WVFMP. Replacing every removed tree with five eucalyptus trees as requested by the commenter is not warranted to lessen any significant environmental impact identified in the EIR. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted.

Letter O4 Hills Emergency Forum

David Brannigan, Fire Chief, City of Berkeley
September 14, 2020

Comment O4-1
The members of the Hills Emergency Forum Staff Liaison Committee support the University of California, Berkeley's Wild/and Vegetative Fuel Management Plan (WVFMP), Draft Environmental Impact Report and Appendices.

The HEF was formed after the 1991 Tunnel Fire and continues to facilitate a cooperative approach among the nine governing organizations to address urban wildland interface issues in the Oakland Berkeley Hills. We support the four implementation treatment types and five vegetation treatment activities identified in the plan as compatible with our regional approach. Our member agencies look forward to collaborating with University of California, Berkeley during implementation of the nine identified treatment projects. The identified two fuel break projects, four temporary refuge areas, and three fire hazard reduction treatments, totaling approximately 600 acres, are critical. They will expand partner agencies' efforts to reduce wildfire hazards in the East Bay. The projects' locations make them an important link in the chain of fuel reduction projects throughout the East Bay hills protecting not only the campus, but also the residents of Berkeley, the City of Oakland, East Bay Municipal Utility District's critical San Pablo watershed and East Bay Regional Park Districts' environmentally sensitive parklands.

The members of the HEF Staff Liaison Committee support the WVFMP, and encourage the University of California to finalize the Draft EIR and begin implementation.

Response O4-1
The commenter's expression of support for the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter O5 San Francisco Forest Alliance

September 14, 2020

Comment O5-1
1) Tree removals will increase fire hazard because the vegetation that will grow instead will be grass and shrubs. These fine fuels dry out more rapidly, ignite much more easily, and result in fast-moving fires that change direction erratically, are difficult to contain, and threaten structures quickly. Forested lands retain moisture much longer than grass and shrub lands, and do not ignite as fast. Of course under the worst conditions, everything burns, but there is no reason to increase the risk by drying out the landscape further. We oppose the removal of trees for this project.

2) In the longer term, trees fight the global warming that is increasing the fire hazard in California year by year. Mature trees store more carbon, and also sequester more carbon each growing season than younger ones, and certainly more than grasses and shrubs. UC should not be contributing to global warming by cutting down trees, thus releasing the stored carbon and cutting off the potential for sequestration.

Response O5-1
The commenter's expression of opposition to the tree removal proposed under the WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

As described in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR, varying levels of tree removal would occur under any of the proposed treatment types. However, relatively more comprehensive

tree removal would only occur where necessary, such as to establish safe evacuation routes by removing trees prone to torching or likely to fall and block access within 100 feet of emergency evacuation routes and to establish non-shaded FBs to aid in the containment of a wildfire and reduce the likelihood of crown fire transition. Furthermore, as described under "Wildfire Conditions in the Plan Area" in Section 3.12.1, "Environmental Setting," in Volume II of this Final EIR, vegetation treatments would focus on the removal of vegetation that poses a high fire hazard, such as eucalyptus trees. On a scale of 1 to 10 for ignition potential, with 1 representing species most easy to ignite and 10 being the most difficult, blue gum eucalyptus scored 1 to 2 (i.e., very high ignition potential). For comparison, oak/bay woodland received a score of 6 to 8, redwood 8, scrub vegetation 4 to 8, and annual grassland vegetation 1 to 3 (EBRPD 2009). This suggests that grassland vegetation has high ignition potential, but grassland fires are not known to be nearly as destructive as forest and scrubland fires. Overall, eucalyptus trees have a high fire hazard rating relative to native tree species and are known to be prolific generators of firebrands or embers; they have been found to start new fires more than 0.5-mile away (EBRPD 2009; Koo et al. 2010; Trelles and Pagni 1997; in Fire Safety Science – Proceedings of the 5th International Symposium). Refer also to Master Response 1 for additional information regarding the fire hazard posed by eucalyptus. In addition, as detailed in Section 2.5.3, "Treatment Maintenance and Monitoring," in Volume II of this Final EIR, UC Berkeley would conduct post-treatment maintenance and monitoring of treatment areas to retain the wildfire risk reduction benefits of initial vegetation treatments and to evaluate the effectiveness of maintenance activities. UC Berkeley would incorporate adaptive management through use of new or different maintenance approaches, as needed, to achieve established performance standards for each treatment area and the objectives of the WVFMP.

As described under Impact GHG-1 in Section 3.7.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, implementation of the WVFMP, including the Identified Treatment Projects, would be consistent with applicable plans, policies, and regulations aimed at reducing GHG emissions, including California's *2017 Climate Change Scoping Plan*, the *California Forest Carbon Plan*, and the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*. To help meet the statewide target for 2030, the *2017 Scoping Plan* prescribed a 15–20 MMTCO2e reduction from business-as-usual emissions from the natural and working lands sector and determined that this reduction should be achieved through increased carbon sequestration and the reduction of wildfire emissions. The treatment activities implemented under the WVFMP would be consistent with the types of treatments called for in the *2017 Scoping Plan*, acknowledging the important role of fuel reduction treatments and prescribed burns in managing natural and working lands to reduce GHG emissions. The *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* has set a goal for, at a minimum, doubling the rate of state-funded forest management and restoration efforts, which include prescribed burns, mechanical thinning treatments, and understory treatments. The objectives of the WVFMP include managing the amount and continuity of vegetation in the Hill Campus to reduce the occurrence and severity of future wildfire emissions and increase carbon sequestration. These objectives, and the activities that will be implemented to attain them, would reduce GHG emissions and increase carbon sequestration over the long term.

Comment O5-2

3) **We also oppose the use of toxic herbicides.** It has been shown that these pesticides are usually more dangerous than their manufacturers claim. They are also more mobile in the soil and more persistent. Nearly every water source on earth contains traces of pesticides. UC should not be contributing to creating toxic waste and potential health hazards from known and yet-to-be-known health impacts on people and animals.

Response O5-2

The comment expresses opposition to the use of herbicides by UC Berkeley. Refer to Master Response 3 regarding the proposed use of herbicides under the WVFMP and the measures that would be implemented to avoid and minimize adverse effects to non-target vegetation.

Comment O5-3

We support the No Project Alternative.

Response O5-3
The commenter's expression of support for the No Project Alternative will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter O6 Claremont Canyon Conservancy

Jerry D. Kent, a Conservancy Board Member
October 3, 2020

Comment O6-1
The following comments are submitted by Jerry D. Kent, a Conservancy Board Member, on behalf of the Claremont Canyon Conservancy in response to the draft UC HILL WILDLAND VEGETATIVE FUEL MANAGEMENT PLAN/EIR (WVFMP/EIR). The Conservancy has been a strong supporter of University efforts to mitigate fire hazards on the Hill Campus since the 1991 fire. Including the significant fire hazard reduction improvements that were achieved by removing eucalyptus, pine, acacia, and other flammable planted and invasive vegetation between 2000 and 2007 in Claremont Canyon, at Chaparral Hill, and along the partial and uncompleted joint EBRPD and UC Grizzly Peak Boulevard Ridgetop Fuelbreak.

The Conservancy has been waiting 14 years, since fire hazard mitigation grants were awarded in 2006 for Claremont and Strawberry Canyon, and was disappointed by the disastrous FEMA EA and EIS process that otherwise would have resulted in fire mitigation projects being completed by now. We are also becoming impatient while seeing increasing fire damage throughout California occurring in the past five years, but are encouraged that the University will again begin significant fire mitigation work based on the "new fire reality" that demands a new comprehensive approach. While visiting Napa Valley and the Glass Fire on Thursday October 1, 2020 with Governor Newsom, Cal Fire Chief Porter was quoted as saying that it's not just firefighters and more aircraft, it's not just more fuels reduction project work, it's not just defensible space or home hardening—it is absolutely every one of those things". Porter also said "We need every piece of the system to be raised to meet the challenge that the changing climate is giving us and that California is going to be in the future". The Conservancy supports the type of comprehensive approach described by Chief Porter for the East Bay Hills and for the UC Campus Hills.

Response O6-1
The comment expresses support for comprehensive approaches to wildfire mitigation. No specific issues related to the content, analysis, or conclusions in the EIR are raised in this comment. No further response is warranted.

Comment O6-2
A. However, we find that the current UC HILL WVFMP/EIR is not comprehensive, represents a significant change in policy, and that it is inadequate. The final draft did not fully respond to the highlighted issues submitted in the attached comments to the draft Plan and NOP. In fact, I can't find any substantive changes in the draft Plan that modified the Cal Fire Grant project list or added other essential provisions as a result of comments made to the draft Plan. The draft Plan is also fragmented because it is based on unspecified ongoing projects funded by Cal Fire, and on a grant request for new projects using untested treatments for managing flammable vegetation on steep hillsides above dense urban development that is periodically subjected to Diablo winds.

Response O6-2
The comment states that the WVFMP and EIR are not comprehensive, represents a significant change in policy, and are inadequate. Refer to responses to comments O6-19 through O6-41 for responses to the highlighted issues submitted on the NOP and included in comment letter O6. Ongoing treatments in the Hill Campus are specifically described in Section 2.4, "Past and Current Vegetation Treatments," in Volume II of this Final EIR.

The proposed WVFMP builds on decades of vegetation management experience by UC Berkeley in the Hill Campus, and employs demonstrated methods and best practices used by agencies in the East Bay. The Plan was prepared by an expert wildland fire manager/fire ecologist and was reviewed and approved by the UC Berkeley Fire Mitigation Committee, which contains experts in fire management, environment, health and safety as well as forestry practices and risk management.

It is unclear what "draft Plan" the comment may be referring to in stating that "…any substantive changes in the draft Plan that modified the Cal Fire Grant project list or added other essential provisions as a result of comments made to the draft Plan" could not be found by the commenter. A draft WVFMP was released for public review on August 3, 2020; this was the first version of the proposed WVFMP where the public was given an opportunity to provide comments.

Comment O6-3

The draft WVFMP/EIR is also faulty because its unstated purpose is to justify an incomplete list of Cal Fire funded grant projects that are based on biased and untested assumptions about thinning dense seedling and coppice eucalyptus forests instead of recommending converting to a lower growing native oak and bay woodland and native shrubland similar to what has already been done by UC above signpost #29 along the South side of Claremont Avenue, on Chapparal Hill, and along Frowning Ridge below Grizzly Peak Boulevard. (Attachment A- Unresolved comments (highlighted) submitted as a response to the draft Hill Campus Wildland Vegetative Fuel Management Plan)

Response O6-3

The intent of an EIR is not to justify the project, but rather to evaluate the impacts of what is proposed. The objectives of the WVFMP are those stated in Section 2.3, "Objectives of the Plan," in Volume II of this Final EIR. Among them, and pertinent to the CAL FIRE grant, is the objective to "Maximize the long-term effectiveness of initial vegetation treatments to responsibly use California Department of Forestry and Fire Protection California Climate Investments grant funds." Refer to the response to comment O6-2, regarding the effectiveness of the treatments. FHR treatments are proposed to both remove eucalyptus and improve native habitat as explained under "Fire Hazard Reduction treatments" in Section 2.5.1, "Description of Vegetation Treatment Types": "Fire hazard reduction treatments would focus on reducing hazardous fire conditions in the Plan Area to help promote landscape resiliency and improve native habitat, and would be primarily implemented in areas where eucalyptus trees were previously removed but regrowth occurred because of ineffective follow-up treatments."

Comment O6-4

The vegetation fuel management details and listed mitigation in the WVFMP will also not fulfill the stated objectives of the Project (objective numbers 1, 4, 5, 6, 8), and is crafted and analyzed as a political mid-option alternative that will not result in managed vegetation safe enough for agency firefighting to stop a Diablo Wind wildfire on steep hillsides before it spreads by flame or embers over fuelbreaks into the Campus, Panoramic Hill residential area, Claremont Canyon open space and residential areas, and other residential communities of Oakland and Berkeley.

Response O6-4

The comment states that the treatments proposed would not meet objectives of the Plan and that they would not be effective in preventing or slowing a Diablo wind driven wildfire. The comment does not provide reasons specifying why the WVFMP will not meet the objectives of the Plan; no further response can be provided. Refer to responses to comments O2-3 and O6-10 and Master Response 1 regarding the effectiveness of the Plan at reducing wildfire risk within and surrounding the Plan Area.

Comment O6-5

To serve as a potential Program and Project EIR, the final UC Campus Hill WVFMP/EIR must result in a comprehensive Plan (that is not limited to the current Cal Fire grant) that will result in a change of the current Hill Campus Cal Fire Resource Assessment Program (FRAP) rating that is currently a Very High Fire Hazard Severity Zone status noted in Figure 3.12-1 to a post project Moderate Fire Hazard Severity Zone status.

Response O6-5

The comment states that the WVFMP and EIR must result in a comprehensive Plan that is not limited to the current CAL FIRE grant. Refer to responses to comments O1-2 and O2-1 regarding the application of grant funding and the WVFMP and EIR's comprehensive consideration of long-term vegetation management throughout the Hill Campus.

The comment also states that implementation of the WVFMP should result in a change from the Plan Area's current designation as Very High Fire Hazard Severity Zone (VHFHSZ) to a Moderate FHSZ. As explained in Section 1.2, "Regulatory Framework for Wildfire Risk Reduction," the intent of identifying areas with very high fire hazards is to

allow CAL FIRE and local agencies to develop and implement measures that would reduce the loss of life and property from uncontrolled wildfires (Government Code Section 51176). The Fire Hazard Severity Zone maps were developed using a model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior, including fire history, vegetation characteristics, flame length, blowing embers, terrain, and typical weather for the area. As explained on CAL FIRE's California Fire Hazard Severity Zone Viewer website (CAL FIRE 2020): "FHSZ maps evaluate wildfire hazards, which are physical conditions that create a likelihood that an area will burn over a 30- to 50-year period. They do not take into account modifications such as fuel reduction efforts." Therefore, implementation of the WVFMP itself could not result in a change to the fire hazard severity designation. Additionally, a change to the fire hazard severity designation is not a CEQA impact significance threshold and is not relevant to the EIR's application as a Program or Project EIR.

Comment O6-6

Further, the UC Hills Campus should not be characterized or managed as a wildland. The UC Hills Campus is currently a collection of historic university and privately owned lands that is now a highly urbanized and already manipulated landscape on a very steep hillside that has not been adequately managed for 120 years. We are faced with increasingly dangerous global warming and 3.6 million acres burning in California while this WFVMP/EIR is being considered, and it's both a fire scientific and political reality that the Hill Campus must now be managed using specific vegetation prescriptions that will result in a fire-safe and manageable greenbelt located above the Campus and urbanized Berkeley and Oakland residential areas.

However, the current WVFMP/EIR is a political plan that relies on inadequate vegetation mapping, inadequate fire behavior modeling, inadequate treatments of flammable blue gum eucalyptus and Monterey pine forests, and on haphazard management of planted flammable vegetation and unmanaged native vegetation without adequately funded and assigned staffing for 800 acres of high risk and sensitive university land. The Draft WVFMP/EIR must be redone to provide required vegetation risk reduction and management detail for public transparency before a final project is selected, analyzed, and approved. (Attachment B- pdf of panels for review and discussion of UC Hills WVFMP/EIR issues).

Response O6-6

As described under "Vegetation Communities" in Section 3.5.1, "Environmental Setting," and shown in Table 3.5-1 in Volume II of this Final EIR, the Plan Area is primarily made up of oak-bay woodlands, scrub habitat, eucalyptus forests, and coniferous forests. Only 110.6 acres of the 800-acre Plan Area (or approximately 13 percent) is developed, disturbed, or landscaped. Although urbanized areas exist in the vicinity of the Hill Campus, vegetation treatments under the proposed Plan would only occur within the undeveloped wildlands in the Plan Area. Refer to Section 2.5, "Plan Description," in Volume II of this Final EIR for the descriptions of the vegetation treatment types and activities that are proposed under the WVFMP, including the nine specific Identified Treatment Projects.

The comment also summarizes detailed comments provided elsewhere in the comment letter and in other public comments. See the response to comment O6-7, regarding the adequacy of the vegetation mapping and modeling used in the proposed WVFMP and EIR. See the responses to comments O2-3 and O6-10, as well as Master Response 1 regarding the effectiveness of the proposed WVFMP at reducing wildfire risks and the proposed treatment of eucalyptus. See the responses to comments O1-2 and O2-1 regarding funding to implement the proposed WVFMP and the university's consideration of long-term, sustained vegetation management throughout the Hill Campus.

The comment also references additional information submitted as attachments to the comment letter. The files provided by the commenter were reviewed when responding to the specific comments that reference them; see responses to comments O6-20 through O6-41 which address the specific attachments.

Comment O6-7

B. The draft WVFMP failed to prepare accurate and useful vegetation and plant community information and detail needed for public disclosure and environmental analysis. The draft Plan and final WVFMP/EIR's discrepancies in communities to be managed and fire modelling must be made consistent. The draft Plan and the WVFMP/EIR should have used an accurate vegetation map to provide baseline integrity for everything that followed. The draft Plan was a

piecemeal plan illustrated by the project maps and policies represented in figures 5, 10, and 23. The 34 different vegetation and land use types used in the statewide Figure 10 LandFire map, even if accurate, resulted in a kaleidoscope of vegetation and fire behavior that the public and agency officials could not be expected to understand. The map used in the draft plan was not clear enough for public review and understanding or for comparison with the McBride Alternative A Vegetation Map. And an Alternative B vegetation map was not prepared for comparison. The WVFMP/EIR map represented by Figure 3.5-1 map should have been used in both the draft Plan and the recommended plan for fuel modeling to determine flame height, rate of spread, and other fire behavior information based on clear vegetation management prescriptions. (Attachment C- McBride map of UC Hills vegetation for comparison purposes)

Response O6-7

As described in Section 3.10, "Vegetative Fuel Models," of the WVFMP (see Appendix A in Volume II of this Final EIR), UC Berkeley used data from the Landscape Fire and Resource Management Planning Tools Project (LANDFIRE, Version 1.40), a nationally accepted and consistent mapping of vegetative fuels. Each of the fuel models present in the Plan Area are described in Section 3.10 of the WVFMP (Appendix A to Volume I of this Final EIR) and are publicly available at www.Landfire.org/vegetation. LANDFIRE was selected for use in the WVFMP because it has been used nationwide since 2006, is continually updated by land managers, and also shows vegetation on lands adjacent to the Plan Area. In addition, it includes vegetation types at a high spatial resolution of 30 meters. The vegetation map included as Figure 3.5-1 in Section 3.5, "Biological Resources," in Volume II of this Final EIR includes vegetation community types in the Plan Area, based on a combination of the characterizations in *A Manual of California Vegetation* (Sawyer et al. 2009) and the land cover types identified by *California Vegetation* (Holland 1986) and the USFWS National Wetland Inventory (USFWS 2020), as presented in habitat assessments prepared for the Federal Emergency Management Agency (FEMA) for a previously proposed, but never approved, wildfire risk reduction plan in the Hill Campus (FEMA 2014). The distribution of these vegetation communities in the Plan Area was verified and refined by Swaim Biological Inc. (SBI) to support preparation of this EIR and mapped in Figure 3.5-1. Refer to the discussion under "Vegetation Communities" in Section 3.5, "Biological Resources," in Volume II of this Final EIR for more information.

The vegetation data depicted in Figure 3.5-1 cannot, and is not intended to, be used for fire behavior modeling because it does not contain the needed inputs to the fire behavior model. The fire behavior model requires fuel characteristics such as fuel model, tree height, canopy base height, and canopy bulk density. These inputs are included in the LANDFIRE data and allowed for the university to model predicted fire behavior under various scenarios in the Plan Area. The reported vegetation types in Section 3.5, "Biological Resources," in Volume II of this Final EIR are appropriately accurate and clear for public review and environmental analysis under CEQA. Furthermore, Figure 2-2 in Chapter 2, "Project Description," in Volume II of this Final EIR clearly depicts the locations of the nine Identified Treatment Projects proposed under the WVFMP, which are also included in Figure 3.5-1 to depict the vegetation communities within and surrounding each.

With respect to alternatives and according to Section 15126.6(d) of the State CEQA Guidelines, "the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparisons with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed." Consistent with State CEQA Guidelines Section 15126.6, specific information about each of the alternatives evaluated in the EIR, including a description of each, a summary of the key differences of each relative to the proposed WVFMP, and an analysis of the environmental effects of each, is included in Section 6.3, "Alternatives Evaluated in this EIR," in Volume II of this Final EIR. In addition, a summary matrix of the environmental effects of each alternative relative to the proposed WVFMP is provided in Table 6-2 in Chapter 6, "Alternatives Analysis," in Volume II of this EIR. The potential environmental effects of each of the alternatives are evaluated in less detail than the effects of the proposed project, pursuant to Section 15126.6 of the State CEQA Guidelines. Alternative A: The McBride Alternative was submitted as a comment on the NOP and included figures (refer to Appendix I in Volume II of this Final EIR). Alternative B: The Reduced

Treatment Alternative is based on a NOP comment letter that was received from the Hills Conservation Network (HCN); however no figures were included and treatments under Alternative B were expected to occur throughout the same Plan Area as the proposed WVFMP. Refer to Section 6.3, "Alternatives Evaluated in this EIR," in Volume II of this Final EIR for more details regarding each of the alternatives that were evaluated.

Comment O6-8

C. There is now worldwide public awareness about the flammability of blue gum eucalyptus and pine trees that can't be denied. However, there is a code of silence based on fear of conflict, inadequate funding for either capital costs or ongoing maintenance, and unverified opinions about the flammability of eucalyptus and pine forests on the part of UC and other East Bay agencies. Instead, agencies have attempted to apply concepts developed for Sierra timberlands which have been controversial and not yet applied successfully by state and federal agencies. In addition, the fire mitigation details and long-term maintenance costs and history of failed ongoing maintenance of flammable forest and open space lands by UC and other agencies is not adequately described in the draft Plan or the draft WVFMP/EIR. As a result, the public and agency officials are clueless about eucalyptus and pine forest fire hazard exposure and the costs and environmental impacts of short and long time care and eventual removal of hazard and decadent trees. (Attachment D- folder of flammable eucalyptus tree articles and applicable science)

Response O6-8

Refer to Master Response 1 regarding the fire hazard posed by eucalyptus and its consideration in the WVFMP and EIR. Development of the WVFMP was based on conditions specific to the Hill Campus, with site-specific fire behavior analysis, not plans for managing pine forests in the Sierras. As explained in the response to comment O6-28, one concept from management of pine forests in the Sierras that is relevant to the WVFMP is variable density thinning.

Proposed treatments to reduce (mitigate) wildfire risk are described in detail throughout the WVFMP and summarized in Chapter 2, "Project Description," in Volume II of this EIR. The history of vegetation management in the Hill Campus is described in the WVFMP (Section 2.4, "Past and Ongoing Vegetation Treatments") and EIR (e.g., see "Past Vegetation Treatments" in Section 3.12, "Wildfire"). Refer to Master Response 2 regarding the university's consideration of long-term maintenance costs.

Land management actions by agencies other than UC Berkeley are beyond the scope of the WVFMP and EIR.

Comment O6-9

D. Surveys of vegetation to be managed and a simple forest analysis was not done, and actual before and after project completion numbers are not described. There is nothing in the draft Plan, the draft WVFMP/EIR, and in the record about the actual type of eucalyptus and pine stands currently found on the UC Hills Campus. Tree numbers are needed for public information to document and analyze before and after treatments of tree stems/acre, coppice, seedling, and mature tree numbers, and information about native and non-native understory to be removed or retained. The draft WVFMP/EIR also did not provided adequate fire safe standards and analysis for initial thinning, removal, conversions to natives, and for the ongoing management of eucalyptus, pine, oak/bay woodlands, shrublands, and grasslands.

Only generalizations like accomplishing tree fire hazard reduction by selecting removals and retention "one tree at a time". Generalizations of this type are used to keep the public in the dark about the scale of potential projects noted in figure 3.5-1. Specific forest details should be included in both the draft Plan and the final WVFMP/EIR to determine if the WVFMP is feasible. Without details it will not be possible to make comparisons with Alternative A and to analyze the differences between alternatives for environmental impacts and for final Project selection.

(Attachment E- pdf of eucalyptus grove photos along Claremont Canyon Avenue as an example for flammable groves logged after the 1972 freeze, with 1,000 eucalyptus and native tree stems per acre)

Response O6-9

The comment states that there is no information in the WVFMP or EIR about the type of eucalyptus and pine tree stands in the Plan Area and that tree numbers are needed to analyze impacts. The specific types of exotic trees that occur in the Plan Area are included in Table 7 "Exotic Plants Known to Occur in the Proposed Plan Area" in the

WVFMP, which is presented in Appendix A of Volume II of this Final EIR. As shown in Table 7 in Appendix A, the species of pine and eucalyptus trees that occur within the Plan Area include Monterey pine (*Pinus radiata*), red gum (*Eucalyptus camaldulensis*), and blue gum (*Eucalyptus globulus*). Refer also to Figure 10 and Table 3 in Appendix A in Volume II of this Final EIR for the specific vegetation types that occur within the Plan Area.

Vegetation removal under the WVFMP would be based on site-specific conditions and is influenced by conditions of vegetation within and adjacent to the Plan Area. In addition, the presence of sensitive resources within the Plan Area, such as the federally and state-listed Alameda whipsnake, affects the types, sizes, locations, and amount of vegetation that can be removed and the treatment activities that may be used. Therefore, it is not feasible to specify the exact number of trees that would be removed as a result of the proposed treatments under the WVFMP. As demonstrated below, the numbers and locations of trees removed will require constant evaluation and consideration in the field.

The comment also states that the WVFMP and EIR did not provide adequate fire safe standards and analysis for initial thinning, removal, conversions to natives, and for the ongoing management of eucalyptus, pine, oak/bay woodlands, shrublands, and grasslands. As described under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types" in Volume II of this Final EIR, the university 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. For example, if two trees are adjacent to each other and one is prone to torching, the tree that is prone to torching would be removed. Shrubs beneath the tree to be retained would also be removed. If a particularly tall tree is determined to be retained, and a shorter tree is located under it, the short tree would be removed if its height is more than 2.5 times the distance between the first set of branches of the tall tree (e.g., if tree branches of a tall tree to be retained start at 25 feet off the ground, trees located under it and taller than 10 feet would be removed). All shrubs would be removed from under and within 6 feet of the tree canopy. Canopy cover and tree density would be variable to help reduce canopy fire spread. There is no set tree density; once trees that are unhealthy, structurally unsound, and prone to torching are removed, a canopy of variable density is expected; this has been observed by university personnel.

Criteria for tree removal include consideration of tree health, structure, height, potential for failure, flammability/fire hazard, high fuel volume production of small diameter fuels, and competition with other trees (including for water, space, and light). Criteria for retention of trees include fuel characteristics (flammability, fuel volume, amount of dead material), consideration of ability to slow spreading of invasive species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, erosion prevention, and cost of removal. Near roads, trails, and buildings, lower limbs of trees would be pruned, understory vegetation shortened, and grass mowed.

In addition, as detailed in Section 2.5.3, "Treatment Maintenance and Monitoring," in Volume II of this Final EIR, UC Berkeley would conduct post-treatment maintenance and monitoring of treatment areas to retain the benefits of initial vegetation treatments and to evaluate the effectiveness of maintenance activities. UC Berkeley would incorporate adaptive management through use of new or different maintenance approaches, as needed, to achieve established performance standards for each treatment area and the objectives of the WVFMP. For example, using prescribed herbivory followed by string cutting grass in areas where herbicides were previously used or planned for future use as a method to keep vegetative regrowth low. The performance standards for FHR projects include:

- No shrubs within 6 feet of tree canopies.
- The absence of dead, unhealthy, structurally unsound trees.
- The absence of trees prone to torching or burning with high fire intensity.
- The absence of shrubs or short trees under tall trees, creating a vertical separation of 2.5 times the height of understory tree or shrub and the overstory tree canopy.
- No resprouts from trees removed.
- The absence of small diameter trees and branches lower than 8 feet off the ground, per defensible space standards described in Section 5.3.1 of the WVFMP.

The performance standards for FB projects are the same as for defensible space, where trees comprise the overstory, with the addition that trees that easily torch (such as Monterey pine and eucalyptus) should have horizontal spacing of at least 35 feet. In addition, understory shrubs and short trees should be absent, consistent with the standards for FHR projects. In a non-shaded FB, the standard would be that shrubs should be no more than 2 feet in height, and some shrubs would be thinned to create groupings no larger than 120 square feet, separated by a minimum distance of 12 feet. The performance standards for TRAs include the absence of all trees and shrubs in a 200-foot-diameter area from the edge of pavement or fire trail, and ground cover consisting of mowed grass. Additional clarifying text has been added under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to further describe the criteria for tree removal and retention under the FHR projects proposed in the WVFMP. This text is presented on page 2-9 in the aforementioned section of Volume II and excerpted in Master Response 1.

As described in Chapter 8, "Maintenance and Monitoring," of Appendix A of Volume II of this Final EIR, monitoring would determine if the treatments are progressing towards and ultimately meeting the overarching goals, as defined in the 2020 LRDP, which are:

- Reducing fuel load by removing dead materials, reducing plant density and favoring species with lower fuel content;
- Reducing horizontal spread by reducing small-diameter fuel materials and by separating dense clusters of vegetation with areas of lower fuel load; and
- Reducing vertical fire spread by increasing separation of understory and crown fuels.

The comment concludes by stating that, without the information identified in the comment, it is not possible to compare alternatives or for "final Project selection." Refer to the discussion under "Alternative Description" provided for Alternative A and Alternative B included in Section 6.3, "Alternatives Evaluated in this EIR," in Volume II of this Final EIR for a summary of the key differences between the WVFMP and each of the alternatives, which are considered in the environmental analysis conducted for each of the alternatives. There is adequate detail, pursuant to State CEQA Guidelines Section 15126.6, in Chapter 6, "Alternatives Analysis," and Chapter 2, "Project Description," in Volume II of this Final EIR to compare the environmental effects of the proposed WVFMP with those of the alternatives. As described in Section 6.4, "Environmentally Superior Alternative," in Volume II of this Final EIR, Alternative B was determined to be the environmentally superior alternative. Alternative B would be the environmentally superior alternative because, although not all of the significant and unavoidable impacts of the WVFMP would be completely avoided, the use of only manual treatment activities to implement vegetation treatments would reduce impacts to almost every environmental resource areas and avoid significant and unavoidable impacts to air quality from prescribed burning.

Comment O6-10

E. The final Hill Campus FM Plan/EIR should recognize that thinning of eucalyptus stands will not be a viable long-term strategy for reducing fire hazards in the steep and windy hill areas of the Campus and that the WVFMP therefore would not meet project objectives. The draft Plan should have reported that a thinning strategy is unproven or at least controversial for blue gum eucalyptus and Monterey pine where tree canopies and ribbon bark are impacted by fire on steep slopes by Diablo winds periodically exceeding 40 mph.

Thinning of pine forests in the Sierra and management of eucalyptus forests in Australia are commonly combined with a program of regular prescribed burning (every 5 to 10 years) which has never been done at scale in the East Bay Hills, and may not be possible in the UC Campus Hills. We do support the eventual use of prescribed fire on already made safe plant communities, but not for eucalyptus and pine groves on steep hillsides with 40 percent and above slopes.

Given the history of failed and successful fire hazard mitigation efforts that have been sustainable. Only removal of the 1972 freeze and logged eucalyptus coppice stumps and seedlings is financially and environmentally warranted to release and manage the lower growing and potentially safer native plant understory community as has already been done successfully by UC. Currently available examples are to be found at the South side of Claremont Canyon. At EBRPD's side of the Frowning Ridge Fuelbreak. At UC's Chapparal Hill. And at the East side of the EBMUD Grizzly Ridge Fuelbreak and its ongoing effort to remove eucalyptus at Grizzly Ridge and Grizzly Peak. (Attachment F

Stephanie Lin 2009 Thesis about the Restoration of Native Flora Following Eucalyptus removal. Referrals are also made to three papers by Jerry Kent posted on the Claremont Canyon Conservancy web page including: Diablo Winds, Wildfires, and Flammable Vegetation in the East Bay Hills, How the East Bay Got its Eucalyptus and Pine Forests, and the Risks and Costs of Eucalyptus and Pine)

Response O6-10

The commenter opines that only complete removal of eucalyptus stands will meet the objectives of the plan. The purpose of an EIR is to evaluate the physical environmental effects of a project, not to defend or criticize its merits. Nevertheless, with regard to project effectiveness, the proposed WVFMP presents a multifaceted approach to vegetation treatment to alter fire behavior, specifically to decrease ignitability, reduce fire intensity and heat output so that fires can be contained and suppressed more easily, resulting in smaller, and less damaging wildfires. In turn, these changes in fire behavior will increase the Plan Area's resistance to catastrophic wildfire to reduce the potential for loss of human life and property damage. The Plan focuses on reducing the likelihood of ember production starting new fires (known as ember cast) during a wildfire. In addition, the Plan aims to reduce overall fuel volume available to burn, thereby increasing the probability of containment of a future fire. The Plan does not call for eradication of any non-native tree species, because it is not needed to reduce wildfire risk; however one objective of the Plan is to manage invasive plant species and promote fire-resistant native plant species to reduce wildfire risks and enhance biodiversity. To these ends, the WVFMP proposes a strategic suite of projects that are within the university's capabilities and available funding and presents a monitoring and maintenance program that ensures treatments will be effective and sustainable. Refer also to Master Response 1 regarding the consideration of eucalyptus in the WVFMP.

Comment O6-11

F. The WVFMP/EIR did not describe and analyze the adequacy of fire mitigation projects of its neighbors or the cumulative impacts of projects by major agencies East of the Campus Hills. The University is clearly not a self-contained island that is isolated from other high risk public lands and residential areas that have experienced repeated wildfires. EBRPD and EBMUD contain extensive open space areas with substantial fuel loads of highly flammable, eucalyptus and pine groves. Diablo Winds come from the East and LBL has modeled the potential for a 60 ft high wall of wildfire coming from EBRPD and University land. The following quotes are from a publication titled Project Shields Lab as Well As Berkeley Neighbors From Wildfire by Jeffery Kahn dated January 12, 2001.

> "The Laboratory manages the entire site under the assumption that in a firestorm, thousands of firebrands will descend upon the Laboratory," says McClure. "These firebrands will ignite vegetation across the site and fire will consume the vegetation around individual buildings in less than ten minutes. But because of the vegetation management effort we have done, these fires will be low-temperature and low-flame. This is the keystone of our defenses: we have reduced fuel levels so that these fires cannot penetrate and ignite the buildings."
>
> Throughout the landscape, the fire characteristics of the site have been evaluated. Where the risks are excessive, the Laboratory has modified native plant communities along the spectrum of the natural succession. The goal is to retard and to accelerate successional forces in selective areas so that fire risks are effectively managed using natural plant communities.
>
> Six years into this complex effort, the Lab has expended a very modest $1.1 million with $600,000 of remaining corrective vegetative work to be done over the next two years. This represents about three-tenths of one percent of the value of just the Lab's buildings (not counting that which is inside). After this initial work is completed, the annual vegetation management bill to ensure the future existence of the Lab will be approximately $100,000.
>
> At the lab's flanks, additional firebreaks and enhancement of existing breaks have been engineered using computer models. Within these firebreaks and within selected wooded areas throughout the site, trees have been felled or thinned and had their lower limbs removed.

> You manage in a way to stop an incoming crown fire. You bring it down to the ground," said McClure. "Before, we would have had 60-foot flames burning uphill toward the Laboratory firehouse. Now, with the breaks and vegetation management, we would get three-to-five-foot flames.
>
> Fifty acres of the Lab had been overgrown with French broom, a highly flammable exotic brush. Now, all of the French broom is gone. Every year, a crew comes in and removes any regrowth, a job that must be continued in perpetuity. But every year, the job becomes easier.
>
> To sustain the fire-safe landscape that has been created by this project, the principles are relatively simple, said McClure. "Grasses we cut. Bushes or brush we thin. Trees we limb up. The end result is a wooded, park-like setting for a complex of buildings that is able to survive a wildland fire."
>
> Computer modeling consistently indicated that the eucalyptus trees above Building 74 on the Lab's critical eastern flank would shower the Lab and Berkeley neighborhoods with firebrands. Now, said McClure, those trees are gone and there is not going to be a storm of firebrands streaming out of the Lab into neighboring residential areas."

LBL proceeded with its own unique fire mitigation approach to create defensible space for its buildings and for its neighbors. However we do not believe the approach used by LBL complies with existing UC policy for the larger Campus Hills or is appropriate for the remainder of Strawberry and Claremont Canyons. For the past 25 years UC has adopted policies and programs which we have supported to successfully remove flammable eucalyptus and pine in Strawberry and Claremont Canyons, along Frowning Ridge below Grizzly Peak to Claremont Avenue, and on Chapparal Hill. We find the potential use of thinning represented in the draft Plan and draft WVFMP/EIR to be significant and not adequately described or analyzed.

(Attachment G- Revised map of completed and proposed UC and adjacent agency eucalyptus and pine removal project areas based on WVFMP/EIR map 3.5-1)

Response O6-11

Vegetation treatment programs implemented by neighboring land managers were considered in the cumulative impact analysis in Chapter 4, "Cumulative Impacts," in Volume II of this Final EIR. Neighboring vegetation treatment programs that were considered in the cumulative impact analysis are summarized in Section 4.3.2, "Regional Vegetation and Fire Fuel Treatment Programs Implemented by Agencies Other than UC Berkeley," and include programs and plans developed by LBNL, the cities of Oakland and Berkeley, Alameda County, the East Bay Regional Park District (EBRPD), and the East Bay Municipal Utility District (EBMUD). The focus was on the environmental impacts of these cumulative projects, which is the requirement of CEQA. See the response to comment O6-10, regarding CEQA's focus on evaluating impacts of a project.

The comment does not provide reasons specifying why the description of vegetation thinning in the EIR is inadequate. Therefore, a response regarding the adequacy of the EIR cannot be provided. The vegetation treatment types and activities that are proposed in the Plan Area are described at a program level of detail in Section 2.5 "Plan Description" in Volume II of this Final EIR, consistent with State CEQA Guidelines Section 15168. The nine identified treatment projects are described at a project-level of detail in Section 2.5.6, "Identified Treatment Projects," in Volume II of this Final EIR. The potential environmental effects associated with implementing the Plan are identified and analyzed throughout Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures," in Volume II of this Final EIR.

Comment O6-12

G. The University should have included in its draft WVFMP/EIR, a dedicated rapid response and early fire ignition detection and suppression wildfire mitigation addition. Specifically, the final draft WVFMP/EIR should include a fire mitigation provision for twenty four hour annual camera and satellite coverage for early ignition detection, coordinated fire behavior modeling during a fire, and for providing initial fire suppression response from a new Campus or Cal Fire Unit with fire trails wide enough for Cal Fire or local agency Type 3 Fire Engines.

Response O6-12

The comment focuses on elements of the proposed project, and not its environmental impacts. As described under Section 6.1.2, "Identification of Alternatives," and Section 6.3.2 "Alternative A: The McBride Alternative" in Chapter 6, "Alternatives," in Volume II of this Final EIR, the installation of cameras to aid in early wildfire detection and suppression, providing increased firefighting equipment on campus (i.e., Type 3 fire engines), and fire road modifications to accommodate Type 3 fire engines were submitted to UC Berkeley as proposed WVFMP alternatives and evaluated in the EIR.

As detailed in Section 6.3.2 in Volume II of this Final EIR, these infrastructure and equipment related alternatives, while likely feasible, would not be practical nor do they involve any vegetation treatment and therefore do not achieve objectives of the project. Please see the referenced discussion. Additionally, UC Berkeley previously evaluated installing a wildfire detection system and determined that the location most visible to the Hill Campus would be on EBRPD parklands, and therefore, UC Berkeley would not have control over installation, maintenance, and monitoring of cameras. Moreover, UC Berkeley does not have its own fire department or firefighting capabilities. It relies on response from Oakland Fire Department, Berkeley Fire Department, Moraga-Orinda Fire District, and CAL FIRE. Therefore, purchasing fire equipment such as fire trucks would be costly, would not necessarily be dedicated to the project area if owned by another fire department, and would not provide a direct benefit to wildfire response in the Hill Campus. Refer also to the response to comment O6-13, regarding the scope of the WVFMP and consideration of non-vegetation management actions.

Comment O6-13

The WVFMP/EIR also did not address how the University vegetation and fuel management plans relate to State Cal OES and Cal Fire suppression programs or consider the potential addition of Cal Fire Unit to be in charge of ignition discovery and response to early fires followed by a coordinated agency suppression program for the East Bay Hills. Currently the WVFMP/EIR states that fire services will be the responsibility of Berkeley, Oakland, Alameda County Fire District, Moraga Orinda Fire Protection District, with mutual aid support from EBRPD and other nearby fire departments. No agency is assigned the lead role even though the University is a State Agency. The UC Hills Campus is exposed to wildfire threats common to the East Bay Hills at an areawide scale, and both protection and suppression must be addressed at this large scale. The final Hill Campus FM Plan/EIR should include in its fire mitigation provisions an East Bay Hills Cal Fire Unit near the Campus. Currently, the Santa Clara Cal Fire Unit headquarters are located too far South in Mountain View with local fire stations near Sunol and Morgan Territory that are strategically placed in rural areas to respond to grassland fires common to Eastern Alameda and Contra Costa Counties, and not to the higher risk East Bay Hill urban interface where major lose in life and homes have happened and can be expected to happen again.

Response O6-13

Section 2, "Overview of the Plan," (page 5) in the WVFMP (refer to Appendix A in Volume II of this Final EIR) describes the various types of plans pertaining to wildland fire management. It states, "The WVFMP does not include other aspects of fire management, such as ignition detection (including installation of cameras or increased roving patrol), a program to enhance fire suppression capabilities (emergency response), nor the placement of water tanks in remote areas of the Hill Campus. This Plan focuses on fuel management through vegetation treatment only." This section contrasts a vegetative fuel management plan with a wildfire management plan: "A wildfire management plan is typically a large document that includes a detailed fire prevention plan that encompasses patrols, education and public outreach, property closure triggers, and operations plan. A wildfire management plan also includes details on wildfire response, such as hydrant locations, engine response times, landowner responsibilities during a wildfire (including evacuation support), and post-wildfire actions including maintenance."

The purpose of an EIR is to evaluate the physical environmental impacts of a proposed project, and this EIR comprehensively fulfils this requirement. The suggestions of the commenter are beyond the scope of a wildland vegetative fuel management plan, and could be considered in a wildfire management plan. They are also comments on the merits of the project and not the environmental impact analysis.

Comment O6-14

H. The WVFMP should not have been selected as the preferred alternative in the EIR process because it did not provide for an adequate Grizzly Peak Boulevard ridgetop fuel break that would include solving the joint-agency vista turnout problem that has increasingly become a known location for fireworks, bonfires, and large day and night-time gatherings. The title of the Oakland Tribune article of Monday August 22, 1932 when 2000 Onlookers witnessed the opening of the new roadway was "New Scenic Road Opened in Berkeley". The article stated that the new road served a three-fold purpose. "namely that work has been provided for hundreds of men (during the great depression) who otherwise would have been out of employment; that a new scenic drive will attract many tourist in years to come has been developed; and the Eastbay has been given a natural fire break which will add further protection from hill blazes".

Since then, the saga of Grizzly Peak Boulevard has become more complex because Berkeley, Oakland, UC Berkeley, EBRPD, and EBMUD are now responsible for specific elements of the "New Scenic Road" including planning for and developing roadside turnout improvements and maintaining public viewing areas where many tourists and residents come to enjoy spectacular views of the San Francisco Bay Area. These agencies are also responsible for maintaining their lands adjacent to Grizzly Peak Boulevard to ensure that this high ridge corridor will serve its stated purpose as a fire break for protection from hill blazes.

However, Grizzly Peak Boulevard between Claremont Avenue (four corners) and Centennial was designated as a sheltered fuelbreak in the McBride Plan, but was amazingly not designated as a fuelbreak of any kind in the WVFMP/EIR. Grizzly Peak Boulevard is one of this Region's most important roadways, and should be listed and managed as an evacuation corridor with fuelbreak vegetation treatments similar to the provisions for Claremont Avenue. The treatments for turnout parking in the draft Plan and the draft WVFMP/EIR are also inadequate. The final WVFMP/EIR should provide for a capital plan and management program needed to replace existing temporary logs, paving of gravel areas, roadway edge control, joint agency staffing or gates for road closure, and policies for red flag and night time closure of vista parking areas.

Response O6-14

This comment addresses the merits of the project and not its environmental impacts. As additional funding is secured by the university, a later vegetation treatment project to establish an FB on UC Berkeley-owned land on the western side of Grizzly Peak Boulevard could be developed under the WVFMP. At the time of its development, UC Berkeley would consider whether it was within the scope of the WVFMP EIR, allowing for a streamlined CEQA review.

The comment also states that treatments for turnout parking in the WVFMP are inadequate and suggests replacing existing temporary logs, paving of gravel areas, roadway edge control, joint agency staffing or gates for road closure, and policies for red flag and night time closure of vista parking areas. Refer to the response to comment O6-13, regarding the reasons non-vegetation management actions are beyond the scope of the WVFMP and EIR. However, the university does take action to reduce wildfire ignition at turnouts. For example, the university recently partnered with the Cities of Berkeley and Oakland to block turnouts along Grizzly Peak Blvd. Eucalyptus logs from the Centennial Evacuation Support project were installed and chained together to prevent vehicles from using the turnout as a way to reduce the chance of wildfire ignition from unsafe behavior.

Comment O6-15

I. The WVFMP/EIR failed to include a mitigation provision for jointly working with Oakland and Berkeley to harden homes against potential embers adjacent to University Hill lands in Strawberry and Claremont Canyons. The WVFMP/EIR was obviously developed to justify the provisions of a recent Cal Fire grant in the absence of an approved regional fire mitigation plan for the East Bay Hills that covers flammable and high-risk agency open space vegetation and adjacent high risk urban residential areas. Firestorms in California are growing larger and more destructive, and experts and state legislation make it clear that it is now necessary to focus on houses at the same time that strategic fuelbreaks and wildland vegetation fire mitigation projects are being planned and analyzed. The University is obviously unable to ensure that vegetation fires originating on its property, whatever the cause of ignition could be, will not produce burning embers during Diablo wind driven fire that could ignite adjacent public or private vegetation and homes in residential areas. Therefore, the University should have included a mitigation provision to work with the cities of Berkeley and Oakland to ensure that homes adjacent to the University Campus

Hills in mapped Cal Fire VHFHS zones are hardened based on the proposals of Jack Cohen and the USFS and current Cal Fire recommendations for home hardening that are necessary for residential resiliency and home survival. (Attachment H. Fire Brands in Large Scale Fires)

Response O6-15

This comment addresses elements of the proposed project and not its environmental impacts. While the comment suggests an important wildfire risk reduction technique for homeowners, UC Berkeley does not have the jurisdiction to require home or building hardening on lands outside of university property. Therefore, such a mitigation, which would be a project element, is not included in the EIR. In addition, as described under Impact WIL-1 in Section 3.12.3 "Impact Analysis and Mitigation Measures," in Volume II of the Final EIR, the Plan would not substantially exacerbate wildfire risks during implementation, and in the long-term, implementation of the treatment activities and maintenance treatments would reduce wildfire risk. Accordingly, there are no significant environmental impacts associated with WVFMP implementation related to increasing wildfire hazards for adjacent landowners; therefore, no related mitigation measures are required. In addition, as described in Section 2.3, "Partnerships," in Appendix A of this Final EIR, UC Berkeley works closely with internal and external fire management partnerships which have assisted in the development of the Plan, including Hills Emergency Forum (HEF), Diablo Firesafe Council, and various neighborhood groups, along with internal interdisciplinary planning teams. The university also maintains partnerships with the cities of Oakland and Berkeley. The cities inspect homes for defensible space compliance where they are adjacent to the Plan Area and cooperatively maintain road rights-of-way on routes abutting the Plan Area. UC Berkeley and the cities of Oakland and Berkeley participate in inspection and maintenance of defensible space on UC Berkeley land (including within the Plan Area) and adjacent private and public properties.

Comment O6-16

J. The WVFMP/EIR project analysis and project selection is inadequate. The Hill Campus FM Plan/EIR needs to investigate and analyze feasible mitigation measures or alternatives that could mitigate or avoid significant project impacts. If any mitigation measure or alternative is to be rejected as infeasible, the DEIR needs to present substantial evidence to support a decision to find the measure or alternative infeasible, using CEQA's definition of feasibility.

The McBride Plan is a comprehensive plan prepared by the most informed and experienced individual who knows more about the UC Hills than any staff member or hired consultant. Dr. McBride is Professor Emeritus of Forestry, Landscape Architecture, and Environmental Planning, Department of Environmental Science, Policy, and Management, UC Berkeley. He has specializations in vegetation and ecological analysis, urban forestry, and historic landscape restoration. In addition to his teaching, Professor McBride has worked as a consulting Forester and Landscape Ecologist in the Bay Area for over 40 years. His consulting work focuses on the preparation of vegetation analysis and management plans. His clients included federal, state, county, and city agencies, legal firms, corporate land owners, private land owners, and foreign governments. Education includes: Ph.D. Botany, University of California, Berkeley; M.S. Forestry, University of California, Berkeley; BS Forestry, University of Montana, Missoula.

The McBride Plan (Alternative A) is discussed and reviewed as an extreme opposite of the Alternative B proposal. The draft UC Hills WVFMP is then justified and selected as the middle of the road political fire mitigation plan using an infeasible and incomplete WVFMP for the faulty EIR analysis found in pages 367 through 452.

Response O6-16

The comment summarizes CEQA requirements regarding rejecting mitigation measures and alternatives as infeasible, expresses support for Alternative A: The McBride Plan, and states that the analysis in the EIR is inadequate.

Under CEQA, "feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code Section 21061.1). As described in Section 6.3, "Alternatives Evaluated in this EIR," in Volume II of this Final EIR, most of the components of all of the alternatives evaluated were found to be feasible. In addition, all of the significant and unavoidable impacts identified in the EIR include the evaluation of feasible mitigation measures; however, not all impacts can be reduced to a less-than-significant level with implementation of mitigation. For example, as described in Mitigation Measure AQ-2 in Section 3.3, "Air Quality," in Volume II of this Final EIR, UC

Berkeley will incorporate all feasible measures to prevent and minimize smoke emissions as part of the precautionary measures required in SMPs, pursuant to BAAQMD Regulation 5 and EPM AQ-1, for the unintended occurrence when a prescribed burn may go out of prescription and adversely affect offsite receptors. Additionally, in accordance with EPM AD-3, UC Berkeley will notify the public of planned prescribed burns and give them adequate notice to take precautionary measures, such as closing windows or temporarily vacating the area, to reduce the potential for exposure. However, considering actions taken by the public to reduce exposure to smoke from prescribed burns would be voluntary, there are no additional feasible methods to compel the public to reduce its exposure. Although all feasible precautions and notifications would be included in EPM AQ-1 and EPM AD-3, the potential remains that short-term exposure to TACs from unpredictable weather changes could occur. Therefore, this impact is significant and unavoidable. Refer to Impact AES-2 in Section 3.2, "Aesthetics and Visual Resources," and Impact NOI-1 in Section 3.10, Noise and Vibration," in Volume II of this Final EIR for the evaluation of the significant and unavoidable impacts of the proposed WVFMP, proposed mitigation measures, and the reasons why the impacts remain significant and unavoidable despite the application of mitigation.

The qualifications of Professor McBride are noted. The proposed WVFMP was prepared by an expert wildland fire manager/fire ecologist and was reviewed and approved by the UC Berkeley Fire Mitigation Committee, which contains experts in fire management, environment, health and safety as well as forestry practices and risk management. The alternative developed offered by Professor McBride (Alternative A) has significant overlap with the WVFMP in both locations and types of treatments. As explained in Section 6.3.2, "Alternative A: The McBride Plan Alternative" in Volume II of this Final EIR, many of the management prescriptions proposed under Alternative A are similar to vegetation treatments currently being implemented by UC Berkeley within the Plan Area or to those proposed in the WVFMP. As described in Section 2.4 of Chapter 2, "Project Description," defensible space treatments are ongoing in the Hill Campus and involve vegetation removal in areas within 100 feet of any structure, consistent with California PRC 4291, which is similar to vegetation thinning around facilities and structures proposed under Alternative A. Roadside treatments are currently implemented within 15 feet of either side of major roads and trails within and bounding the Plan Area and evacuation support treatments are currently implemented up to 100 feet on either side of evacuation routes to remove highly flammable vegetation and trees that may block access/egress should they fall. Ongoing roadside and evacuation support treatments are similar to the roadside FBs and evacuation route maintenance proposed under Alternative A, although the distance from the road in which vegetation would be removed by UC Berkeley would be substantially less under Alternative A. UC Berkeley currently removes exotic trees and vegetation, including eucalyptus, Monterey pine, and French broom seedlings, which is similar to the eucalyptus and conifer conversion under Alternative A, although the locations and areal extent of specific treatments may differ. In addition, the WVFMP includes evacuation support treatments, FHR treatments (which would remove eucalyptus and other highly flammable invasive species), and shaded and non-shaded FBs. Although many of the management prescriptions under Alternative A are already occurring in the Plan Area and/or are included in the WVFMP, some locations and areal extent of specific treatment projects, such as FBs, differ between Alternative A and the WVFMP. Similar to the WVFMP, Alternative A would treat vegetation using manual and mechanical treatment activities, herbicide use, and managed herbivory.

Comment O6-17

The WVFMP does not meet project goals, and is included a 1,200 page cumbersome document that is beyond the review capability of the public with short notice to meet an October 2, 2020 deadline.

Response O6-17

The comment states that the proposed WVFMP does not meet the project goals, and that it was not available for review by the public for a sufficient length of time. Refer to Section 2.3, "Objectives of the Plan," in Volume II of this Final EIR for the text of the objectives of the proposed WVFMP and responses to comments O2-3 and O6-10 regarding the effectiveness of the proposed Plan at reducing wildfire risks. The proposed WVFMP is consistent with all of its stated objectives.

As described in Section 21091(a) of the State CEQA Guidelines, the public review period for a draft EIR shall be at least 45 days when a draft EIR is submitted to the State Clearinghouse for review. The Draft EIR for the proposed WVFMP

was available for public review for a period of 52-days, beginning August 14, 2020, and ending October 5, 2020. The university released the Draft WVFMP earlier, in July 2020, to allow the public more time to review the proposed WVFMP and prior to releasing the Draft EIR.

Comment O6-18

The stated reasons for rejecting the McBride Plan (alternative A) included:

- No broadcast prescribed burning would be conducted.
- No temporary refuge areas would be developed.
- No chipping of biomass or reuse onsite would occur; accordingly, pile burning would substantially increase relative to the WVFMP.
- A 300-foot-wide non-shaded fuel break would be created on the ridgeline between Strawberry and Claremont canyons (the WVFMP includes a 126-foot-wide non-shaded fuel break that extends from Frowning Ridge to Claremont Canyon).
- Water tanks would be installed on Grizzly Peak Boulevard.
- An Alameda whipsnake preserve would be created on the upper south facing slopes of Strawberry Canyon.
- Fire roads throughout both Strawberry and Claremont canyons would be widened and graded to accommodate the Type 3 fire engines purchased.

All of these items or some reasonable modification are required to meet the eight listed objectives of the project. Rejection of the McBride alternative for these stated reasons did not allow for an accurate comparison with the draft WVFMP alternative during a faulty DEIR process.

Response O6-18

As described under "Alternative Description" in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR, there are several similarities and differences between Alternative A and the proposed WVFMP. The bulleted list provided in the comment is a summary of the key differences between the McBride Plan and the WVFMP, which are considered in the environmental analysis of the McBride Plan, not the reasons for rejecting the alternative. The consistency of the McBride Plan with Plan objectives and the feasibility of the McBride Plan are analyzed in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR. The comment does not provide reasons specifying why the alternatives analysis in the EIR is inadequate. Therefore, a response regarding the adequacy of the EIR cannot be provided.

Comment O6-19

ATTACHMENT B- List of Maps and Panels submitted as a pdf along with Jerry Kent comment letter about the draft UC HILL WILDLAND VEGETATIVE FUEL MANAGEMENT PLAN/EIR (WVFMP/EIR).

1. Fire Hazard Severity Map (Figure 3.12-1)
2. Fire History Map (Figure 6)
3. UC Hills Area Topographic Map- showing areas where firefighting will be problematic
4. Map of Ongoing Treatments Funded by Cal Fire (Figure 5)
5. Map of Current Vegetation Types, from 2016 LandFire Data (Figure 10)
6. Fuel model distribution in the Hill Campus (Figure 11)
7. Flame Length Projections with 40 mph NE winds (Figure 19)
8. Rate of Spread Projections with 40 mph NE winds (Figure 20)
9. Map of All Project Area Treatments (Figure 23)

10. Map of Current Vegetation Communities (Figure 3.5-1)
11. Map of Identified Treatment Projects (Figure 2-2)
12. Map of Roads, Trails, and Grizzly Peak Blvd. Turnouts (Figure 3.11-1)

Response O6-19

The comment lists additional maps and panels that were submitted as an attached PDF to the comment letter. The files provided by the commenter are predominately figures from the proposed WVFMP and EIR. One map depicts the topography in the Plan Area and states that more than 75 percent of the Hill Campus has slopes over 40 percent and more than 90 percent of the Hill Campus has slopes over 20 percent. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by decision makers.

Comment O6-20

The Conservancy has been a strong supporter of the Universities efforts to mitigate fire hazards on the Hill Campus since the 1991 fire. Including the significant fire hazard reduction improvements that were achieved between 2000 and 2007 in Claremont Canyon, at Chaparral Hill, and along the Grizzly Peak Boulevard Ridgetop Fuel break between Grizzly Peak and Chaparral Hill. We believe UC was able to accomplished important fire mitigation work at these project areas with limited funds, limited staffing, and without opposition by the public.

Unfortunately, after being awarded a substantial grant in 2005 requiring FEMA to complete an Environmental Assessment, a small group of residents (HCN) in 2008 opposed the draft Strawberry Canyon EA. They complained about UC and its proposed projects, they wanted UC to act like EBRPD, and they wanted to live in the urban/wildland interface while wanting everyone to respect their right to put themselves in harm's way. They lobbied FEMA to do a more extensive East Bay Hills EIS for Hazardous Fire Risk Reduction that was then challenged by the group seven years later in litigation with FEMA in 2015. Shockingly, UC and Oakland's grant funds and their USFWS biological mitigation provisions were yanked at the last minute by a questionable settlement agreement between HCN and FEMA in 2017. Dense, flammable, and unsustainable eucalyptus and pines now remain on Hill Campus lands on the North side of Claremont Canyon and in Oaklands Tunnel Canyon putting everyone at risk during a time of increasing state-wide wildfire disasters.

Response O6-20

The comment expresses support for previous wildfire risk reduction efforts, concern about the fire hazard of current vegetation conditions on the Hill Campus and in other areas of the East Bay hills, and disappointment about the outcome of HCN's opposition to FEMA's earlier wildfire risk reduction efforts in the East Bay Hills. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by decision makers.

Comment O6-21

A. Overriding Policies in the UC Berkeley 2020 Long Range Development Plan that we believe should guide the current Hill Campus FM Plan/EIR process

- "First, the Hill Campus is a scenic and recreational resource for the entire East Bay, and is part of the continuous greenbelt of park and watershed land that extends the length of the East Bay Hills from Richmond to Hayward. A greenbelt of such size and integrity, in such close proximity to densely urbanized areas, is a unique feature of the region and contributes significantly to the quality of East Bay life." (Page 51)
- "Second, the mix of scrub and conifer and eucalyptus stands make the East Bay Hills, including the Hill Campus, a regular seasonal fire risk. This risk becomes particularly pronounced during the periodic one-or two-day shifts from the normal northwesterly winds to Diablo winds blowing from the warm, dry regions to the east. 20th century Diablo wind fires have burned over ten times the acreage of normal wind condition firesand include the firestorms of 1923 and 1991. The steep terrain and poor access and infrastructure in the Hill Campus present enormous obstacles to fire response, and some areas such as Claremont Canyon may be indefensible in Diablo wind conditions." (Page 52)

- "Third, the steep terrain and the poor access and infrastructure also make development itself more disruptive and costly. Over 75% of the Hill Campus has a slope over 40%, and over 90% has a slope over 20%. Areas with slopes under 20% are scattered throughout the Hill Campus, often in locations not served by either roads or utilities." (Page 52)•The UC 2020 LRDP Policy is to: "Manage the Hill Campus Landscape to Reduce Fire and Flood Risk and Restore Native Vegetation and Hydrology Patterns. UC Berkeley maintains an ongoing program of fire fuel management in the Hill Campus to reduce fire risk to the campus, LBNL, neighboring residents, and recreational visitors to adjacent park and watershed lands. While the treatment used in a given area must be customized to address its specific conditions, including vegetation type, access, and proximity to roads and structures, in general the treatments are designed to meet one or more of the following goals:
    - Reducing fuel load by removing dead material, reducing plant density, and favoring species with lower fuel content,
    - Reducing horizontal spread by reducing fine fuel material and by separating dense clusters of vegetation with areas of lower fuel load, and
    - Reducing vertical fire spread by increasing separation of understory and crown fuels.

    Whenever feasible, future fuel management practices should include the selective replacement of high-hazard introduced species with native species: for example, the restoration of native grassland and oak-bay woodland through the eradication of invasive exotics (broom, acacia, pampas grass) and the replacement of aged Monterey pines and second-growth eucalyptus. Such conversions must be planned with care, however, to avoid significant disruptive impacts to faunal habitats." (page 57)

Response O6-21

As described in Section 2.4, Past and Current Vegetation Treatments," in Volume II of this Final EIR, UC Berkeley maintains an approved and ongoing program of vegetation treatment and maintenance activities in the Plan Area to reduce fire risk to the UC Berkeley campus, LBNL, neighboring properties, recreational amenities, and to adjacent park and watershed lands. Past, ongoing, and planned vegetation treatments include defensible space and roadside treatments; evacuation support treatments; roadside turnout and signpost treatments; exotic plant removal; hazard tree removal; and tree planting (i.e., replacing flammable vegetation with more fire-resistant vegetation). These ongoing activities were included in the UC Berkeley 2020 Long Range Development Plan (2020 LRDP) and are consistent with 2020 LRDP policies. The vegetation treatments proposed in the WVFMP would expand upon the approved and ongoing vegetation treatment and maintenance activities currently occurring in the Plan Area to further reduce wildfire risk and restore native vegetation, and are also consistent with the policies contained within the 2020 LRDP.

Comment O6-22

B. Specific comments about the NOP and the Initial Study

1. The NOP as written is inadequate because it appears to be based on a partial Plan for the UC Hills that is incomplete and likely guided by a CAL FIRE California Climate Investments Fire Prevention Grant instead of by a comprehensive Plan like the McBride Plan, that will be required for the UC Hills . The current NOP makes the following statement which indicates that the NOP contains a partial plan which in our opinion will not survive a rigorous review including a required cumulative impact analysis.

    "Facilities Services recognizes that additional work will be required and anticipates that it will increase its implementation of defensible space and roadside treatments, roadside turnout treatments, exotic plant removal, hazard tree removal, signpost treatments, and selective tree planting throughout the Plan Area".

Response O6-22

The comment refers to the contents of the Notice of Preparation (NOP), which initiates the preparation of an EIR and requests comments on the scope of what the EIR should address. The comment addresses the merits of the project as explained at the time the NOP was prepared, and not the contents of the EIR.

Refer to responses to comments O1-2 and O2-1 regarding the application of grant funding and the WVFMP and EIR's comprehensive consideration of long-term vegetation management throughout the Hill Campus. The cumulative analysis is presented in Chapter 4, "Cumulative Impacts," in Volume II of this Final EIR. No specific issues related to the content, analysis, or conclusions in the cumulative analysis are raised in this comment. No further response is warranted.

Comment O6-23

1. The Initial Plan (in the NOP) was too general and vague. The project areas should include the entire 800-acre Hill Campus. The Claremont Canyon Conservancy strongly recommends that UC planners base their Plan and EIR on the McBride Fuel Management and Wildfire Mitigation Proposal for the University of California Property in Strawberry and Claremont Canyons.
2. The Hill Campus FM Plan/EIR needs to identify and implement methods of vegetation management that will decrease both the short-term and long-term liability for the University resulting from damage to people, property, and/or the environment from wildfires occurring on or moving through the Hill Campus.
3. The Hill Campus FM Plan/EIR needs to identify and describe both short-term and long-term goals for the project – i.e., reducing the risk of wildfire damage over the next 2-10years as well as decreasing the risk of wildfire damage over the longer-term 10-30 years.

Response O6-23

Refer to responses to comments O1-2 and O2-1 regarding the application of grant funding and the WVFMP and EIR's comprehensive consideration of near-term and long-term vegetation management throughout the Hill Campus.

As explained in Section 2.1, "Plan Overview," in Volume II of this Final EIR, up to 600 acres of the 800-acre Plan Area would be treated under the WVFMP because 200 acres are inaccessible (i.e., in Hamilton Gulch) or not expected to carry fire, due to the lack of vegetative fuel.

The Plan objective to "[s]ubstantially reduce risk to life, property, and natural resources on the UC Berkeley campus and in the greater East Bay region" (see Section 2.3, "Objectives of the Plan," in Volume II of this Final EIR) applies in the near-term as well as the in the long-term management of wildfire risk in the Hill Campus.

The plan referenced in the comment and included with the NOP was considered by the preparers of the WVFMP and EIR and evaluated as Alternative A in the EIR, refer to Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR. As explained therein, many of the management prescriptions proposed under Alternative A are similar to vegetation treatments currently being implemented by UC Berkeley within the Plan Area or to those proposed in the WVFMP.

Comment O6-24

7. The Hill Campus FM Plan/EIR needs to investigate and analyze feasible mitigation measures or alternatives that could mitigate or avoid significant project impacts. If any mitigation measure or alternative is to be rejected as infeasible, the DEIR needs to present substantial evidence to support a decision to find the measure or alternative infeasible, using CEQA's definition of feasibility.

Response O6-24

The comment summarizes detailed comments provided elsewhere in the comment letter. See the response to comment O6-16. As described above in the response to comment O6-16, all of the alternatives evaluated in detail in the EIR were found to be potentially feasible, and where mitigation measures could not reduce impacts to less-than-significant levels, substantial evidence was provided.

Comment O6-25

8. The Hill Campus FM Plan/EIR needs to take into account the effects of future climate change while analyzing projects in the Plan including the cumulative effect of future climate change on the environment. Under a "business as usual" scenario, temperatures are now projected to rise 3.5 degrees Centigrade (~6.3 degrees Fahrenheit) by 2100 causing increases in the number of wildfires and extreme weather days in the state and the region.

Response O6-25

The proposed vegetation treatment types and activities in the WVFMP would be selected in designing future vegetation treatment projects depending on site-specific conditions and treatment objectives, and are reviewed in the EIR for long-term implementation throughout the Plan Area. The design of these later vegetation treatment projects will inherently consider the effects of climate change as manifested in the site-specific conditions of treatment areas. Refer also to the response to comment O7-3, regarding the Plan's consideration of increased wildfire risk attributable to climate change.

Comment O6-26

9. The Hill Campus FM Plan/EIR should analyze, provide alternatives, and make recommendations to inform policy makers about hotly debated and controversial issues about fire and resource management science, eucalyptus and pine trees, herbicides, and the public desire to save trees that became apparent during earlier plans, including:

   - The relative number of trees in groves that are considered fire hazards to be removed and the number of trees in groves to be saved that are considered to be less of a fire hazard during forest treatment alternatives in relationship to the current total number of similar trees in groves in the East Bay Hills.
   - The relative differences in fire and liability risks today between already planted large groves of trees (eucalyptus and pine forests) and lower growing native groves of trees (oaks, willows and bays woodlands).
   - The relative differences in fire mitigation in dense 1,000 stems per acre groves remaining in logged areas by removing second growth eucalyptus coppice stumps and seedlings and saving understory oaks and bays vs. keeping 40 eucalyptus trees per acre and removing all understory native vegetation and managing a cleared understory for the next 50 years.
   - The relative feasibility differences in thinning high fire risk trees to manage and retain groves with eventual large tree removal costs in the future vs. the use of one-time grant capital funds to efficiently remove high-risk tree fire risk trees to be replaced by understory native vegetation identified in each area in the final Plan.
   - The relative differences in available science based methodologies for fire Behavior Analysis that would provide better descriptions of flame height, rate of spread, and other factors to inform policy makers of the relative fire danger of vegetation in the UC hills, along evacuation routes, and in public open space areas in the project area. The fire behavior science in the 2010 Park District Plan/EIR and the 2017 FEMA Plan/EIS were largely not recognized as important by the public and media as an issue to be understood leaving most arguments about saving trees and not using herbicides. UC's final Plan's fire based science about vegetation fire hazard descriptions must be accurate and useful for a conflicted public and for public officials who must decide how to make the city reasonably fire-safe.
   - The relative differences in the use and environmental impacts of using or not using approved herbicides by licensed operators vs. labor intensive hand and mechanical treatments to remove flammable weeds and other flammable vegetation.
   - The relative differences in a claim made by some individuals and groups that it is not necessary to mitigate fire hazards by removing eucalyptus, pine, and cypress trees or managing flammable park vegetation because residents instead should harden homes and accept the fact that uncontrollable wildfires are a part of living near the Campus and generally in the East Bay Hills.
   - The relative differences in the desire for a "species neutral" approach that proponents assume would result in keeping costly and flammable hazard trees like eucalyptus and pine while removing less costly and flammable trees like native oaks, bays, and maples.

- The relative differences for the Campus and nearby residents in assuming that another major fire will happen soon vs. residents who want to live near the Campus "just like it is today" and are not worried about a major fire during a period of global warming when fires are now a year-round threat and the East Bay is due for another 20 year cycle of fire.
- The relative differences between the use of fuel breaks only to be located adjacent to residential areas vs. a comprehensive plan of vegetation management like the McBride Plan to prevent the intensification and spread of an incipient or already-developed wildfire.

Response O6-26

A purpose of the EIR is to assess impacts of the proposed project, rather than compare differences in specific practices that are not analyzed as alternatives to the proposed project. As such the relative differences between using hand labor or applying herbicide to control regrowth is not warranted. Chapter 6, "Alternatives," in Volume II of this Final EIR presents an analysis and comparison of different approaches to treatment, including alternatives that propose complete removal or selective thinning of eucalyptus, such as Alternative A: McBride Plan Alternative.

The commenter requests a comparison of Hill Campus tree quantities with other public landowners in the East Bay Hills; however, the focus of the plan is on the UC Berkeley Hill Campus. Similarly, the commenter requests an analysis of the efficacy of increased ignition-resistant construction vs. vegetation management. While the hardening of buildings outside the project area would reduce susceptibility to damage caused by the wildfire, these activities are outside the control and jurisdiction of the university and are therefore infeasible. The project focuses on those actions under the control of the university.

Regarding the available science-based methodologies for fire Behavior Analysis, the fire behavior analysis in the WVFMP is the same software and database used by federal and state firefighting agencies to plan for and respond to fires. The preparers of the WVFMP's used accurate, science-based methodologies with the intent that the information be useful to the public and UC decision makers.

Comment O6-27

1. The final Hill Campus FM Plan/EIR should address the fact that the Hills and portions of the current UC Campus Hills were forested for real estate development 120-years ago and by the University more recently for research projects on the Campus Hills that are now covered with trees and unmanaged vegetation that will burn as a wildland/urban intermix fire that can't be stopped. Dense and flammable residential areas also occur near the Campus on steep hillsides with narrow roads that will not allow residents to quickly evacuate during a major Diablo wind fire. We believe that flammable eucalyptus and pine trees that are identified in the final Hill Campus FM Plan/EIR should be removed, as proposed in the UC 2020 Long Range Development Plan, to release safer understory native vegetation to be managed appropriately.

Response O6-27

The commenter expresses concern about the wildfire risks associated with the current vegetative conditions of the Hill Campus and requests that the eucalyptus and pine trees identified in the proposed WVFMP be removed. Refer to Section 2.5, "Plan Description," in Volume II of this Final EIR for information regarding the vegetation treatments proposed under the WVFMP and Master Response 1 for more information specifically regarding eucalyptus removal under the WVFMP.

Comment O6-28

2. The final Hill Campus FM Plan/EIR needs to be independent of other typical Cal Fire-funded thinning projects. Plans for dealing with coppice eucalyptus plantations at the wildland-urban interface, for example, should not be based on plans for managing pine forests in the Sierras intended for lumber production. Thinning of second-growth coppice blue gum eucalyptus trees is neither a safe nor sustainable method of creating a "healthy forest of blue gum eucalyptus trees" without regular use of prescribed fire in the densely, over-developed, steep, and periodically windy East Bay Hills wildland/urban interface and intermix.

3. The final Hill Campus FM Plan/EIR must be separated from the Cal Fire award of a grant for partial work without a comprehensive plan. Care must be taken that a "cart before the horse" approach to justify the provisions in a grant does not interfere with a transparent and unbiased public process required by CEQA and NEPA laws.

Response O6-28

Development of the WVFMP was based on conditions specific to the Hill Campus, with site-specific fire behavior analysis, not plans for managing pine forests in the Sierras intended for lumber production. One concept from management of pine forests in the Sierras that is relevant to the WVFMP is variable density thinning. This concept is employed in the Hill Campus because it is specifically designed to arrest fire movement from tree crown to tree crown. Prescribed burning is an element of the WVFMP for long-term management of wildfire risk in the Hill Campus, as described under "Prescribed Burning" in Section 2.5.2, "Description of Vegetation Treatment Activities," in Volume II of this Final EIR.

Refer to responses to comments O1-2 and O2-1 regarding the application of grant funding and the WVFMP and EIR's comprehensive consideration of near-term and long-term vegetation management throughout the Hill Campus.

Comment O6-29

4. The Universities Hill Campus FM Plan/EIR should be developed recognizing that Diablo wind fires have proven to be unstoppable in unmanaged wildland vegetation. The Hill Campus FM Plan/EIR must include a comprehensive land management plan, such as the McBride Plan, while also relying on locally mandated and enforced home hardening and defensible space provisions to be administered by local agencies.

5. The University should work with the cities of Berkeley and Oakland to ensure that homes in mapped Cal Fire VHFHS zones are hardened to resist extreme fires with adequate defensible space around homes and within the community. East Bay Hill residents in Cal Fire VHFHS zones must be accountable for preparing their homes for wildfire and protecting themselves by having a family evacuation plan since there will not be a fire truck for every home and residents will be evacuated during all major fires.

Response O6-29

This comment addresses the merits of the project and not its environmental impacts. This response provides clarity regarding conditions that led to development of the proposed WVFMP. Existing conditions within the Plan Area, including the fire history in the East Bay hills, previous Diablo-wind driven wildfires, and fire hazards in the Plan Area are summarized in Section 3, "Description of Existing Conditions," in Appendix A of this Final EIR. In addition, two weather scenarios were selected to conduct a fire behavior analysis of the Plan Area, one of which used a Diablo wind scenario, which is with a 40 mile per hour wind blowing from the northeast. The results of this analysis help to guide the development of the proposed treatments included in the WVFMP. Refer to Chapter 3 of the WVFMP (Appendix A in Volume II of this Final EIR) for details related to predicted wildfire behavior under Diablo wind conditions in the Plan Area.

Refer also to the response to comment O6-15, regarding the university's partnerships with adjacent jurisdictions with the intention of reducing wildfire risks in the East Bay hills. As described in the response to comment O6-15, while an important wildfire risk reduction technique for homeowners, UC Berkeley does not have the jurisdiction to require home or building hardening on lands outside of university property. In addition, as described in Section 2.3, "Partnerships," in Appendix A of this Final EIR, the university maintains partnerships with the cities of Oakland and Berkeley. The cities inspect homes for defensible space compliance where they are adjacent to the Plan Area and cooperatively maintain road rights-of-way on routes abutting the Plan Area. UC Berkeley and the Cities of Oakland and Berkeley participate in inspection and maintenance of defensible space on UC Berkeley land (including within the Plan Area) and adjacent private and public properties. The university implements ongoing defensible space treatments on university property, which involve vegetation removal in areas within 100 feet of any structure, consistent with California PRC 4291.

Comment O6-30

7. The final Hill Campus FM Plan/EIR should describe how recommended fire projects in the Plan will address future fire risks associated with global warming, extreme weather, and the new normal for more fires often described by Cal Fire, in numerous scientific publications, and by the media.

Response O6-30

Refer to the response to comment O6-25, regarding the WVFMP's consideration of climate change in the design of future vegetation treatment projects, and to the response to comment O7-3, regarding the WVFMP's consideration of increased wildfire risk attributable to climate change.

Comment O6-31

8. The final Hill Campus FM Plan/EIR should include numbered polygons of project areas with cost projections for project work to facilitate grant requests and development of annual budget requirements.

Response O6-31

Refer to Master Response 2 regarding economic considerations in the WVFMP and EIR.

Comment O6-32

9. The final Hill Campus FM Plan/EIR should describe how the Campus will be prepared for the "new normal fire future" including climate change and the probability of more wildfires during the present century. Fire mitigation principles developed between 1991 and 2019 must be upgraded to incorporate new lessons learned in the past 28 years because the Oakland/Berkeley Hills have unfortunately held the record for the state's most damaging and costly fires for 93 of the years since the 1923 fire, and the University must take aggressive steps to ensure that its Hill Campus and adjacent residential areas are reasonably fire-safe in the future.

Response O6-32

Refer also to the response to comment O7-3, regarding the WVFMP's consideration of increased wildfire risk attributable to climate change.

Comment O6-33

11. The final Hill Campus FM Plan/EIR should describe the differences between forest fires and urban intermix fires. The current theme for addressing forest fire hazards in the Sierra is to thin and then burn forests on a regular schedule to create healthy native forests that can survive repeated wildfires. We believe that model does not work in the East Bay Hills urban/wildland intermix because of extensive areas of planted eucalyptus, pine, and acacia, and that the UC Hills Plan and EIR must describe a viable model that is understandable and based on native woodlands, shrubland, and grasslands that can be managed by University employees.

Response O6-33

The WVFMP is based on local conditions and local capabilities in the Plan Area. The proposed Plan builds on decades of vegetation management experience by UC Berkeley in the Hill Campus, and employs best practices used by agencies in the East Bay, not plans for managing pine forests in the Sierras. As explained in the response to comment O6-28, one concept from management of pine forests in the Sierras that is relevant to the WVFMP is variable density thinning.

Comment O6-34

13. The final Hill Campus FM Plan/EIR should describe the 1972 freeze and its impact on high-ridge Campus, Tilden, and Claremont Canyon eucalyptus trees using before and after aerial photos (provided here and attached), and describe the logging that took place to remove eucalyptus trees, litter, and other ground fuel to prevent another fire for the next twenty years. Also describe the fact that the East Bay has experienced freezes in 1921, 1933, 1972, and 1991 that have impacted eucalyptus trees in specific areas requiring either removal or cleanup. Also, note that the October 1991 fire followed an earlier freeze during the winter of 1990. Finally, describe the lessons learned from the 1972 freeze about leaving stumps untreated to produce the much denser and therefore more fire prone groves that exist today in public and private lands in the East Bay Hills.

Response O6-34

The comment requests that information regarding past freeze occurrences in the Plan Area be included in the WVFMP and EIR and notes a relationship between freeze occurrence and fire hazard in subsequent years. Refer to Section 2.4.3, "History of Eucalyptus Management in the Hill Campus," in the WVFMP included as Appendix A in this Final EIR for a discussion of the past management of eucalyptus trees in the Hill Campus, including after freeze events.

The commenter correctly notes that the last freeze affecting eucalyptus trees in the Hill Campus occurred in 1990/1991. Given the time that has elapsed since the last freeze, the existing vegetative fuels within the Identified Treatment Project areas and throughout the Hill Campus do not create an increased fire hazard within the Plan Area as a result of a recent freeze event. Recommended actions in the WVFMP are based on site-specific and current conditions in the treatment areas. If a future freeze affects trees and other vegetation in the Plan Area such that fire hazards are increased, it will be addressed by later vegetation treatment projects applying the treatment types and treatment activities consistent with the WVFMP, pursuant to the analysis in this EIR.

Comment O6-35

14. The final Hill Campus FM Plan/EIR should include a detailed discussion of topography with over 75% of the Hill Campus having a slope over 40%, and over 90% has a slope over 20%. In our opinion, current fire modeling does not fully address slopes of this degree when combined with extreme weather conditions that are typical during Diablo winds. Therefore, mitigating fire under extreme conditions with dense vegetation and dense adjacent residential areas should be supported and justified by expert knowledge with descriptions factored upward to deal with steep gradients commonly found in the Campus Hills.

Response O6-35

This comment addresses the fire modeling used to develop the WVFMP. It is a comment on the project rather than the contents of the EIR.

The comment opines that the fire modeling does not adequately consider steep slopes in the Plan Area. The effect of steep slopes is included in the heat transfer algorithms within FlamMap. FlamMap is relied on by wildland fire managers nationwide, in locations with extremely steep slopes like in the Hill Campus, and is an industry standard. As further recognition of the effect of slope on fire behavior, one of the modeling inputs selected is to simulate fire behavior where wind is blowing uphill in all locations, which is the most severe option possible, since wind will accelerate and intensify fire behavior moving up a slope. See Figure 14, "Inputs to fire behavior prediction software FlamMap," which appears page 44 of the WVFMP.

The fire behavior modeling presented in the WVFMP informed but did not dictate the design of proposed treatments to land managers. Treatment areas were identified with input from several experts in wildland fire science and environmental health, including staff from LBNL. Some of the treatment areas have been identified by university fire mitigation managers as long ago as 2010. The proposed treatment areas (locations) and treatment methods have been reviewed and approved by the UC Berkeley Fire Mitigation Committee, which includes experts in fire management, environment, health and safety as well as forestry practices and risk management. The fire behavior modeling uses the same software and database as federal and state fire response agencies and is an industry standard.

Comment O6-36

17. The final Hill Campus FM Plan/EIR should recognize that the fire science in 2010 EBRPD Plan and the 2017 FEMA Plan/EIS was largely not recognized as important by the public or media as an issue to be understood leaving most arguments about saving trees and not using herbicides. The UC Hill Campus Plan's vegetation fire hazard descriptions must be accurate and useful to a conflicted public and for university officials who must decide how to make the UC Hills reasonably fire safe.

Response O6-36

This comment addresses assumptions used to develop the WVFMP. It is a comment on the project rather than the contents of the EIR.

Refer to the response to comment O6-26, regarding the WVFMP's presentation of fire science to the public. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted.

Comment O6-37

23. The final Hill Campus FM Plan/EIR should address the fact that fire behavior in the past has been based on standard modeling that assumes relative differences in vegetation with flame lengths at the fire front of 0-4', 4-8', 8-11', and above 20'. However, these flame lengths and descriptions do not correspond to what urban residents see on TV during every fire season. The Plan should explain how these projected flame assumptions relate to flames of 100' or 200' that are commonly seen that are 2 to 5 times the height vegetation including flames above the tops of tall trees with embers expanding the fire area across valleys and ridges during a major fire. As an example, a small fire on the Vallejo side near the Carquinez Bridge in November of 2019 jumped the Straits to ignite a fire on the Crockett side during a Diablo Wind event in the East Bay during a period of multiple wind driven fires.

Response O6-37

This comment addresses assumptions used to develop the WVFMP. It is a comment on the project rather than the contents of the EIR.

The output of FlamMap, which was used in the WVFMP, predicts flames from surface fires at the flaming front, but does not identify flame height of a fire that involves the tree canopy. When a fire transitions to the tree canopy through torching, flame lengths can be two- to-three times the height of the tree. The location of areas predicted to torch, as identified in the output of FlamMap, is displayed in Figures 17 and 21 of the WVFMP (see Appendix A in Volume II of this Final EIR). The maximum spotting distance is another feature displayed using the output of FlamMap; refer to Figures 18 and 22 in the WVFMP.

Comment O6-38

24. The final Hill Campus FM Plan/EIR should note that a comprehensive Environmental Impact Statement was prepared by FEMA that also covered Strawberry Canyon, Chaparral Hill, and Claremont Canyon areas. It also should describe how the University proposes to deal with the FEMA/EIS and its USFWS Biological Opinion for these three project areas, and for obtaining required permits. The Plan should also state how long it will take the University to complete a Title 10 Habitat Conservation Plan with the USFWS and other resource agencies if required, to obtain permits.

Response O6-38

The Environmental Impact Statement prepared by FEMA and the Biological Opinion issued by the U.S. Fish and Wildlife Service have been reviewed by the preparers of the EIR for technical information on landscape conditions and resources present within the Plan Area, and cited in the EIR as appropriate. However, because these are documents prepared pursuant to federal laws (the National Environmental Policy Act and Section 7 of the Endangered Species Act, respectively) they are not applicable to the regulatory compliance of the proposed project under CEQA, and do not need to be noted or otherwise presented within the EIR. Refer to the response to comment O9-23, regarding compliance with the federal Endangered Species Act.

Comment O6-39

27. The final Hill Campus FM Plan/EIR should include in its fire mitigation program and suppression planning a request for the location of an East Bay Hills Cal Fire Unit near the Campus. Currently, the Santa Clara Cal Fire Unit headquarters is located too far South in Mountain View with small fire stations near Sunol and Morgan Territory. Cal Fire's local stations generally have a combination of four fire trucks stationed in the East Bay while local fire departments have about 125 fire trucks with multiple support units. We believe Cal Fire should have a dedicated unit assigned to the VHFHS zoned East Bay Hills near the Campus for rapid response and to assume early command during a major wildfire.

Response O6-39

Refer to the response to comment O6-13, regarding the scope of the WVFMP and consideration of non-vegetation management actions.

Comment O6-40

29. The final Hill Campus FM Plan/EIR should recognize that thinning of mature eucalyptus stands will not be a viable strategy for reducing fire hazards in the urban/wildland areas of the Campus. The Plan should report that this strategy is unproven where tree canopies and ribbon bark are impacted on steep slopes by Diablo winds periodically exceeding 40 mph. Thinning of pine forests in the Sierra and management of eucalyptus forests in Australia is also commonly combined with a program of regular prescribed burning which has never been done and may not be possible in the UC Hills. Removal of highest-fire-risk trees in the Hills to reduce excessive vegetation fuel followed by treating eucalyptus stumps with an IPM approved herbicide is the only currently available economic and effective strategy in UC's Very High Fire Hazard Severity Zones.

30. The final Hill Campus FM Plan/EIR should recommend removal of all second-growth eucalyptus trees, coppice suckers and seedlings for both fire hazard reduction and economic reasons to allow for the restoration of areas that were logged following the freeze of 1972. By removing the second-growth eucalyptus at a cost range of $10,000 to$20,000 per acre, the University can begin restoration of understory vegetation similar to what was done at Signpost 29 along Claremont Ave on the south side of Claremont Canyon which was done at an average cost of $5,000 per acre between 2000 and 2007. Otherwise the University must expect to fund ongoing long-term costs of $200,000 per acre for retained and managed large blue gum eucalyptus tree groves.

31. The final Hill Campus FM Plan/EIR should also document and include a discussion about the continued risks of retaining large blue gum eucalyptus trees on both the Campus Park area and the Hill Campus. Policies should be developed to address the few remaining beloved, large, and dangerous blue gums that were planted in the early 1870's, and the remaining coppice eucalyptus stems and seedlings that remain after "freeze" logging in the early 1970's. We understand that a University retained arborist recommended removal of 20 large and dangerous trees in the 140 year old West Gate grove, and that a 140 year old eucalyptus tree near the Greek Theater toppled to smash a vehicle on January 6, 2019 killing a young man from Novato. While beautiful, these large trees now represent danger and liability for the University with removal costs likely to be $10,000 to$20,000 per tree. Issues concerning the remaining freeze damaged blue gums on the Hill Campus are discussed in #30 above and elsewhere in this NOP response, but an overall policy and program is needed to also cover all remaining eucalyptus trees to address environmental, fire, student/visitor safety, and liability issues.

Response O6-40

This comment addresses the merits of the WVFMP. It is a comment on the project rather than the contents of the EIR.

The comment suggests that prescribed burning is an important tool to manage fuels in the Hill Campus. While prescribed burning is not proposed for the Identified Treatment Project, it is a treatment activity that could be used in the design of later treatment projects under the proposed WVFMP and is analyzed in the EIR. In the 1960s, 1970s and 1980s, prescribed burning was applied at Panoramic Hill, Tightwad Hill, along the northern LBNL border, and below the Lawrence Hall of Science. Removal of trees most prone to torching is part of the proposed FHR and FB treatment project areas.

The comment recommends removal of all second-growth eucalyptus trees and its concern regarding the costs. Many of the second-growth eucalyptus trees are within the FHR Identified Treatment Project areas, which are proposed for treatment in the near-term using the funds provided by a CAL FIRE grant, as well as the Evacuation Support Treatment areas that are part of the university's program of current and ongoing treatment.

The WVFMP addresses fire hazard based on physical attributes, not species. The WVFMP considers the potential for roadside trees to fall and block fire access/evacuation routes. University Risk Management is responsible for the totality of risks posed by all types of trees. Refer to Master Response 1 regarding the consideration of eucalyptus in the WVFMP and EIR.

Comment O6-41

34. The final Hill Campus FM Plan/EIR should document the fact that the University of California at Berkeley has an enormous responsibility as a leader in science-based education in many subjects including forestry, natural resource protection, and urban/wildland fire mitigation for its campus and for its adjoining and neighboring communities. The University is clearly not a self-contained vegetation island. Its immediate neighbors, EBRPD and EBMUD, contain extensive wildlands with very substantial fuel loads of highly flammable and invasive vegetation. The EIR will need to address the "cumulative impacts" of fire safety for the campus and the major land ownerships of wildlands in the East Bay Hills. Diablo Winds come from the North East and LBL has modeled the potential for a 60 ft high wall of wildfire coming from Tilden blowing into the Hill Campus. The EIR will need to address how the University's fuel management plans interact with and have been coordinated among the major wildland ownerships in the East Bay Hills. The wildlands wildfire threats in the East Bay Hills are present at an areawide scale, and they must be addressed at this large scale. Especially after the major wind driven siege of fires during 2017, 2018, and 2019 followed by PG&E's newly implemented PSPS program of power shutoffs.

Response O6-41

UC Berkeley works closely with internal and external fire management partners related to regional wildfire prevention, including the Hills Emergency Forum (HEF), Diablo Firesafe Council, and various neighborhood groups and internal interdisciplinary planning teams. HEF and the Diablo Firesafe Council have partnered with UC Berkeley in the development of the WVFMP; HEF as a technical advisor on the Plan and the Diablo Firesafe Council for community outreach and liaison. University staff and its consultants regularly meet with fellow land managers of the East Bay Hills to address fire safety hazards. An example of such cooperative actions is the blocked turnouts on Grizzly Peak Blvd, where the EBRPD and the Cities of Oakland, Berkeley worked with the university to prevent access to high fire hazard roadside areas where the public is known to use fireworks and barbeques.

Regarding consideration of areas outside the Hill Campus, the FlamMap analysis presented in figures 15 through 22 extends outside Plan Area to lands owned by EBRPD, EBMUD, LBNL and private landowners as well. Section 1.4, "Regional Wildland Vegetative Fuel Management Planning Efforts," in Volume II of this Final EIR, acknowledges the regional coordination necessary to reduce wildfire risk in the East Bay Hills. The cumulative impact analysis in the EIR also considers the wildfire risk reduction actions of other land managers in the East Bay Hills, as described under "Regional Vegetation and Fire Fuel Treatment Programs Implemented by Agencies Other than UC Berkeley" in Section 4.3, "Related Projects and Plans" of the Cumulative Effects Analysis in Chapter 4.

Letter O7 Claremont Canyon Conservancy

Stuart M. Flashman, LLP
October 5, 2020

Comment O7-1

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.

Response O7-1

The comment acknowledges the comments submitted separately by the Claremont Canyon Conservancy, which are addressed in responses to comment letters O2, O6, and O8. It also summarizes the detailed comments presented elsewhere in the letter regarding the analysis of alternatives; these are addressed in responses to comments O7-2 through O7-12. Refer also to Master Response 1 regarding the consideration of eucalyptus in the WVFMP and EIR.

Alternatives identified in Chapter 6, "Alternatives," in Volume II of this Final EIR range from no vegetation removal (i.e., No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives), selective thinning of eucalyptus and pine (i.e., Alternative B: Reduced Treatment Alternative), to complete eradication of eucalyptus and pine (i.e., Sierra Club's 3 R's Alternative), including the conversion of eucalyptus and conifer plantations to native vegetation (i.e., Alternative A: The McBride Plan Alternative). The alternatives analyzed in Section 6.3, Alternatives Evaluated in the EIR comprise a range of reasonable alternatives as required by State CEQA Guidelines Section 15126.6(a). The rationale for the selection of the environmentally superior alternative is explained in the response to comment O6-9 and the environmentally superior alternative remains Alternative B, as presented in Section 6.4, "Environmentally Superior Alternative," in Volume II of this Final EIR. An EIR's purpose is to evaluate the impacts of the project and identify mitigation measures and alternatives that would reduce or avoid those impacts. This EIR does that. CEQA does not require consideration of the merits of the project. However, this EIR does address the merits of the project and analyzes alternatives with varying degrees of effectiveness in reducing wildfire risk to provide information to decision makers and the public.

As explained in Master Response 1, information was added under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. (This text is presented on page 2-9 in the aforementioned section of Volume II and excerpted in Master Response 1.) Based on review of the text changes to the WVFMP and EIR resulting from consideration of the Claremont Canyon Conservancy's and other's comments, no significant new information requiring recirculation of a draft EIR, as defined by State CEQA Guidelines Section 15088.5, has been added. Pursuant to State CEQA Guidelines Section 15088.5(a), "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." State CEQA Guidelines Section 15088.5(b) states that "Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." The clarifying text does not substantially modify any of the analysis or change any conclusions in the EIR and does not add any new significant impacts. Therefore, recirculation is not warranted.

Comment O7-2

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.

Response O7-2

The comment cites relevant sections of the State CEQA Guidelines and case law. The comments regarding the EIR setting are addressed in responses to comments O7-3 through O7-5.

Comment O7-3

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[1].

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.")

[1] 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.

Response O7-3

State CEQA Guidelines Section 15125(a)(1) requires lead agencies to "describe physical environmental conditions as they exist at the time the notice of preparation is published." This is the basis for the impact analysis in the EIR. Nonetheless, Section 1.3, "Purpose of the Wildland Vegetative Fuel Management Plan," in Volume II of this Final EIR acknowledges that the need for the WVFMP is based on the anticipated increase in the frequency and severity of wildfire in the Plan Area: "Given the increasing frequency and severity of wildfires in California, along with the regular occurrence of hot, dry summers; Diablo wind events; and the presence of steep terrain, flammable vegetation, urban development, and limited fire-fighting access in the Plan Area, there is a need to increase vegetation management to reduce wildfire risk in the Hill Campus." Section 3.7, "Greenhouse Gas Emissions and Climate Change" under "Effects of Climate Change on Wildfire Risk" explains in detail that the anticipated increase in wildfire frequency and severity is attributable to climate change.

The comment also asserts that the EIR does not consider changes to vegetation resulting from climate change. The proposed vegetation treatment types and activities in the WVFMP would be selected in designing future vegetation treatment projects depending on site-specific conditions (e.g., vegetation present) and treatment objectives, and are reviewed in the EIR for long-term implementation throughout the Plan Area. The design of these later vegetation treatment projects will inherently consider the effects of climate change as manifested in the site-specific conditions of treatment areas.

Refer to Master Response 1 regarding the consideration of eucalyptus.

Refer to the response to comment O8-3, regarding the consideration of fire ignition by lightning strikes.

Comment O7-4

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[2].'

[2] Presumably, an ineffective treatment is one that allows the removed species to quickly re-establish themselves.

Response O7-4

The history of eucalyptus management in the Plan Area is described in Section 2.4.3 of the WVFMP (Appendix A of this Final EIR) and summarized under "Past Vegetation Treatments" in Section 3.12, "Wildfire." The comment is correct that a treatment, or the maintenance of an initial treatment, is considered ineffective if the removed species quickly re-establishes in the treated area. The WVFMP is informed by decades of vegetation management experience in the Hill Campus. Applying the lessons learned from past treatments, the proposed WVFMP identifies treatments of known effectiveness with a commitment of follow-up maintenance and monitoring to ensure regrowth is prevented.

Comment O7-5

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 CO2 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 CO2 release in a wildfire. (See Management of blue gum eucalyptus in California at p. 42.)

Response O7-5

Responses to comments O7-3 and O7-4 explain why the EIR presents an accurate and adequate environmental setting. The WVFMP's treatment of eucalyptus, and resultant wildfire risk reduction, is addressed in Master Response 1. The university intends to maintain initial treatments such that eucalyptus do not regrow in treated areas. The carbon benefits of the WVFMP are substantiated under Impact GHG-2 "Generate GHG Emissions through Treatment Activities," in Section 3.7, "Greenhouse Gas Emissions and Climate Change," In Volume II of the Final EIR.

Comment O7-6

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.

Response O7-6

The comment asserts that the project description does not provide adequate detail about proposed treatments, including treatment of eucalyptus and pine, which in turn undermines the EIR's analysis of impacts and alternatives.

As described in Section 1.5, "Purpose and Intended Uses of this EIR," this EIR functions as both a Program EIR and a Project EIR. Upon certification of this EIR, UC Berkeley intends to implement the proposed Identified Treatment Projects. Accordingly, this EIR presents a project-level analysis of the proposed Identified Treatment Projects to facilitate review by UC Regents. This document also functions as a Program EIR in accordance with State CEQA Guidelines Section 15168(c) for streamlining later activities. The four vegetation treatment types and five vegetation treatment activities are evaluated for long-term implementation throughout the Plan Area at a programmatic level in this EIR.

The comment references the description of FHR treatments on page 2-9 of the EIR. This is within the section that describes the programmatic application of the treatment types in the Hill Campus (see Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR). Information was added to this section to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. This text is also excerpted in Master Response 1.

Refer to the response to comment O6-9, regarding the extent of vegetation removal that may occur based on the application of objective criteria. In designing future vegetation treatment projects, the university would select among the vegetation treatment types and activities, depending on site-specific conditions and treatment objectives. Then, the university will conduct a detailed, site-specific evaluation of the later vegetation treatment project to determine whether it has been analyzed in this EIR. Such evaluations must ascertain whether these later vegetation treatment projects are consistent with the activities contained in the WVFMP and would have effects that were analyzed in the EIR. If the UC Regents find that the impacts were analyzed in the EIR and no new or substantially more severe significant effects could occur or no new mitigation measures would be required for a later treatment project, the project can be found to be within the scope of this EIR. The documentation used to substantiate the "within the scope" finding would provide the substantial evidence required to reach that conclusion. For the WVFMP, this documentation would be provided in the Environmental Checklist for Later Treatment Projects Under the WVFMP (see Appendix B of Volume II this EIR).

The commenter cites *Stopthemillenniumhollywood.com* v. *City of Los Angeles* (2019) 39 Cal.App.5th 1 as applicable case law supporting its assertion that the description of treatment types in the EIR project description is inadequate. *Stopthemilleniumhollywood* is inapposite. First, the EIR under consideration in *Stopthemillenniumhollywood* was a project-level EIR, and it is not comparable to the programmatic elements of the WVFMP EIR. As explained above, the WVFMP is, in part, intended to function as a program EIR for streamlining review of later vegetation treatment projects consistent with State CEQA Guidelines Section 15168. As a programmatic document, this EIR presents a plan-area-wide assessment of the potential impacts of the proposed WVFMP and describes the treatment types at an appropriate level of detail to facilitate this intended use. The proposed treatments are described in detail. The overall locations where treatment would occur are discussed and mapped. The specific details of later vegetation treatment projects, which will depend on site-specific characteristics and treatment objectives, will be determined when those projects are under consideration, but the parameters of the treatments are well defined. The specific details of each later vegetation treatment project proposed for implementation in the WVFMP will be developed by the university and evaluated using an environmental checklist to determine whether the project is within the scope of the WVFMP EIR.

As a project-level EIR, the WVFMP EIR is also distinguishable from the EIR in the *Stopthemilleniumhollywood* case. The EIR in that case proposed a mixed-use development, without specifying details such as intended use, site features, building design, and technical characteristics. The court faulted the project's lack of specificity about whether and where development would occur given that there were no "practical impediments" preventing the project from making firm commitments about the nature of the proposed development. *Stopthemilleniumhollywood*, 39 Cal.App.5th at 19. Here, the WVFMP EIR describes the Identified Treatment Projects at a degree of specificity that "correspond[s] to the degree of specificity involved in the underlying activity which is described in the EIR" (State CEQA Guidelines Section 15146). An EIR is not required to resolve all "hypothetical details" prior to approval of an EIR. *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1054. Further, an EIR is not required to describe in detail "each and every conceivable development scenario." *City of Antioch v. City Council* (1986) 187 Cal.App.3d 1325, 1337. In *Treasure Island*, the ultimate type of development that could occur on the site depended on soil characterization details that would not become clear until the project actually proceeded. The court noted that "as a matter of necessity at this stage in the planning process, there are many Project features that are subject to future revision…[and] the EIR cannot be faulted for not providing detail that, due to the nature of the Project, simply does not now exist." *Id*. Similarly, in the WVFMP, the precise number of trees that may be removed will be based on a case-by-case, on-the-ground determination based on objective criteria to be applied by the university. These objective criteria are described in Chapter 2, "Project Description" in Volume II of this Final EIR. The court in *Stopthemilleniumhollywood* distinguished *Treasure Island* based on the "practical impediments" that prevented the project from being able to provide the level of specificity the court found lacking in

the *Stopthemilleniumhollywood* EIR. *Stopthemilleniumhollywood*, 39 Cal.App.5th at 20.The comment states that the EIR does not consider an alternative that includes eucalyptus and pine removal. The Sierra Club's 3 R's Alternative proposes the removal of eucalyptus, pine, and other non-native trees. A description of this alternative and the rationale for its elimination from detailed consideration in the EIR are presented in Section 6.2.3, "Sierra Club's 3 R's Alternative," in Volume II of the Final EIR. Alternative A: The McBride Plan Alternative, which is analyzed in Section 6.3.2, proposes the conversion of eucalyptus and conifer plantations to native vegetation.

Comment O7-7

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[3].

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 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.

[3] 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.

Response O7-7

The comment asserts that the EIR does not provide adequate information about adverse effects of increased fire risk over time that would result from the WVFMP. The purpose of the WVFMP is to reduce fire risk and was prepared by experts to achieve this purpose. Refer to the response to comment O7-4, regarding the history of eucalyptus

management in the Hill Campus, as described in the WVFMP and EIR. The comment is a critique of the plan, not the analysis of impacts in the EIR.

Nevertheless, in the response to this and other comments, information was added under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. (This text is presented on page 2-9 in the aforementioned section of Volume II and excerpted in Master Response 1.) These criteria apply to eucalyptus removal under the WVFMP. Monitoring and follow-up treatments are expected to prevent regrowth of eucalyptus and regeneration of pines. The university has conducted such follow-up treatments for six years in areas in Strawberry Canyon and Chaparral Hill and since 2001 in Claremont Canyon where these species have been removed. The method of removal is to cut the seedlings/saplings and if the tree can resprout, to apply herbicide so that regrowth is prevented.

The WVFMP includes a monitoring plan that assesses the environmental conditions (including fire hazard) over time. As hazards such as the potential for long-range spotting are observed, projects can be designed that address that situation, using the treatment types and treatment activities in the WVFMP. Refer also to Master Response 1 regarding the fire risk posed by eucalyptus in the Plan Area and proposed treatments under the WVFMP. Refer to responses to comments O9-23, O9-24, O9-25, and O9-26 regarding potential impacts to Alameda whipsnake.

Comment O7-8

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[4].

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 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.

[4] 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.

Response O7-8

The comment supports the rejection of Alternative B from selection as the environmentally superior alternative. No issues were raised regarding the adequacy of the analysis in the EIR. No further response is warranted.

Comment O7-9

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 area 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.

Response O7-9

The comment supports the rejection of Alternative B from selection as the environmentally superior alternative. No issues were raised regarding the adequacy of the analysis in the EIR. No further response is warranted.

Comment O7-10

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.

Response O7-10

Planting to replace treated vegetation will not be the primary means of tree regeneration in the Hill Campus. Abundant coast live oak and California bay seedlings – along with a wide variety of other native plant species - are present in the treatment areas, and are expected to establish in treated areas. In every area previously treated by the university, native trees have become established without human intervention. Coast live oak, California bay, and other native species are endemic to the site and have evolved through the millennia with the local environmental conditions and are expected to persist in the future climate.

This is a photo of short California bay trees under eucalyptus trees taken in Claremont Canyon looking east. With the exception of redwood trees, the trees south of Claremont Avenue were established without assistance.

Occasionally native tree, shrub and grass plantings will be conducted by volunteer groups such as the Cal Forestry Club to revegetate areas where tree mortality is high, and where there is high visibility and public use, such as on Tightwad Hill, which is across the street from Memorial Stadium. In some areas of the Hill Campus, replacement plantings may not be desirable because their addition would significantly reduce the effectiveness of the treatment. This is particularly the case in locations where understory vegetation needs to be kept low in volume and short in height.

Comment O7-11

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.

Response O7-11

The comment addresses the comparative merits of the proposed project and Alternative A. CEQA requires that the alternatives analysis address the relative impacts of feasible alternatives to the proposed project. Decision makers can balance the differences in impacts and the degree to which an alternative feasibly attains project objectives in determining whether to approve the proposed project or an alternative to the project. The WVFMP EIR goes beyond that requirement by also addressing merits of the alternatives. The reasons that the WVFMP would be more effective than Alternative A in reducing wildfire risk, including with regard to biomass disposal, FB creation, and eucalyptus management, are explained in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of the Final EIR (refer especially to "Consistency With Plan Objectives").

The commenter questions whether the purpose of the Plan is solely to conduct vegetation management activities or if it is to improve the protection of the Plan Area from the risk of wildfire. The primary purpose of the Plan, as presented in Section 2.3, "Objectives of the Plan, in Volume II of this Final EIR is to "[s]ubstantially reduce risk to life, property, and natural resources on the UC Berkeley campus and in the greater East Bay region *by managing the amount and continuity of vegetation* in the Hill Campus that increases wildland fire hazards." (emphasis added). The reasons that components of Alternative A that do not pertain to vegetation management are impractical are explained under "Feasibility" in Section 2.3.

Comment O7-12

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.[5] 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.

[5] 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.

Response O7-12

The comment addresses the WVFMP and not the analysis of the plan in the EIR. The comment states that the EIR never examines the accuracy of the modeling upon which the Plan is based. LANDFIRE is used nationwide by federal and state wildfire response agencies as a database for wildfire planning and response, and as such, is an industry standard. The fire behavior modeling uses the most recent version available; this dataset of site-specific fuels is the most recent, and highest resolution available for the Plan Area. The results of the fire behavior prediction were reviewed in 2019 and again in 2020 by the UC Berkeley Fire Mitigation Committee, chaired by Scott Stephens, Professor of Wildland Fire Science and Management. Any comments by the committee were incorporated.

One of the basic purposes of CEQA is to inform the public and decision makers of the potential, significant environmental effects of proposed activities (State CEQA Guidelines Section 15002(a)). In this case, this EIR serves to inform the public and UC Regents of the effects of UC Berkeley's proposed WFVMP. Because the Plan was prepared by an expert wildland fire manager/fire ecologist, and was also reviewed and approved by the UC Berkeley Fire Mitigation Committee, which contains experts in fire management, environment, health and safety as well as forestry practices and risk management, it reasonable for the analysis in the EIR to assume the modeling that serves as the basis for the proposed WVFMP is accurate. No evidence has been presented to show the model is not accurate. The fundamental purpose of the EIR is to evaluate the project as proposed, not to evaluate the effectiveness of the project.

The comment states that most of the references in the WVFMP to modeling of fire behavior date to 2006, and do not appear to be specific to the Plan Area. The LANDFIRE data is dated 2014, published in 2016, and was the most recent dataset available at the time the modeling was done. The underpinning (decisions and initial data collection) of LANDFIRE was established in 2006. However, LANDFIRE data is continually being updated, and the most recent version was used in the WVFMP modeling.

Comment O7-13

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.

Response O7-13

The comment summarizes other comments contained in the letter; refer to responses O7-1 through O7-12. As explained in the responses to those comments, the WVFMP presents an effective strategy to selectively remove eucalyptus and pine in the Plan Area while managing the wildfire risk posed by these species and maintaining their other perceived intrinsic and ecological values (e.g., aesthetic, habitat, carbon sequestration). Refer also to Master Response 1 regarding the consideration of eucalyptus in the Plan Area.

Letter O8 Claremont Canyon Conservancy

October 5, 2020

Comment O8-1

The New Reality

The increased number and severity of wildfires in California over the past three years illustrates that we are in a new reality. Hotter summers combined with drought, longer, warmer falls and more prolonged Diablo winds, and now lightning, all brought about in large part by climate change, have altered our environment and increased the likelihood and danger of wildfires.

(See notes A-D) Firefighters and government officials are telling us that once a wildfire gets started, our only recourse is evacuation. (See note E) The UC Hill Campus Vegetation Management Plan acknowledges this reality by making evacuation routes safer, removing highly flammable vegetation within 100 feet along Centennial Drive, Claremont Avenue and the Jordan Fire Trail. So far, so good.

However, the need for evacuation once a wildfire takes hold underscores the importance of preventing wildfires from starting and becoming unmanageable in the first place. Based on well-known principles of fire behavior in our new reality, much more effective and stringent vegetation management is required than what is noted in the University's Plan. The Plan is simply inadequate. More work will require more funding, indeed much more than the Cal Fire grant provides. Thus, the Plan should be a plan for what is needed to obtain a relatively fire safe situation, whether or not it is fully funded by the Cal Fire grant. The Plan needs to establish clear priorities to ensure the most pressing needs are addressed first, whether or not the full Plan is funded initially. The Plan should state what work would be done under the Cal Fire grant and what would await availability of additional resources. Other resources are essential and it is important for the University to identify them. If a fire spreads from the Hill Campus to the homes, businesses, and University facilities downwind, the damage and the liability to the University will be in the billions of dollars. The Plan must address in full the future vegetation management needs of the Hill Campus. It cannot simply be a shopping list for using the funds provided by the Cal Fire grant.

Response O8-1

The comment criticizes the WVFMP but does not address the contents of the EIR. Refer to the response to comment O2-1. As explained therein, the WVFMP identifies specific projects to be implemented in the near-term and establishes objectives, performance standards, and a framework for monitoring to guide the development of longer-term projects consistent with the WVFMP.

Comment O8-2

Wind Speed and Canopy Fire

Today California wildfire windspeeds have been measured in the range of 40 to 55 miles per hour. (See note F) Yet, referring to the Hill Campus, the report states on page 44, the rate of fire spread "is expected to be slow to moderate, or 1 to 20 chains/hr" or 1.4 to 28 mph. On page 49 the Plan refers to very strong winds at 40 mph. Based on available scientific evidence, the Plan underestimates the potential windspeeds and associated speeds of fire spread based on previous fires both here and elsewhere. One might hope that wind speeds will not exceed 28 or 40 mph, but, given the evidence of wildfire wind speeds already measured, the Plan must address not only most probable scenarios, but also reasonably foreseeable worst-case scenarios, rather than limiting itself to a best-case situation.

The Plan states on page 46 that "While only 21.61 acres in the Plan Area are expected to experience canopy-to-canopy fire spread, more than 300 acres can be expected to torch, consuming the tree canopy and producing and distributing embers, . . . Canopy fire is rare and occurs in small patches sprinkled throughout the Hill Campus."

Wind speeds measured during recent wildfires must be taken seriously. Even looking back to evidence of the spread of burning embers in the Tunnel Fire 29 years ago, the danger is much greater than the Plan suggests. "Small patches" may not be the case in the new reality. We all recall that in 1991 burning embers blew across Highway 24

and destroyed homes on the south side of the freeway. Those winds were measured at 60 mph. (See note G) With current measurements of wildfire winds running even higher than that, both crown fires and firebrand and ember spread are likely to be much greater than what the Plan considers. The Plan notes the potential for damage to campus facilities from canopy fires but given the evidence of these greater velocities, it is especially important that the Plan consider and discuss what may occur if a fire spreads beyond the campus.

Response O8-2

The comment criticizes the WVFMP but does not address the contents of the EIR. Refer to the response to comment O2-2, regarding wind speed. The WVFMP analyzes ember production and distribution in two ways: by mapping crown fire potential, which identifies locations where torching and crown fires (that produce embers) are likely and mapping maximum spotting distance, which indicates locations where spotting might be distributed long distances. Crown fire potential is presented in figures 17 and 21, and maximum spotting distance is shown in figures 18 and 22 of the WVFMP (Appendix A in Volume II of this Final EIR).

Comment O8-3

Lightning Must be Considered

In addition to wind, it is now clear that lightning is another cause of wildfires that the Plan must address. The San Francisco Chronicle reported on August 18, 2020, "Residents in multiple Bay Area counties fled their homes under mandatory evacuation orders Monday as inland temperatures soared above 100 degrees and firefighters battled a series of rapidly spreading wildfires sparked by lightning storms--with a threat of more on the way." (See note H) It has been known for centuries that lightning will hit the highest available points. Here that means lightning strikes the canopies, not the ground underneath the trees, creating another reason for canopies to be removed on a far wider scale than proposed in the Plan, beginning with canopies on ridgelines but also wherever canopies are the highest points in the immediate area. The August 2020 lightning storm that caused so many fires in Northern California was the result of a tropical storm in the Pacific Ocean west of Baja California moving northward and causing its warm, moist air to reach land and initiate powerful lightning and thunder storms. Meteorologists tell us that such events will be increasingly likely as climate change continues to warm the Pacific Ocean. (Attachment I) Future ignition events similar to those of August 2020 must now be considered reasonably foreseeable and must be addressed by the Plan.

In the interest of safety and prudence, the Plan should do more to prevent canopy fires from occurring. Removing eucalyptus and pine trees from areas near ridgelines is a top priority. However, in the new reality that includes higher wind speeds and lightning-induced ignitions, all highly flammable eucalyptus and pine trees should be removed throughout the Hill Campus. The Plan correctly lays out the methodology for removing these trees known to spread wildfire from their burning canopies but this methodology needs to be applied far more widely. As stated previously, the Plan should be based on what is necessary and not simply on what the current source of funding allows. We join with Forestry Professor Emeritus Joe McBride, who has examined the Hill Campus wildfire prevention matter in detail and thinks all eucalyptus and pine trees should be removed. Yet the UC EIR dismisses the McBride alternative. Science should determine what is in the Plan. Budgeting should be a separate matter.

Response O8-3

The comment criticizes the WVFMP but does not address the contents of the EIR. Refer to the response to comment O1-3, regarding the WVFMP's consideration of lightning.

Comment O8-4

Thinning, Shaded Fuel Breaks and Canopies

The Plan goes into detail about how thinning and removing the understory can help prevent wildfires. We do not disagree. However, this method does not create true fuel breaks that will be effective in stopping a wildfire from spreading during periods of high winds. The term "shaded fuel break" is a misnomer and is misleading to anyone who takes the term at face value. In the new reality multiple sources of wildfire must be considered. Certainly, one source that is evident from prior fires in the East Bay Hills is fires which start on the ground from multiple sources,

natural and human, and go up fuel ladders and light canopies. Removing the understory does prevent this kind of ground fires from climbing into canopies and spreading.

However, removing fuel ladders fails to address fires that start elsewhere. These include both lightning-initiated direct canopy fires and the spread of fires to canopies through wind driven embers and firebrands. Removal of tall, highly flammable canopies will not only reduce the risk of lightning strike-initiated fires, it also will reduce the likelihood of crown fire transmission through wind-born embers or firebrands. This is another reason to remove pine and eucalyptus from the entire hill campus.

As we know from recent experience, winds and especially the strong, hot, dry Diablo Winds that affect the Hill Campus, are a major fire risk. The 1991 Tunnel fire started locally on the ground but it was spread by the wind driven embers from eucalyptus tree canopies. The danger of canopy fires has increased as drought and disease have attacked the eucalyptus and pine forests in the Hill Campus, dried them out and made the fire danger there far greater than the Plan suggests. Those risks will only grow as climate change causes even hotter and drier summers and falls in the East Bay Hills. Eliminating both ladder fuel and canopies is necessary in this new reality.

On page 15, the Plan discusses the previous, successful removal of Eucalyptus sprouts and canopies in Claremont Canyon, but it understates the extent of the effort that was involved. Rather than just in 2005-06, the effort began in 2001 and continued through 2007 and required on-going maintenance thereafter.

Response O8-4

The comment criticizes the WVFMP but does not address the contents of the EIR. Refer to the response to comment O2-3, regarding thinning and canopies. The text on page 15 of the WVFMP (see Appendix A in Volume II of this Final EIR) has been changed to acknowledge the dates identified in the comment.

Comment O8-5

Maintenance

Continued long-term maintenance of treated areas is essential if the initial work conducted is to have a lasting impact. On pages 81 and 84-85, the Plan suggests that maintenance will occur over a 10-year period. Based on the Conservancy's work in Claremont Canyon, 10 years is not sufficient. Today, 15 years following the removal of eucalyptus trees from Claremont Canyon and treating the stumps, Conservancy volunteers continue to find new eucalyptus sprouts. The University has been responsive when we have pointed out the situation to staff and its contractor has removed them and retreated stumps. It should be noted that these new sprouts will grow rapidly, from six to 10 feet per year so prompt removal and treatment with Garlon is necessary and should be continued for at least 15 years, and not 10 years.

Response O8-5

Refer to the response to comment O1-4, regarding the timeframe for maintenance.

Comment O8-6

Studies have shown that sprouting of new eucalyptus plants after removal of adult trees comes from two places. One is from the stumps of removed trees that were not completely killed, unless the root system is killed with herbicide treatment, new sprouts can continue to grow. In most cases, however, new sprouts come from completely new plants. These new plants in turn come either from seeds left behind by the removed trees or from seeds spread by winds from existing eucalyptus plantations elsewhere that were not part of earlier eradication efforts. In Claremont Canyon, the initial removal of eucalyptus stems was completed in 2007, 13 years ago. Therefore, there is reason to believe that new stems are coming from wind-blown seeds. These likely originated from existing eucalyptus groves on the hillside above the canyon. (See Note J) In either case site maintenance requires eliminating sources of new trees. Unless the Plan includes provisions for removing all eucalyptus groves and continued monitoring to eliminate newly-sprouted plants, additional monitoring beyond that anticipated in the Plan will be necessary into the foreseeable future. Once new eucalyptus sprout takes hold, young trees will grow six-to 12 feet or more per year if not removed. (See note K)

Response O8-6

Figure 2 of the WVFMP (see Appendix A in Volume II of the Final EIR) identifies the locations where maintenance of treatments to remove exotic species has occurred and is ongoing. In addition, monitoring will identify treatments necessary to address areas of high fire hazard that may be attributed to the regrowth and spread of eucalyptus and regeneration of pines.

Comment O8-7

Page 22 of the Plan stipulates that trail maintenance shall not be performed in Claremont Canyon. There is no explanation of the justification underlying this statement. In particular, the Plan does not identify a relationship between trail maintenance and vegetation management for wildfire prevention. University personnel were involved in building trails and the Conservancy provided volunteers and tools for the building and the maintenance of trails in Claremont Canyon. Today these trails are used to access the Canyon to remove fire-prone and invasive species, and by hikers, runners, dog walkers, those simply looking for a place to go beyond their homes during the pandemic, and occasionally by UC Berkeley forestry students. Trails require occasional maintenance to prevent them from becoming a liability. If the prohibition of maintenance is only to exclude this from funding under the Cal Fire grant, then the Plan should so state. If the intention is to do no further maintenance period, then the University must be prepared to explain itself to the many users of the trails and to state that it accepts liability if an accident happens.

Response O8-7

The comment criticizes the WVFMP but does not address the contents of the EIR. Refer to the response to comment O2-5, regarding trail maintenance in Claremont Canyon.

Comment O8-8

Additional Fire Station, Equipment and Cameras

Page seven of the Plan states that it considers only vegetation management and not other tools. However, the Conservancy is aware of three issues that UC should include in the Plan, whether they are funded by the Cal Fire grant or not. One is the need for and opportunity to have another fire station in the area and available to extinguish vegetation fires in the Hill Campus. UC should persuade Cal Fire to install a fire station on a plot of available land on Fish Ranch Road on the east side of the hills just above the intersection with Highway 24. Related to this is the need for additional fire fighting equipment. In his alternative plan, Professor McBride notes the advisability of purchasing off-the-road fire trucks. We urge the University to work together with Cal Fire and purchase this equipment.

The third item is the installation of a camera trained on the Hill Campus that is able to spot plumes of smoke at the very beginnings of a fire and relay that information to the proper authorities. Such cameras exist today and have proven most helpful in the early suppression of fires, before they become unmanageable. Funds to install and more importantly monitor such a camera would prove to be a worthwhile investment.

Response O8-8

Non-vegetation management actions, including an additional fire station, fire suppression equipment, and cameras are beyond the scope of the WVFMP as explained in the response to comment O6-13.

Comment O8-9

The following notes and links are hereby incorporated in this Comment from the Claremont Canyon Conservancy.

A) Center for Climate and Energy Solutions. https://www.c2es.org/content/wildfires-and-climate-change/

B) Fourth National Climate Assessment, US Global Change Research Program, https://science2017.globalchange.gov/chapter/6/

C) Fourth National Climate Assessment, US Global Change Research Program, https://science2017.globalchange.gov/chapter/7/

D) Fourth National Climate Assessment, US Global Change Research Program, https://science2017.globalchange.gov/chapter/8/

E) Give your household the best chance of surviving a wildfire by being ready to go and evacuating early. Cal Fire, https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/

F) https://www.sacbee.com/news/california/fires/article246001395.html. https://www.athenium.com/news/wind-data-california-woolsey-camp-wildfires/

G) Page 3-75 of the 2014 City of Berkeley Local Hazard Mitigation Plan. https://www.cityofberkeley.info/uploadedFiles/Fire/Level_3_-_General/2014%20LHMP.pdf

H) "How a surge of lightning strikes ignited more than 500 California wildfires", Matt Brannon, Redding Record Searchlight, August 21 updated August 23, 2020. https://www.redding.com/story/news/local/2020/08/21/what-caused-california-wildfires-2020-lightning-strikes-cal-fire-map-ca/3413807001/

I) https://www.ebparks.org/climatesmart.htm

J) https://static1.squarespace.com/static/56e612b159827e4b847675c9/t/5f790d423eaedf59be724140/1601768772542/Going+nowhere+fast%2C+Trevor+H.+Booth.pdf

K) http://www.angelfire.com/bc/eucalyptus/eucgrowth.html

Response O8-9

The comment provided sources for notes mentioned in the commenter's letter. Each note was considered in the preparation of the response to the comment where the note was referenced.

Letter O9 Hills Conservation Network

Michael Lozeau, Lozeau Drury LLP
October 5, 2020

Comment O9-1

The following comments are submitted on behalf of Hills Conservation Network

("HCN") regarding the Draft Environmental Impact Report ("DEIR") for the UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan ("WVFMP" or "Project").

INTRODUCTION

For the past 10 years, HCN has been working with local East Bay agencies and institutions to reduce the risk of wildfire in the East Bay Hills. While there is a shared desire to make the area safer from wildfire, there have been significant changes in thinking as to how best to accomplish this goal as the overall fire regime in California has become more dangerous.

Unlike other parties involved in these discussions, HCN has consistently advocated for methods that are laser-focused on reducing wildfire risk. In the view of HCN, consideration of the origin of various nonnative species is not relevant to the determination of various optimal courses of action. Based on the support HCN has received from a broad cross section of the affected community, we are confident that the community wants enhanced fire safety at the lowest cost and with the least damage to the environment.

HCN favors an approach that identifies the various risks and assigns these risks a cost/benefit ranking to establish priorities. The community sees great value in the environment of the East Bay Hills and wants to protect this treasure while ensuring that fire risks are effectively mitigated. HCN is dedicated to this goal.

Response O9-1

The comment provides the background and goals of the HCN. As explained further in the response to comment O9-21, proposed treatments under the WVFMP are not based on whether any plant is native or non-native, but rather the fuel characteristics of the area within which it is located. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted.

Comment O9-2
LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances). See, e.g. Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); County of Inyo v. Yorty (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); *see also, Berkeley Jets*, 91 Cal.App.4th at pp. 1344, 1354; *Citizens of Goleta Valley, supra*, 52 Cal.3d at 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines §15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub. Res. Code § 21081; 14 Cal.Code Regs. § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732.

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets, supra*, 91 Cal. App. 4th at p. 1355 (emphasis added) (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 391 409, fn. 12). As the court stated in Berkeley Jets:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.)

More recently, the California Supreme Court has emphasized that:

> When reviewing whether a discussion is sufficient to satisfy CEQA, a court must be satisfied that the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted], and (2) makes a reasonable effort to substantively connect a project's air quality impacts to likely health consequences.

Sierra Club v. Cty. of Fresno (2018) 6 Cal.5th 502, 510 (2018), citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405. "Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." *Sierra Club v. Cty. of Fresno, supra*, 6 Cal.5th at 516. Although an agency has discretion to decide the manner of discussing potentially significant effects in

an EIR, "a reviewing court must determine whether the discussion of a potentially significant effect is sufficient or insufficient, i.e., whether the EIR comports with its intended function of including 'detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'" 6 Cal.5th at 516, citing *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197. "The determination whether a discussion is sufficient is not solely a matter of discerning whether there is substantial evidence to support the agency's factual conclusions."(6 Cal.5th at 516. Whether a discussion of a potential impact is sufficient "presents a mixed question of law and fact. As such, it is generally subject to independent review. However, underlying factual determinations—including, for example, an agency's decision as to which methodologies to employ for analyzing an environmental effect—may warrant deference." *Sierra Club v. Cty. of Fresno*, 6 Cal.5th at 516. As the Court emphasized:

> [W]hether a description of an environmental impact is insufficient because it lacks analysis or omits the magnitude of the impact is not a substantial evidence question. A conclusory discussion of an environmental impact that an EIR deems significant can be determined by a court to be inadequate as an informational document without reference to substantial evidence.

Sierra Club v. Cty. of Fresno, 6 Cal.5th at 514.

Response O9-2

The comment presents legal background and CEQA case law. The university has prepared this EIR with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences (State CEQA Guidelines Section 15151). None of the comments raised in the rest of the commenter's letter call into question the adequacy of the EIR's discussion of the environmental impacts of the proposed WVFMP. *Sierra Club v. Cty. of Fresno* (2018) 6 Cal.5th 508, 514. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment; although, the relevance of the information to responses to subsequent comments in this letter is noted. No further response is warranted.

Comment O9-3

I. The DEIR's Project Description is Inadequate and Prevents the Public and University From Evaluating the Environmental Impacts of the FHR Projects.

A major flaw in the DEIR is its failure to adequately describe what mix of treatment and extent of tree removal, i.e. eradication or selective thinning, will occur and where within the three Fire Hazard Reduction projects for which the DEIR is addressing on a project-level. As written, the DEIR does not specify what the FHR treatment plans look like. Unfortunately, as a result, the DEIR fails to provide any meaningful impact analysis or ability to compare the proposed FHR Projects to any alternatives because no one can tell what specific actions the FHR Projects include.

"An accurate, stable and finite project description is the sine qua non of an informative and legally adequate EIR." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192; Berkeley Jets, 91 Cal.App.4th at 1354; *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1023; *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal.App.4th 182, 201. "[A] curtailed or distorted project description," on the other hand, "may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental costs, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh other alternatives in the balance." *Id. See also*, CEQA Guidelines § 15124.

Applying these standards, the University must go back to the drawing Board, provide the details of all tree removal and other activities it is planning on conducting for the FHR projects, analyze those projects in a revised EIR, and circulate that new EIR for public review and comments.

Response O9-3

As described in Section 1.5, "Purpose and Intended Uses of this EIR," this EIR functions as both a Program EIR and a Project EIR. Upon certification of this EIR, UC Berkeley intends to implement the proposed Identified Treatment

Projects. Accordingly, this EIR presents a project-level analysis of the proposed Identified Treatment Projects to facilitate review by UC Regents. This document also functions as a Program EIR in accordance with State CEQA Guidelines Section 15168(c) for streamlining later activities. The four vegetation treatment types and five vegetation treatment activities are evaluated for long-term implementation throughout the Plan Area at a programmatic level in this EIR.

Thinning of vegetation, not complete eradication, would occur under the FHR treatment type, including for the three Identified Treatment Projects implementing this treatment type (i.e., Strawberry FHR, Claremont FHR, and Frowning FHR). Information was added under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. The additional clarifying text is presented in page 2-9 of the aforementioned a section; an excerpt with the additional text is also presented in Master Response 1. Refer to the response to comment O9-4 for additional information regarding the added text. Refer to the response to comment O7-6, regarding the level of detail in the EIR project description. As explained in the response to comment O7-6, regarding the adequacy of this EIR's project description, this EIR describes the FHR projects at a degree of specificity that "correspond[s] to the degree of specificity involved in the underlying activity which is described in the EIR" (State CEQA Guidelines Section 15146). An EIR is not required to resolve all "hypothetical details" prior to approval of an EIR. *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1054.In the context of the State CEQA Guidelines Section 15088.5, this clarifying text does not constitute significant new information requiring recirculation of a draft EIR. Pursuant to State CEQA Guidelines Section 15088.5(a), "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." State CEQA Guidelines Section 15088.5(b) states that "Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." The clarifying text added to the description of FHR treatments does not change any of the analysis or conclusions in the EIR. Therefore, recirculation is not warranted.

Comment O9-4

A. The DEIR Fails to Disclose the Quantity or Extent of Trees That Will be Removed in the FHR Projects.

As described in the WVFMP and the DEIR, the University can cut relatively few trees through selective thinning or may remove almost all of the trees from the FHR Project areas. Whether to adhere to selective thinning or, as the University has previously proposed, "eradication" of all eucalyptus and pine trees in the FHRs has been the focal point of community disputes over the University's vegetation management for at least the last decade (perhaps longer). Rather than disclose their plan for the FHRs and squarely address the potential impacts of selective thinning versus eradication, the University hides the details. Within the FHRs, the University provides an entirely subjective list of criteria which it will apply after the FHRs and WVFMP are approved to inform the public the extent of tree removal it actually has in mind. For example, the WVFMP identifies the following treatment activities within the three FHRs:

The Fire Hazard Reduction Treatment involves the following activities:

- Evaluate trees and shrubs for both vertical and horizontal spacing and their corresponding potential to torch and produce embers; and
- Remove tall, unhealthy or structurally unsound trees, predominantly eucalyptus that are likely to torch and distribute embers; and remove short trees under tall trees.

WVFMP, p. 60. The WVFMP then lists the following criteria for tree removal in the FHRs:

> Criteria for tree removal includes flammability/fire hazard, consideration of tree health, structure, height, potential for failure/falling, and competition with other trees (including for water, space, and light), and high fuel volume production of small diameter fuels. Criteria for retention of trees includes fuel characteristics (flammability, fuel volume amount of dead material), consideration of ability to slow spreading of invasive

species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, prevention of erosion, and cost of removal.

WVFMP, p. 60. The WVFMP then acknowledges that the type of tree to be removed would usually be eucalyptus and pine trees but again hedges on stating clearly the scope of tree removal expected in the FHRs. *Id*., p. 63 (of the 98.4 acres to be treated in the FHRs "[m]ost of the treatment area comprises dense pine and eucalyptus tree cover that will have the trees cut, stumps treated, and protection given to interspersed native oak, bay and other tree species as well as native brush vegetation"); *Id*. ("In all three areas, the treatments would focus on removing high hazard vegetation").

The DEIR does not provide any additional clarity regarding the extent of tree removal within the FHRs, simply reiterating the vague and open-ended criteria listed in the WVFMP. See DEIR, p. 2-9. This broad list of subjective criteria would justify the removal of any tree within the FHRs. All trees are flammable. They all pose some degree of fire hazard. In the case of eucalyptus trees, given the dire description of potential spotting from eucalyptus painted in the WVFMP, any and all eucalyptus trees removal would be justified by the loose criteria. WVFMP, pp. 26-27. See DEIR, p. 3.12-4. Likewise, the DEIR already attempts to single out eucalyptus trees as posing a high fire hazard. DEIR, p. 3.12-4.1 Thus, a criterion of "fire hazard" is no criteria at all for the extensive groves of eucalyptus forests found in the FHRs. The presence of oily resins and potential ignition of litter build-up in the University's eucalyptus forests also makes many of the "dead materials" and "fuel volume production" criteria no criteria at all when applied to the FHRs and their extensive eucalyptus groves. See DEIR, p. 3.12-4.

Given the University's familiarity with the three FHR areas, it is inconceivable that the University does not know the extent of tree removal that is expected for the Project. The University had ample time during the last two years since it filed its application for funding from CalFire to survey the FHR areas and determine with precision the extent of tree removal in the FHRs it believed was necessary to achieve its fire management goals. Fire Prevention Program Grant Application Fiscal Year 2017-18 dated June 6, 2018. Indeed, during the FEMA process, the University and FEMA disclosed the number of trees proposed to be removed in that project. See Final EIS ("Approximately 12,000 eucalyptus, pine, and acacia trees would be cut down" in the Strawberry Canyon-PDM); 3-35 ("About 10,000 trees would be cut down" in the Claremont-PDM). Rather than disclose the level of tree removal the University intends to implement in the FHRs, the WVFMP and DEIR serve to obfuscate the extent of tree removal. As a result, the DEIR frustrates the public's ability to understand the extent of the proposed project, whether or not it would achieve the fire risk reduction goals identified by the University, and the extent of the significant impacts that may result from the Project, including impacts on fire risk, visual and aesthetic impacts, wildlife impacts, and greenhouse gas emission and sequestration impacts.

Rather than disclose the details of the tree removal projects in the FHRs, the WVFMP and DEIR are designed to obfuscate the Project and hide the extent of tree removal planned for the FHRs. The goal of this vague project description is either a naive attempt to assuage the conflicting positions of various commenters that the project is consistent with both selective thinning of eucalyptus and pine forests or their complete eradication or, more likely, an effort by the University to hide the specifics of the Project in an effort to frustrate one or the other viewpoint from understanding and critiquing the actual extent of tree removal being planned by the University in the FHRs. Either way, it is a complete rebuff to the goals, purposes and requirements of CEQA which, among other things, include requiring sufficient detail in an EIR to "insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug." *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agric. Assn.* (1986) 42 Cal. 3d 929, 935, 727 P.2d 1029, 1032 (1986), citing *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841.

[1] Nor is there evidence or any discussion in the DEIR regarding the fire risks posed by native trees as well compared to non-natives. Bays, chaparral and oak trees all burn. Indeed, according to the Hills Emergency Forum, the average flame length for a mixed hardwood forest (including oaks and Bay trees) is 17.5 feet compared to an average flame length for eucalyptus of 13.5 feet. See Close Report, p. 11. Average flame length for brush is 41.5. Id. Nor does the DEIR disclose any evidence showing that burning eucalyptus trees will result in greater spotting and firebrand production than other species such as oaks or Bay trees. Indeed, the catastrophic wildfires engulfing large areas of the north and south bays are predominantly oak woodland and shrub areas. Obviously, spotting and high flame

lengths are occurring in those native habitats. Lastly, the Flammap modeling of the existing conditions conducted by the University does not discern between species of trees.

Response O9-4

The comment requests additional detail regarding the criteria for tree removal and retention in the FHR treatment areas. Refer to the response to comment O6-9, regarding the extent of tree removal and the objective criteria that will determine vegetation removal under the WVFMP. Information was added to Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. This text is presented on page 2-9 in the aforementioned section of Volume II and excerpted in Master Response 1. Information was also added to Section 4.1.2.3, "Fire Hazard Reduction Projects," of the WVFMP. Refer to additional explanation of the consideration of eucalyptus in Master Response 1.

Refer also to responses to comments I24-2 and O9-21 regarding fire risk posted by native and non-native species. The fuel characteristics of vegetation affect how they burn. The fuel characteristics are sometimes separate from the vegetation types. The fuel model inputs to the fire behavior prediction software used in the WVFMP are classified as a function of the fuel volume, vertical and horizontal continuity, percent of live and dead material, as well tree height, base of tree canopy and tree foliage density. All these are factors that describe the fuel conditions directly, and separate from vegetation types. Fuel models used to predict fire behavior do not consider whether the fuel is native or non-native. Treatments are aimed at changing the physical attributes of the environment as a way to reduce fire hazard, especially ember protection and distribution.

The commenter claims that without this additional detail, the public cannot understand the extent of the proposed project and its impacts. As described in the response to comment O9-3, the clarifying text regarding tree and shrub removal and retention criteria does not change any of the analysis or conclusions in the EIR. The additions are consistent with the assumptions used in the analysis of the Draft EIR and are not considered to be significant new information, as defined in State CEQA Guidelines Section 15088.5. Refer to responses O7-6 and O9-3 regarding the adequacy of the project description. The EIR provides objective tree and shrub removal and retention criteria and describes the project at a level of specificity that corresponds to the specificity of available information (State CEQA Guidelines Section 15146). CEQA does not require the EIR to quantify the precise quantity and extent of tree removal that will occur since that level of specificity does not yet exist. See *Treasure Island, supra,* 227 Cal.App.4th at p. 1054.

Comment O9-5

B. Project Description of the FHR Projects is Unstable and Inconsistent with the Information Provided in the DEIR.

The DEIR's description of the three FHRs and the proposed mechanical treatment of these areas is inconsistent with the description of these Projects that they do not include any heavy equipment on slopes greater than 30 percent. This inconsistency and the failure to identify the locations of particular treatment methods within the FHRs further illustrates the inadequacy of the DEIR's project description.

In regard to the FHR Projects, the project description states that the Claremont and Strawberry FHRs will be conducted using only mechanical treatment. DEIR, p. 2-23 ("Strawberry FHR Project would be implemented using mechanical equipment on approximately 24 acres in the northwesternmost part of the Plan Area"); *Id*. ("The Claremont FHR Project would be implemented using mechanical equipment on approximately 26 acres in the southeastern portion of the Plan Area"). The Frowning FHR would use mechanical treatment for most of that FHR area. One can deduce that about 12 acres of Frowning FHR would be manually treated. *See* DEIR, p. 3.6-20 (Table 3.6-7) ("37.2 acres of the Frowning FHR would include mechanical treatment as well as grading of access roads and landings in this area"); DEIR, p. 2-23 ("The Frowning FHR Project would be implemented on approximately 49 acres spanning the northern portion of the Plan Area using manual and mechanical methods").

At the same time as describing these FHRs as including mechanical treatment, the EIR also acknowledges limits or places restrictions on the use of mechanical treatment. "Mechanical vegetation treatment involves the use of heavy motorized equipment, such as feller-bunchers and masticators, specially designed to cut, tear, uproot, crush, compact, or chop target vegetation" DEIR, p. 2-10. The DEIR identifies mechanical equipment as including "feller

buncher, yarder, skidder, masticator, tractor, brush cutters/mower, [and] grapple saw." DEIR, p. 2-6 (Table 2-1). "Use of feller-bunchers is limited to slopes of less than approximately 45 percent." DEIR, p. 2-10. "A grapple saw can fell and remove trees up to 100 feet from where it is mounted and would be used from existing roadways to remove vegetation from sensitive interior areas." *Id*.

"Heavy equipment on steep slopes can cause extensive soil disturbance." EIR, p. 3.6-17. As a result, "[t]rees on steep slopes would be cut down using hand-held equipment only; ***no heavy equipment would be used***." DEIR, p. 2-9 (emphasis added). Likewise, the FHR projects would incorporate environmental protection measures ("EPMs"). DEIR, p. 2-24. EPM GEO-3 Minimize Erosion provides that "[t]o minimize erosion, UC Berkeley will prohibit heavy equipment use where slopes are steeper than 30 percent." DEIR, p. 2-26. See also DEIR, p. 3.6-18 ("EPM GEO-3 prohibits use of heavy equipment on slopes steeper than 30 percent").

The DEIR's description of the Strawberry and Claremont FHR as using only mechanical treatment relying on heavy equipment is inconsistent with the DEIR's restrictions on heavy equipment use and the slope and access roads and trails to those FHRs. The description of all mechanical treatment for those two FHRs cannot be squared with the slopes that exist within those areas. Figure 3.6-2 provides a map of soil types with slope ranges for broad areas within the Hill Campus area. DEIR, p. 3.6-4. Along the northern edge of the Hill Campus, slopes range from 30 to 50% in the Gilroy clay loam area. The areas marked as Maymen loam and Maymen-Los Gatos complex indicate that slopes in that are from "30-75% slopes." The Claremont FHR is located entirely within these Maymen zones. DEIR, p. 3.6-4. See also Table 3.6-3 (100% of Claremont FHR area has slopes of from 30 to 75%). The Strawberry FHRs is mostly within that same zone but also extends northward into the Gilroy clay loam zone. DEIR, p. 3.6-4. See also Table 3.6-3 (96.5% of Strawberry FHR have slopes greater than or equal to 30%). According to Figure 3.6-2, none of these areas have slopes less than 30 percent. The Project description stating that no heavy equipment will be used on slopes greater than 30 percent is inconsistent with the description's claim that all of the treatment in the Claremont and Strawberry FHRs will be mechanical. Although perhaps a few locations will be precisely 30 percent slope, from the information provided in the DEIR, it is clear that many, perhaps the vast majority of slopes within these FHRs exceed 30 percent. It simply cannot be true that all of the treatments can or will be mechanical for these entire areas.

Response O9-5

The commenter asserts that the WVFMP was unclear as to the maximum slope steepness on which mechanical treatments can be used. Text in the WVFMP was edited to clarify that mechanical equipment will not be used on slopes greater than 30 percent slope steepness. The clarifying text appears in Section 4.1.2.1, "Access for Treatment Areas" and Section 5.2 "Mechanical Vegetation Treatment" of the WVFMP (Appendix A in Volume II of this Final EIR).

The commenter also asserts that because only mechanical treatment is proposed to implement the Strawberry and Claremont FHR projects, and no mechanical equipment would be used on slopes greater than 30 percent, much of the Strawberry and Claremont FHR projects would be impossible to implement given the presence of slopes greater than 30 percent within these treatment areas. Text in the EIR was edited to clarify that manual treatments, in addition to mechanical treatments, may be used to implement the Strawberry and Claremont FHR projects. Refer to Section 2.5.6, "Identified Treatment Projects," in Volume II of this Final EIR for the updated descriptions of the Strawberry and Claremont FHR projects. Minor text edits have been made in other sections of the EIR, where necessary, to reflect the additional treatment activity that would be used to implement the Strawberry and Claremont FHR projects (i.e., Section 3.3 "Air Quality," Section 3.7 "Greenhouse Gas Emissions," and Section 3.10 "Noise and Vibration"). The addition of manual methods to the treatment activities that would be used to implement the Strawberry and Claremont FHR projects did not result in an increase in the severity of any environmental impacts evaluated in the EIR because generally, manual treatment activities are less impactful than the use of heavy equipment and machinery during mechanical treatments. No substantial revisions to the analysis, and no change to any significance conclusions, or mitigation measures in the EIR resulted from consideration of the additional treatment activity.

Comment O9-6

The same inconsistency also plagues the description of the Frowning FHR. The description of the Frowning FHR generally states that about ¾ of that area will be treated mechanically but does not describe where in the Frowning FHR those areas are located. The Frowning FHRs is mostly within the Maymen loam and Maymen-Los Gatos complex

soil zones with slopes from 30-75% slopes. Portions of the Frowning FHR extend northward into the Gilroy clay loan zone. DEIR, p. 3.6-4. See also Table 3.6-3 (84.4 % of Frowning FHR area has slopes of 30 to 50%). Because the Frowning FHR also contains extensive areas with slopes greater than 30 percent, the DEIR inconsistently has mechanical treatment in this area in areas where it is not available or allowed.

Response O9-6

As noted above in the response to comment O9-5, mechanical equipment will not traverse slopes greater than 30 percent; text in the WVFMP has been changed to clarify this maximum slope steepness. As described under "Frowning FHR Project," in Section 2.5.6, "Identified Treatment Projects," in Volume II of this Final EIR, the Frowning FHR project would be implemented on approximately 49 acres of the Plan Area using manual and mechanical methods. In areas where slope steepness exceeds 30 percent, manual treatment methods would be used, and mechanical equipment would be prohibited. A map showing slopes greater than 30 percent, where mechanical equipment would not be permitted, in relation to the proposed FHR projects has been prepared and added to Section 3.6, "Geology and Soils," in Volume II of this Final EIR (see Figure 3.6-5 on page 3.6-9). The addition of this clarifying slope map did not warrant any substantial edits to the analysis or changes to any significance conclusions in the EIR.

Comment O9-7

Similarly, grapple saws being operated from adjacent roads, trails and landings would only be able to reach modest portions of the Strawberry, Claremont and Frowning FHRs. Figure 2-2 shows the general locations of existing landings in relation to the three FHR Projects. DEIR, p. 2-3. That figure also shows the locations of existing roads and access trails. *Id*. Circular symbols for the landings, although not indicative of the actual size of the landing areas, are also identified. Id. Fire trails and roads also are depicted on Figure 3.2-1. DEIR, p. 3.2-3. See also p. 3.11-3 (Figure 3.11-1). Based on the provided maps, it is clear that areas to be treated within the FHRs extend well beyond 100 feet from roads, trails or landings where a grapple saw could be mounted.

Response O9-7

The commenter notes the limits of use of grapple saws in performing work to implement the FHR projects. Equipment that would be used to implement the FHR projects is not restricted to grapple saws. While use of equipment such as a grapple saw from roads, landings, and skid trails is preferred as a way to minimize impacts from ground disturbance, any of the manual and mechanical equipment types listed in Table 2-1 in Chapter 2, "Project Description," in Volume II of this Final EIR could be used to implement FHR projects, with the exception of mechanical equipment where slopes are greater than 30 percent steepness.

Comment O9-8

As a result, the DEIR's description of the FHR Projects is inconsistent and unstable because, based on the information provided, it includes mechanical treatment in areas where it prohibits mechanical treatment. Likewise, there is no explanation how equipment operating from roads, trails or landings could mechanically treat the FHRs. To comply with CEQA, the DEIR's project descriptions of the FHRs must specify where in each of the FHRs mechanical treatment would occur, where manual treatment would occur, the types of mechanical treatment equipment that would be used in each area of the FHRs, and the location of any skid trails. The description also should map the actual slopes of the areas within the FHRs.

Response O9-8

The comment summarizes detailed comments provided earlier in the comment letter and requests that the locations of skid trails and a map of slope steepness in the Plan Area be provided. See responses to comments O9-5 through O9-7 regarding the combination of equipment types that would be used to implement the FHR projects and the text that has been added to the EIR to clarify the descriptions of proposed FHR projects and the methods that would be used to implement them. Refer to Figure 8 in the WVFMP included as Appendix A in Volume II of this Final EIR for the locations of skid trails and fire roads/trails within the Plan Area. In addition, a map showing slopes greater than 30 percent, where mechanical equipment would not be permitted, in relation to the proposed FHR projects has been added to Section 3.6, "Geology and Soils," in Volume II of this Final EIR (see new Figure 3.6-5 on page 3.6-9). These

clarifying explanations and additional text and are minor modifications to clarify elements of the project. They do not warrant any edits to the analysis or conclusions in the EIR.

Comment O9-9

Relatedly, the DEIR vaguely asserts that projects within the WVFMP will include an Access Plan." DEIR, p. 2-25 (EPM BIO-6). The Access Plan would be designed to minimize ground disturbance. "UC Berkeley will use existing roads, trails, and former logging paths and minimize ground disturbance from equipment and vehicles (e.g., wheels, tracks, skidding to landings), to the extent feasible." *Id*. "UC Berkeley will develop an access/implementation plan that maps and names all fire roads and/or trails that will be used to reach treatment areas and that details the starting location(s) and direction of progression of treatment in coordination with a qualified biologist approved by USFWS and CDFW." *Id*. This provision is prudent. However, for the Identified Treatment Projects being addressed in this EIR, including in particular each of the FHRs, these details must be disclosed in the DEIR in order to provide a sufficient description of these projects from which to evaluate impacts and alternatives.

Response O9-9

Paved roads, fire roads, trails, and routes suitable for skidding are presented in Figure 8 of the WVFMP (Appendix A in Volume II of this Final EIR). These are the existing roads, trails, and former logging paths that comprise the possible access routes analyzed in the EIR. The access plan required pursuant to EPM BIO-6 would identify a subset of those shown in Figure 8, as some could be the basis of road/trail-based operations using equipment on articulated arms that can reach beyond the roads/trails.

Comment O9-10

II. The DEIR Fails to Adequately Disclose and Address the Significant Visual Impacts of the FHRs and the WVFMP.

The DEIR's discussion of visual impacts to recreational users of trails and motorists using roads adjacent to or through the FHR areas fails to disclose the scope of tree removal and deforestation that is planned for the Project. The University continues its effort to mask the scope of the proposed FHR projects with a vague discussion of visual impacts from the unclear level of tree removal intended for the FHR areas. Because of the deficient project description, the scope of tree removal in the FHRs could be limited to selective thinning or extend up to almost complete removal of all trees in some areas. The vagueness of the project descriptions for the FHR Projects is now echoed in an equally vague and meaningless discussion of visual impacts.

Response O9-10

As described in Section 1.5, "Purpose and Intended Uses of This EIR," in Volume II of this Final EIR, the four vegetation treatment types and five vegetation treatment activities are evaluated for long-term implementation throughout the entire 800-acre Plan Area at a programmatic level in this EIR. According to Section 15168 of the State CEQA Guidelines, a Program EIR may be prepared on a series of actions that can be characterized as one large project and are related to, among other things, the issuance of general criteria to govern the conduct of a continuing program or individual activities carried out under the same authorizing statutory or regulatory authority, and having generally similar environmental effects that can be mitigated in similar ways. The UC Regents will need to evaluate the later activities associated with each future vegetation treatment project to determine whether such activities have been adequately analyzed in this EIR.

The level of detail included under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR is appropriate for a programmatic evaluation of environmental impacts under CEQA. As explained in Master Response 1, Section 2.5.1 presents the criteria that would be considered in determining which trees and shrubs would be removed or retained; these criteria are applicable to the FHR projects described under Section 2.5.6, "Identified Treatment Projects." Clear cutting is not proposed, but under the management concept of variable density thinning, which is the central tenet of the proposed WVFMP, gaps in canopy cover and tree density will be created. In some areas, a closed tree canopy will remain. Vegetation will be modified according to the criteria stated in the WVFMP to promote a less hazardous wildfire condition. Later activities, such as future FHR projects, would be evaluated once project details are known, pursuant to Section 15168 of the State CEQA Guidelines. The program-level evaluation of the potential long-term visual impacts associated with the

implementation of FHR treatments in the Plan Area is provided under Impact AES-2 in Section 3.2.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR and considers public views, including by motorists and recreationists.

The adequacy of the analysis in the FHR Identified Treatment Projects is addressed in responses to comments O9-11, O9-12, O9-13.

Comment O9-11

A reader cannot discern the scope of tree removal in the Strawberry FHR. As a result, the general discussion of this FHR Project's visual impacts fail to convey the actual visual impacts of the Project and whether there is any potential to mitigate those impacts. The DEIR states "[v]iews of surrounding wooded areas along Centennial Drive and portions of Grizzly Peak Boulevard, and Jordan Fire Trail would be disrupted by treatment activities." DEIR, p. 3.2-20. If the treatment activities amount to clearcutting all of the trees in the vicinity of roads and trails in this FHR, that would of course be a significant and presumably unmitigable impact on recreational and other users with "moderate to high sensitivity to disruption to visual resources…." *Id*. A selective thinning regimen would have much less, if any, visual impacts. Because the DEIR does not provide any detail on what level of tree removal will be in this FHR, the analysis of visual impacts is unreasonable on its face and not supported by any substantial evidence.

The DEIR does not include any photographs of the current views of surrounding woods and areas from any trails or roads in the Strawberry FHR. Thus, even if the DEIR described the Strawberry FHR Project with sufficient detail, there would be no baseline to gauge the visual impacts of tree removal.

Response O9-11

The impacts resulting from implementation of the Strawberry FHR project described on page 3.2-20 of the EIR are specific to the evaluation of short-term visual impacts from the proposed treatment activities (i.e., manual and mechanical treatment activities and herbicide application) within the Strawberry FHR project area boundaries. Refer to the response to comment O9-5, above, regarding the text edits made in the EIR to clarify that manual treatments, in addition to mechanical treatments, may be used to implement the Strawberry and Claremont FHR projects. The addition of manual methods to the treatment activities that would be used to implement the Strawberry and Claremont FHR projects did not result in an increase in the severity of any environmental impacts evaluated in the EIR because generally, manual treatment activities are less impactful than the use of heavy equipment and machinery during mechanical treatments. No substantial revisions to the analysis, and no change to any significance conclusions, or mitigation measures in the EIR resulted from consideration of the additional treatment activity.

The description of the existing visual setting of the Plan Area is based on site visits and photographs provided by the consultant team and UC Berkeley, and information from the UC Berkeley's 2020 Long Range Development Plan EIR. Several photographs of current views of the Plan Area are included in Section 3.2, "Aesthetics and Visual Resources," in Volume II of this Final EIR, as depicted on Figure 3.2-1, "Photographic Locations." As shown on Figure 3.2-1, eight photo points were chosen to help illustrate the existing views and visual character and quality in the Plan Area. The discussion under "Strawberry Fire Hazard Reduction" in Section 3.2.1, "Environmental Setting," in Volume II of this Final EIR describes the current visual character and quality of the Strawberry FHR project area, as well as the viewer groups and viewer sensitivity and exposure of those viewers. As described therein, public views of the Strawberry FHR project include views from roads (Centennial Drive, Grizzly Peak Boulevard), views from research facilities in the vicinity of Centennial Drive and Grizzly Peak Boulevard, and views from the Upper Jordan Fire Trail. Views of the Strawberry FHR project are composed primarily of stands of pine and eucalyptus trees lining the roads and trails with partially screened views of research facility buildings within the Plan Area and within LBNL boundaries, as well as nearby residential structures. Distant scenic vistas of the surrounding area are largely blocked by the vegetation and structures. Intactness and unity are considered moderate due to screening effect of the extensive stands of trees that soften views of built-environment features. The overall visual quality of the treatment site is considered moderate. Although no photographs are included specifically depicting the Strawberry FHR project area, the types of vegetation present and types of views available are aesthetically similar to the rest of the Plan Area, as shown in Figure 3.2-2 through 3.2-9. Specifically, Figure 3.2-5 shows a scenic view into Strawberry Canyon from Grizzly Peak Boulevard, near the location of the Strawberry FHR project. The existing visual setting of the Strawberry FHR project as described

in the EIR allowed for meaningful analysis of the short-term and long-term visual impacts from project implementation, which are further detailed below.

As described under "Fire Hazard Reduction Projects," under Impact AES-1 in Volume II of this Final EIR, manual and mechanical treatments similar to what would be required to implement the Strawberry FHR project currently occur within the Plan Area under UC Berkeley's existing 2020 Hill Area Fire Fuel Management Plan; the treatments proposed would not introduce new or substantially different equipment or activities on the landscape. EPM AES-1 would be implemented during treatment activities to avoid staging equipment within viewsheds of public trails, parks, recreation areas, and roadways to the extent feasible and to minimize the visual presence of treatment-related materials and equipment. Because herbicide treatment would only use ground-level application, and applicators would be continuously moving throughout a project area, visibility in one location would be brief and it would not result in a substantial degradation of a scenic vista, of visual character and quality, or substantially damage scenic resources in the treatment sites. The long-term impact of vegetation removal under the Strawberry FHR project is evaluated under "Identified Treatment Projects (Project-level Analysis)," under Impact AES-2 in Volume II of this Final EIR; as identified therein, this impact would be significant and unavoidable. Refer also to responses to comments O9-3 and O9-4 regarding the description and extent of tree removal that would occur under the FHR projects. The EIR is not required to quantify the precise extent of vegetation removal. As stated in State CEQA Guidelines Section 15151, "An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible."

Comment O9-12

The discussion of visual impacts from the proposed Claremont FHR is equally devoid of detail. The DEIR vaguely states that "views of surrounding wooded areas on the slopes visible from Claremont Avenue and Grizzly Peak Boulevard would be affected by treatment activities." DEIR, p. 3.2-20. Recreationists using this FHR area are recognized as being highly sensitive to visual disturbances. Id. Assuming the University's project is to cut down all of the eucalyptus and pine trees in this FHR, the resulting impacts would be highly significant to recreationists and motorists using this area. No mention of that scenario or any detail of the scope of tree removal is provided in the discussion. The two photos of existing conditions at specific locations adjacent to this FHR only emphasize the lack of any meaningful discussion of visual impacts. Clearcutting all of the eucalyptus trees depicted in Photo P-7 (DEIR, p. 3.2-13, Figure 3.2-8) and replacing them with a field of stumps, slash, abandoned logs, and wood chips would have a dramatic impact on the view of hikers ascending or descending the fire access road running through this area or motorists driving by the location of P-7. The same is true for the trees depicted on the left side of Claremont Avenue at Mile Post 29, depicted in Photo P-5. DEIR, p. 3.2-10, Figure 3.2-6.

Response O9-12

The impacts resulting from implementation of the Claremont FHR project described on page 3.2-20 of the EIR are specific to the evaluation of short-term visual impacts from the proposed treatment activities (i.e., manual and mechanical treatment activities and herbicide application) within the Claremont FHR project area boundaries. Refer to responses to comment O9-5 and O9-11 above regarding the text edits made in the EIR to clarify that manual treatments, in addition to mechanical treatments, may be used to implement the Strawberry and Claremont FHR projects. No substantial revisions to the analysis, and no change to any significance conclusions, or mitigation measures in the EIR resulted from consideration of the additional treatment activity.

As described under "Fire Hazard Reduction Projects," under Impact AES-1 in Volume II of this Final EIR, manual and mechanical treatments similar to what would be required to implement the Claremont FHR project currently occur within the Plan Area under UC Berkeley's existing Hill Area Fire Fuel Management Plan; the treatments proposed would not introduce new or substantially different equipment or activities on the landscape. EPM AES-1 would be implemented during treatment activities to avoid staging equipment within viewsheds of public trails, parks, recreation areas, and roadways to the extent feasible and to minimize the visual presence of treatment-related materials and equipment. Because herbicide treatment would only use ground-level application, and applicators would be continuously moving throughout a project area, visibility in one location would be brief and it would not

result in a substantial degradation of a scenic vista, of visual character and quality, or substantially damage scenic resources in the treatment sites.

The photographs provided as Figure 3.2-6 and Figure 3.2-8 include existing views of Claremont Canyon from Claremont Avenue, which depict current vegetative conditions within and in the vicinity of the Claremont FHR project to assist with the evaluation of long-term visual impacts. As described under "Fire Hazard Reduction Treatments," in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR, variable density thinning would be used to implement the FHR projects, which would retain shrubs and trees in the FHR treatment areas and no full removal or clearcutting of vegetation would occur. Refer to responses to comments O6-9 and O9-4 regarding the criteria for tree removal and retention and performance standards that would be applied to implementation of the FHR projects and associated clarifying text edits that have been made to the EIR and WVFMP. The long-term impact from vegetation removal under the Claremont FHR project is evaluated under "Identified Treatment Projects (Project-level Analysis)," under Impact AES-2 in Volume II of this Final EIR. As identified therein, although not all trees and other vegetation would be removed, this impact would be significant and unavoidable due to the removal of eucalyptus trees and other vegetation that is present and shown in Figure 3.2-6 and Figure 3.2-8.

Refer also to responses to comments O9-3 and O9-4 regarding the description and extent of tree removal that would occur under the FHR projects. The EIR is not required to quantify the precise extent of vegetation removal. As stated in State CEQA Guidelines Section 15151, "An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible."

Comment O9-13

The discussion of visual impacts from the Frowning FHR suffers from the same defects. The generic statement that, within this FHR, the "[s]urrounding vegetated areas on the slopes visible from Upper Jordan Fire Trail and connecting trails would be affected by treatment activities," does nothing to convey the actual visual impacts that may result from the Project, especially if all of the eucalyptus and pine trees are removed. Because the reader has no idea what level of tree removal will occur, the vague discussion of visual impacts in this FHR is unreasonable and not supported by any substantial evidence. Rather than a shaded fire road, the highly sensitive hikers on Upper Jordan Fire Trail would be walking on an unshaded trail and viewing a perhaps completely denuded landscape. No reader can tell from this EIR. The visual impact discussion of the Frowning FHR is unreasonable and unsupported by a clear project description or any evidence.

Response O9-13

The impacts resulting from implementation of the Frowning FHR project described on page 3.2-20 of the EIR, and included as quoted text in comment O9-13, are specific to the evaluation of short-term visual impacts from the proposed treatment activities (i.e., manual and mechanical treatment activities and herbicide application within the Frowning FHR project area boundaries). As described under "Fire Hazard Reduction Projects," under Impact AES-1 in Volume II of this Final EIR, manual and mechanical treatments similar to what would be required to implement the Frowning FHR project currently occur within the Plan Area under UC Berkeley's existing Hill Area Fire Fuel Management Plan; the treatments proposed would not introduce new or substantially different equipment or activities on the landscape. EPM AES-1 would be implemented during treatment activities to avoid staging equipment within viewsheds of public trails, parks, recreation areas, and roadways to the extent feasible and to minimize the visual presence of treatment-related materials and equipment. Because herbicide treatment would only use ground-level application, and applicators would be continuously moving throughout a project area, visibility in one location would be brief and it would not result in a substantial degradation of a scenic vista, of visual character and quality, or substantially damage scenic resources in the treatment sites.

The long-term impact from vegetation removal under the Frowning FHR project is evaluated under "Identified Treatment Projects (Project-level Analysis)," under Impact AES-2 in Volume II of this Final EIR. As described therein, along the Upper Jordan Fire Trail, scenic and long-range views would likely be improved by the thinning of dense vegetation, thereby providing increased opportunities for long-range, scenic views. However, less vegetation would be present where treatments occur, and many eucalyptus trees and other vegetation would be removed (but there would not be clear cutting; see the response to comment O6-9). Therefore, because vegetation removal would be

long-term and visible to recreationists with high sensitivity to visual change, the visual character and quality of public views would be degraded, and the impact would be significant and unavoidable. Refer also to responses to comments O6-9, O9-3, and O9-4 regarding the criteria for tree removal and performance standards that would be used to implement the FHR projects and associated clarifying text edits that have been made to the EIR and WVFMP. The EIR is not required to quantify the precise extent of vegetation removal. As stated in State CEQA Guidelines Section 15151, "An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible."

Comment O9-14

The DEIR's conclusion regarding short-term visual impacts also is devoid of any reasonable detail or logical basis. Acknowledging the Identified Treatment Projects "could result in short-term degradation of public views," the conclusion claims that "because treatment types and activities are visually similar to other vegetation treatments and landscaping activities already occurring in the Plan Area, and EPMs would be integrated into treatment design to avoid and minimize aesthetic impacts and reduce viewer exposure, short-term degradation would not be substantial." DEIR, p. 3.2-22. This conclusion is not defensible given the unclear scope of tree removal proposed for the FHRs and the likelihood that the University is aiming to take advantage of the DEIR's and WVFMB's vagueness to proceed with removing essentially all of the trees from these areas. Of course, that level of tree removal is not happening currently. The University has no reasonable basis or evidence for its conclusion that "[i]mpacts from the proposed Identified Treatment Projects to scenic vistas, to visual character or quality of public views, would be less than significant."

Response O9-14

Impact AES-1 in Section 3.2.3, "Impact Analysis and Mitigation Measures," analyzes the short-term visual impacts of each of the treatment activities proposed for use during active implementation (i.e., manual and mechanical treatments activities, herbicide application, prescribed broadcast burning, and managed herbivory treatments), as opposed to the long-term impacts that would result from vegetation removal. Manual and mechanical treatment activities and herbicide application would be used to implement the Identified Treatment Projects. As discussed under "Overall WVFMP (Program-level Analysis)" under Impact AES-1 in Section 3.2.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, during manual and mechanical vegetation treatment activities, hand-held and vehicle-mounted equipment would be used, such as hand tools, chainsaws, and other hand-operated power tools and heavy motorized equipment, such as feller-bunchers and masticators, both of which are specially designed to cut, tear, uproot, crush, compact, or chop target vegetation. Examples of such equipment in use are shown in Figure 2-4 and Figure 2-5 in Chapter 2, "Project Description," in Volume II of this Final EIR. Manual treatments tend to utilize small hand equipment, such as a chainsaw. Because equipment typically used in manual treatment activities tends to be small (refer to Figure 2-4), and much of the Plan Area is heavily forested, manual equipment in use would not be prominently visible from a scenic vista or substantially degrade visual character or quality. Mechanical treatments use larger equipment than manual treatments (refer to Figure 2-5 in Chapter 2, "Project Description"), but can treat vegetation more efficiently than manual treatments and thus occur over a shorter duration than manual treatments.

Although the presence of large mechanical equipment could contrast with the natural environment if visible, the treatment and its visibility would be temporary and would not dominate a view or block any views from scenic vistas or substantially degrade the existing visual character or quality of an area. This is because treatment activities would be limited in geographic extent, and mechanical equipment is typically used in areas with large trees, which would at least partially screen views into treatment areas from scenic vistas or other public areas outside of a treatment area. Furthermore, the treatments proposed under the WVFMP would not introduce new or substantially different equipment on the landscape. EPM AES-1 would be implemented during treatment activities to avoid staging equipment within viewsheds of public trails, parks, recreation areas, and roadways to the extent feasible and to minimize the visual presence of treatment-related materials and equipment. In addition, personnel with herbicide application equipment would not substantially intrude on scenic views of the area.

The appearance of typical herbicide application treatment activities is shown in Figure 2-8 in Chapter 2, "Project Description." Under the WVFMP, herbicides would only be applied on the ground by manual application devices,

and no aerial application would occur. Herbicide application would be temporary, intermittent, and applicators would move continuously throughout a treatment area. Herbicide application would often occur within vegetation and thus be largely screened from public view. For these reasons, herbicide application itself would not dominate a view or block any views from a scenic vista or public views, nor would it substantially degrade the existing visual character and quality of the treatable landscape. No large or heavy equipment would be used in the hand application of herbicides and UC Berkeley would incorporate EPM AES-1 during implementation. For these reasons, manual and mechanical treatment activities and herbicide application used to implement the Identified Treatment Projects would not result in a short-term substantial degradation of a scenic vista or of visual character and quality in the Plan Area and the impact would be less than significant.

Impact AES-2 in Section 3.2.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR addresses the long-term visual impacts that would occur as a result of implementation of the proposed treatment types and each of the Identified Treatment Projects (i.e., how views and visual character and quality will change post-implementation). Refer to responses to comments O9-10 through O9-13 above for details regarding the extent of tree removal that would occur under the FHR projects (i.e., variable density thinning) and the long-term visual impacts that would occur as a result of implementing each of the FHR projects.

Comment O9-15

The same is true for long-term visual impacts. The DEIR's analysis of this impact (Impact AES-2) for the three FHRs states, in its entirety:

> Of all the treatment types implemented for the Identified Treatment Projects, the FHR projects would retain most visually dominant vegetation. Along the Upper Jordan Fire Trail, scenic and long-range views would be improved by the thinning of dense vegetation. However, less vegetation would be present where these treatments occur, and eucalyptus trees exist in all three FHR project areas that would likely be removed. Because vegetation removal would be long-term and visible to recreationists with high sensitivity to visual change, the visual character and quality of public views would be degraded.

DEIR, p. 3.2-25. This herky-jerky discussion perhaps best exemplifies the absence of any clear description of what level of tree removal is intended by the University for the three FHRs. On the one hand, the reader is told that "FHR projects would retain most visually dominant vegetation." *Id*. At the same time, "less vegetation would be present where these treatments occur, and eucalyptus trees exist in all three FHR project areas that would likely be removed." *Id*. Given that each of the FHRs is dominated by eucalyptus trees, it is easy to imagine that the FHR treatments would remove almost all of the trees in the FHRs. However, the University fails to identify the scope of tree removal. Accordingly, it is impossible for the reader to understand the visual impacts from the FHR Projects.

Response O9-15

Refer to responses to comments O6-9, O9-3, and O9-4 regarding the criteria for tree removal and retention and performance standards that would be applied to implementation of the FHR projects.

As described under "Identified Treatment Projects (Project-level Analysis)" under Impact AES-2 in Section 3.2.3 of Volume II of this Final EIR, all of the FHR projects would visible from public viewpoints. Although long-range public views are expected to improve with the removal of trees and other vegetation, UC Berkeley recognizes that the vegetation removal proposed for each of the FHR projects would be long-term and result in a substantial visual change to existing views. These visual changes would constitute a substantial degradation of visual character and quality, and the impact would be significant.

Comment O9-16

The University does conclude that the long-term impacts of removing trees in the Identified Treatment Projects would be significant prior to mitigation and that this impact is significant and unavoidable. DEIR, p. 3.2-26. However, simply concluding an impact is significant and unavoidable does not relieve the University of accurately detailing the scope of the impact. The EIR must not only identify significant impacts, but must "describe the nature and magnitude of the adverse effect." *Cleveland Nat'l Forest Found. v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514. "Before one brings about a potentially significant and irreversible change to the environment, an EIR must be

prepared that sufficiently explores the significant environmental effects created by the project." *Berkeley Keep Jets*, 91 Cal.App.4th at 1371. "The EIR's approach of simply labeling the effect 'significant' without accompanying analysis of the project's impact … is inadequate to meet the environmental assessment requirements of CEQA." *Id*.

In addition, the University fails to apply all available mitigations to this acknowledged, though unexplained, visual impact. The University states it "will implement vegetation feathering techniques to reduce the visibility of the Identified Treatment Projects, but substantial degradation of a scenic vista or visual character or quality of public views would still occur despite mitigation." DEIR, p. 3.2-26. However, as is discussed below, an available feasible alternative and mitigation would be to limit treatments in the FHRs, or specified portions of those areas, to selective thinning and ground fuel controls. This would prevent many, perhaps all, of the long-term visual impacts of removing trees in the FHRs.

A lead agency may not conclude that an impact is significant and unavoidable without requiring the implementation of all feasible mitigation measures to reduce the impacts of a project to less than significant levels. CEQA Guidelines §§ 15126.4, 15091. If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub.Res.Code § 21081; 14 Cal.Code Regs. § 15092(b)(2)(A) & (B). Because selective thinning is a feasible treatment method for the FHR areas and would achieve all of the goals and objectives of the Project, the University must incorporate that method into the FHR projects in order to address this otherwise unavoidable impact.

Response O9-16

The analysis of the potential long-term visual effects as a result of the Identified Treatment Projects is included under "Identified Treatment Projects (Project-level Analysis)" in Impact AES-2 in Section 3.2, "Aesthetics and Visual Resources" in Volume II of this Final EIR. As described, all of the Identified Treatment Project areas would be visible to recreationists and/or motorists using specific fire trails or roads in the Plan Area. Specific viewer groups and vantage points are identified for each of the Identified Treatment Projects in the analysis. Implementation of each of the Identified Treatment Projects would remove trees and vegetation, including eucalyptus trees, which would alter the landscape and reduce vividness, intactness, and unity of public views. These visual changes would constitute a substantial degradation of visual character and quality. As further described under Impact AES-2, of all the treatment types implemented for the Identified Treatment Projects, the FHR projects would retain most visually dominant vegetation (i.e., trees). Along the Upper Jordan Fire Trail, scenic and long-range views would be improved by the thinning of dense vegetation. However, less vegetation would be present where treatments occur, and eucalyptus trees exist in all three FHR project areas that would likely be removed. Because vegetation removal would be long-term and visible to recreationists with high sensitivity to visual change, the visual character and quality of public views was determined to be substantially degraded. As described in Mitigation Measures AES-2, UC Berkeley would conduct a visual reconnaissance of the treatment area before establishing ESTs, FHRs, FBs, and TRAs to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the treatment may be implemented without additional visual mitigation. However, if UC Berkeley identifies public viewing points, including heavily used scenic vistas, public trails, or recreation areas, with lengthy views (i.e., longer than a few seconds) of a proposed treatment area, UC Berkeley would, before implementation, identify any change in location of the treatment site to reduce its visibility from public viewpoints. If no changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed treatment, UC Berkeley would thin and feather adjacent vegetation to break up the linear edges of treatment areas and strategically preserve vegetation at the edge of the treatment area, to help screen public views and minimize the contrast between the treatment area and surrounding vegetation. Based on visual reconnaissance, it was determined that public viewing locations, including scenic vistas and public trails, have views of the proposed Identified Treatment Projects. However, because of the strategic nature of siting the treatments, it is not feasible to relocate the Identified Treatment Projects to avoid public visibility while achieving the wildfire risk reduction objectives. UC Berkeley would implement vegetation feathering techniques to reduce the visibility of the Identified Treatment Projects, but substantial degradation of a scenic vista or visual character or quality of public views may still occur despite mitigation.

The commenter suggests that an available feasible alternative and mitigation would be to limit treatments in the FHR project areas, or specified portions of those areas, to selective thinning and ground fuel controls. As described under "Fire Hazard Reduction Treatments" in Section 2.5.1, "Description of Vegetation Treatment Types" in Volume II of this Final EIR, the FHR projects involve selective removal of trees and ground fuels treatments. UC Berkeley 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. Criteria for tree removal would include consideration of tree health, structure, height, potential for failure, flammability/fire hazard, high fuel volume production of small diameter fuels, and competition with other trees (including for water, space, and light). Criteria for retention of trees includes species type, consideration of ability to slow spreading of invasive species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, erosion prevention, and cost of removal. Near roads, trails, and buildings, lower limbs of trees would be pruned, understory vegetation shortened, and grass mowed.

The selective thinning alternative and/or mitigation measure proposed by the commenter is also substantially similar to what is proposed in the WVFMP such that it would not reduce the impact to a less-than-significant level, and was evaluated as an alternative to the WVFMP in the EIR. As described in Section 6.3.3, "Alternative B: Reduced Treatment Alternative," in Volume II of this Final EIR, Alternative B is based on a NOP comment letter that was received from the commenter (i.e., the Hills Conservation Network) that proposes an alternative to the WVFMP. Alternative B emphasizes maintaining the existing overstory/tree canopy and prohibits the use of herbicides and planting of any new vegetation. Alternative B was determined to be the environmentally superior alternative; however, Alternative B would result in the same significant and unavoidable affect as the WVFMP from long-term visual changes to the landscape. In addition, further reducing the amount of tree and vegetation thinning in FHR project areas would not fully achieve the objectives of the Plan, and would not prevent visual impacts, since vegetation removal would still occur. As previously described, because of the strategic nature of siting the treatments, it is not feasible to relocate the FHR projects to avoid public visibility while achieving the wildfire risk reduction objectives of the Plan.

Comment O9-17

III. The DEIR Fails to Address Likely Exacerbation of Fire Risks Resulting From Removing Large Swaths of Trees.

The DEIR fails to address the major scientific debate surrounding the University's past and current vegetation management planning. The U.S. Forest Service as well as U.S. EPA and fire experts David Maloney and Kelly Close have all referenced existing scientific studies and provided their expert opinions pointing out the significant fire risks posed by removing all trees in fire prone areas, even eucalyptus trees. There is a consensus of scientific opinion that when all trees are removed over a large area, risk of fire ignition and spread increase. This is because removing all canopy cover will eliminate shade, increase ground temperatures, remove fog drip, reduce moisture content at the ground level, increase wind speeds through the area and increase subsequent risk of fire ignition from the proliferation of weeds and grasses. Instead of large swaths of tree removal, these experts note that the most efficient and effective means of reducing wild fire risks in the East Bay Hills is selective thinning coupled with the removal of ladder fuels and lower tree limbs.

As noted above, no one can tell from the DEIR what level of tree removal the University intends for the three FHR Projects. This alone precludes any meaningful analysis in the DEIR of fire risks from the unknown treatment design. In order to evaluate the risk of fire posed by the removal of trees, the University must identify the extent of tree removal it is proposing. If the University chooses to remove all eucalyptus and pine trees from the FHRs – which are essentially all of the trees in those areas with perhaps a spattering of small oaks and bay trees left – there is ample scientific evidence indicating that such a vegetation management scheme will actually increase ignition and fire risks. This is especially true when compared to a selective thinning alternative.

The significant fire risk of large-scale tree removal in the East Bay Hills has been pointed out to the University many times over the past number of years. In particular, the U.S. Forest Service, in comments the agency submitted on the last iteration of a vegetation management plan submitted by UC Berkeley to the Federal Emergency Management Agency ("FEMA"), belied the effectiveness to reduce fire risks of eradicating acres of large and small trees alike and leaving behind, in effect, clear-cut areas:

> From a fire behavior standpoint commercial thinning from below that would target smaller diameter trees leaving the largest dominate trees on the landscape, followed by surface and ladder fuel treatments ***provides the highest level of reduction in potential fire behavior***. These treatments and combinations of these treatments would break up the horizontal and vertical continuity from the surface fuels to the canopy fuels, by increasing canopy base height, and reducing canopy bulk density thus reducing the likelihood of crown fire ignition.

US Forest Service, Adaptive Management Services Enterprise Team Comments, p. 2 (Sept. 27, 2013) (emphasis added) (attached as Exhibit A). The Forest Service emphasized that, in areas dominated by eucalyptus, the amount of fine fuel available on the forest floor "was the most significant fuel variable affecting the behavior of fires in eucalyptus forests." *Id*., pp. 2-3. The Forest Service warned that removing eucalyptus and other trees would promote the growth of brushland species, increasing live surface fuel loading in those areas. *Id*., pp. 1-2. The Forest Service stated:

> Removal of the eucalyptus overstory would reduce the amount of shading on surface fuels, increase the wind speeds to the forest floor, reduce the relative humidity at the forest floor, increase the fuel temperature, and reduce fuel moisture. These factors may increase the probability of ignition over current conditions.

Id., pp. 2-3.

Likewise, FEMA also has emphasized the scientific support of the effectiveness of thinning eucalyptus forests rather than clearcutting them in order to reduce fire risks:

> Numerous scientific studies and the fire modeling supported that thinning reduces fire risk and that the eradication approach, or clearing of overstory trees does not, and can in fact, increase different fire risks. ***FEMA, despite our best efforts, could not find a rational basis to discount the studies and consequently determined that we could not justify the eradication or overstory clearcutting approach*** …. Selective thinning is also preferred because it has less potential for serious negative environmental impacts.

E-mail from Antoinette DiVittorio, HMA EHP Coordinator, FEMA (Oct. 30, 2013)(emphasis added) (attached as Exhibit B).[2]

Fire Chief (ret.) David Maloney also has reviewed vegetation management options in the East Bay Hills and has warned the University of the fire risks posed by canopy removal proposals. Dec'l of David Maloney (Sept. 16, 2016) (attached as Exhibit C). Chief Maloney is the former Chief of Fire Prevention for the U.S. Army at the Oakland Army Base and a member of the 1991-1992 Emergency Preparedness and Community Restoration Task Force which investigated the 1991 Oakland Hills Fire and made recommendations to prevent a recurrence of a major fire in the East Bay hills. Chief Maloney has provided his expert opinion regarding the effectiveness of controlling fires in eucalyptus forests, such as those in the East Bay Hills, by leaving trees in place and focusing management methods on removing ladder fuels, removing dry materials from the forest floor, and removing lower limbs from trees. Maloney Dec., ¶¶ 26-27. He also points out the serious fire risks that will result from UC completely removing tree canopies that currently exist in large portions of the Hills campus. Id, ¶¶ 5-25.

Adding to this consensus of fire experts, Chief Kelly Close also has voiced serious scientific concerns about the increased fire risk posed by canopy removal in eucalyptus forests and underscored the feasibility of selective thinning as a more effective and cost-efficient method to reduce fire risk in eucalyptus forests. Chief Close describes the risks of increased fire subsequent to treating vegetation to remove canopy cover over large areas. Close, Kelly, "Hazardous Tree Reduction Draft Environmental Impact Statement (DEIS) East Bay Hills, CA – Fire Behavior Commentary," pp. 9-11 (June 17, 2013) (attached as Exhibit D). Chief Close explains that the selective thinning approach is a well-accepted hazard reduction practice in eucalyptus forests. *Id*., pp. 11-12, 18-22. Chief Close explains that taller eucalyptus trees actually help reduce fire hazard by breaking up strong winds and reducing the hazard from flying embers. *Id*., p. 11 ("it has been found that eucalyptus trees actually help reduce fire hazard by breaking up turbulent flow dynamics of strong winds and reduce the hazard from flying embers"). Chief Close concludes that a selective thinning project, his "Combined Alternative Program," would reduce fire risk to a greater extent and less expense than canopy removal:

> [I]t is my opinion that the Combined Alternative Program approach is clearly a preferable alternative. It … follows sound forestry practices, is consistent with current accepted hazard fuel reduction practices for

> eucalyptus, does not result in an increase in invasive brush species post-treatment, deposits far less flammable woody material on the treatment sites, and is more economically sound.

Id. at 21.

The DEIR begrudgingly acknowledges that selective thinning is very effective at reducing fire risks.

> One published literature review found that certain treatments, such as hand or mechanical thinning followed by prescribed fire, or prescribed fire alone, are very effective at reducing wildfire severity, and that related ecological impacts are often neutral to positive (Winford et al. 2015). Another published literature review indicates that fuel treatments reduce fire severity, crown and bole scorch, and tree mortality compared to untreated areas. This finding is most applicable to the combination of thinning (manual and mechanical treatments) and prescribed burn treatments.

DEIR, p. 3.12-3. The DEIR attempts to walk this acknowledgment back, stating without citation that "[i]ncreased treatment size and intensity (e.g., number of trees removed) can increase the effectiveness of the treatments." *Id*. Again, one is left wondering what the FHR Projects actually are and the type and location of treatment methods the University proposes to use in each of those areas.

Although the University identifies various treatment methods at its disposal, the EIR's project-level review of the fire hazard reduction ("FHR") projects in Strawberry Canyon (Strawberry FHR Project), Claremont Canyon (Claremont FHR Project), and in areas along Frowning Ridge (Frowning FHR Project) does not indicate whether those methods would be used to selectively thin the FHRs, remove effectively all of the trees in these areas, or a specified combination of these options in specified areas of the FHRs. The trees comprising the forested areas with these projects are overwhelmingly eucalyptus trees. As currently proposed, the three projects may include cutting down effectively all of the trees in these three areas. The DEIR fails to acknowledge the scientific concerns regarding the fire risks of large-scale removal of trees in the Hills and fails to address the potentially significant fire risk impacts this management option will have within these large project areas. As a result, the DEIR also falls short of identifying mitigations of these impacts or presenting sufficient information for the University and public to compare alternatives, including a selective thinning alternative that would better achieve the project objectives in these project areas.

[2] EPA also raised concerns that an eradication approach, questioning the assumption that areas where trees were removed would realize the benefits of "natural regeneration." USEPA Detailed Comments, p. 3 (June 17, 2013 (attached as Exhibit E).

Response O9-17

This comment addresses the WVFMP and not the analysis of the plan in the EIR. The commenter notes two individuals with fire expertise believe clearcutting eucalyptus trees would increase fire risk and quote from a FEMA EIS about the relative merits of thinning vs. clearcutting eucalyptus stands.

As described under "Fire Hazard Reduction Treatments," in Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR, variable density thinning would be used to implement the FHR projects, which would retain shrubs and trees in the FHR treatment areas. Each tree considered for removal is evaluated as to its potential for torching and the adjacent overstory and understory according to the criteria identified in the WVFMP. Clearcutting or other removal of large swaths of trees is not proposed under the WVFMP.

Information was added to Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR to clarify the criteria for tree and shrub removal and the criteria for retention of trees and shrubs by providing examples of how the criteria would be implemented. This text is presented on page 2-9 in the aforementioned section of Volume II and excerpted in Master Response 1. Additional clarifying detail was also added to Section 4.1.2.3, "Fire Hazard Reduction Projects," of the WVFMP. Refer to Master Response 1 regarding the fire hazard posed by eucalyptus and its consideration in the WVFMP and EIR.

Thinning of eucalyptus is proposed in the WVFMP. It is also a component of Alternative B: Reduce Treatment Alternative, albeit using alternative methods to those proposed in the WVFMP. For comparative purposes, Alternative A:

The McBride Plan Alternative proposes conversion of eucalyptus and conifer plantations to native vegetation. The analysis of these alternatives is presented in Section 6.3, "Alternatives Evaluated in the EIR," in Volume II of this Final EIR.

Comment O9-18

The DEIR's fire risk analysis boils down to the circular and unsubstantiated conclusion that because the WVMP and the FHR Projects are intended to induce fire risk, the fire risk posed by the WVFMP and each of the Identified Treatment Projects, including the FHRs, is less than significant. See DEIR, p. 3.12-15 ("Furthermore, one of the main objectives of the WVFMP is to reduce the frequency and severity of future uncontrolled wildfire. This impact would be less than significant for the overall WVFMP as well as the Identified Treatment Projects"); *Id*., p. 3.12-16 ("One of the primary purposes of the Identified Treatment Projects is to reduce wildfire risk. Thus, the potential for the Identified Treatment Projects to expose people or structures to uncontrolled wildfire or substantially exacerbate fire risk would be similar to that described above for the overall WVFMP. This impact would be less than significant."). Unfortunately, wishful thinking is neither substantial evidence nor a reasoned analysis.

Response O9-18

UC Berkeley retained an expert wildland fire manager/fire ecologist with over 40 years of directly related experience, Carol Rice, to develop and prepare the WVFMP. The WVFMP was also reviewed and approved by the UC Berkeley Fire Mitigation Committee, which contains experts in fire management, environment, health and safety as well as forestry practices and risk management. The threshold used in Impact WIL-1 is whether the project would "expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires." The stated purpose of the plan to reduce wildfire risk backed by the expertise of those who prepared the plan is strong evidence to substantiate that such exposure would not occur. While there still will be risk of wildfire in the area, the WVFMP would reduce that risk; therefore, the WVFMP would not result in an impact to wildfire. Other substantial evidence used in the impact conclusion of Impact WIL-1 includes the application of EPMs and the extensive effort that goes into prescribed burn planning and implementation to prevent escape of fire beyond containment lines.

Comment O9-19

The DEIR mentions the 2017 Grizzly Fire which burned 20 acres on the Hill Campus and required evacuations of nearby facilities. See DEIS, pp. 1-2, 3.12-4. The DEIR attempts to use the 2017 Grizzly Fire as an example of the need for increased fire safety in the Hill Campus. *Id*, p. 3.12-4. Although an example of the need for increased fire safety, the Grizzly Fire is ironically an example of how the University's prior efforts at canopy removal increase fire risks and how thinning of an adjacent eucalyptus grove can stop a fire from further spreading. Although not mentioned in the history of eucalyptus management included in the WVFMP (see WVFMP, pp. 14-15), the area where the Grizzly Fire occurred on Frowning Ridge was treated by University by removing the tree canopy in that area. The treatment occurred in 2005 and involved the complete eradication of about 1,900 eucalyptus trees over a roughly 11 acre area. Summary, Frowning Ridge Fuel Management Project - Phase 4 (attached as Exhibit F.) Photos taken by HCN's Dan Grassetti shortly after the Grizzly Fire show that most of the burned area was in the area previously treated by the University in 2005. The attached photos show that, rather than exacerbating the fire, the fire did not spread once it hit the few tall eucalyptus trees on the north edge of the burning area and the eucalyptus grove to the east across Grizzly Peak Road. See Exhibits G, H & I. In the case of the trees across Grizzly Peak Road, when the fire entered that area, it consumed all of the understory fuels, singed the lower parts of the eucalyptus tree trunks, and then went out. Exhibit H. No large trees burst into flame. The north side of Grizzly Peak Road is a eucalyptus forest area managed by East Bay Municipal Utility District ("EBMUD"), which relies extensively on thinning of these areas and removing of ground fuels rather than eradication. Where there was no ground fuel amongst the eucalyptus trees, the fire died out. Exhibit I.

What did burn in the Grizzly Fire were the dry grasses and chaparral remaining from the University's prior removals of eucalyptus and other trees. See Exhibit G. In addition, the dried out trees left on the ground from the University's previous tree cutting in 2005 did burn. See Exhibit J. These are the ignition materials that led to the evacuations and need for assistance from multiple fire departments. Thus, the Grizzly Fire is an example of how removing large numbers of trees from forested areas exacerbates fire risk for all of the reasons identified by the USFS, FEMA staff and

Chiefs Close and Maloney. As is the case with those previous expert comments, the University and the DEIR turned a blind eye to this example of the fire risks of cut-over areas and the effectiveness of tree-shaded areas with management of ground fuels.

Response O9-19

The comment notes the fire behavior of the Grizzly Fire. The areas burned by the Grizzly Fire on UC Berkeley property were not in locations where eucalyptus trees were removed in 2005. The area photographed and presented in the comment was treated by EBMUD only weeks before the fire and, as acknowledged by the comment, did not burn with great intensity.

The proposed FHR treatments are different from both the area treated by EBMUD and previous work by the university. In the area of the Grizzly Fire, EBMUD removed small trees and shrubs under a eucalyptus canopy, keeping surface fuels to a minimum with regular maintenance. Previous treatments by the university have focused on removal of all eucalyptus. As explained in the Section 4.1.2.3, "Fire Hazard Reduction Projects," of the WVFMP, the trees to be selected for removal in FHR treatments are based on variable density thinning, which is influenced by the condition of adjacent vegetation. Canopy cover and tree density will be variable to help reduce canopy fire spread. This is consistent with the commenter's recommendation to thin eucalyptus and remove ground fuels, as was done by EBMUD.

Comment O9-20

Given the University's failure to reasonably describe the FHR Projects and the type, location and implementation of planned vegetation treatments in those areas, the DEIR does not give itself or the public anything concrete from which to consider the resulting fire risk impacts. Under the vague criteria identified by the University, complete eradication may (and indeed given the University's prior proposals, likely will) be identified as the planned treatment of the FHRs going forward. Ignoring the long-standing, expert concerns regarding fire risks of large-scale tree removal in the Oakland Hills does not reasonably disclose fire risk impacts, never mind address appropriate alternatives and mitigations. "[O]mitting or ignoring contrary information is not the way to produce an adequate informational document." *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 57. For this reason, the DEIR is entirely inadequate.

Response O9-20

As stated in the response to comment O9-17, clarifying text was added to the WVFMP and EIR regarding proposed FHR treatments. While the comment offers information regarding risks from large-scale tree removal, the bulk of scientific literature, specifically the literature cited in the WVFMP, describes the hazards posed by tall trees prone to torching. In addition, FHR treatments would not result in complete eradication of any type of trees. Instead, variable density thinning would be implemented as described in the response to comment O9-19.

UC Berkeley retained an expert wildland fire manager/fire ecologist with over 40 years of directly related experience to develop and prepare the WVFMP. As described in Chapter 1, "Executive Summary," of the WVFMP (Appendix A of Volume II of this Final EIR), the Plan was reviewed by the UC Berkeley Fire Mitigation Committee, which is an inter-department committee headed by Scott Stephens, Wildland Fire Science professor from the College of Natural Resources, with representation from the university's Facilities Services, Environment Health & Safety, and police departments as well as LBNL Protective Services. The university chose to develop the Plan in coordination with an expert wildland fire manager and fire ecologist to achieve the Plan's primary objective to reduce wildfire risks in the Plan Area. Different approaches to vegetation management are acknowledged in Master Response 1. The existence of differing expert opinions does not make an EIR inadequate, and the EIR is not required to resolve a dispute among experts. *See Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059. 1069.

Comment O9-21

IV. The DEIR Fails to Explain How Follow-Up Maintenance Work Will Maintain Any Reduced Fire Risk.

Because the University has failed to describe in any detail the extent of removal of trees within the FHR Projects, it is not possible to evaluate the reasonableness or effectiveness of the monitoring and performance criteria set forth in

the WVFMP. Although the descriptions of the FHR Projects do not indicate which specific areas of the FHRs would be subject to thinning or eradication of eucalyptus and pine trees, the performance criteria set an "overall vegetation recruitment and retention goal for native plants is 80 percent." WVFMP, p. 86. Without knowing the extent and mix of vegetation removal, one cannot evaluate the merits of this performance criterion. Likewise, the goal of limiting the return of canopy cover to 10 percent for woody vegetation where it was removed cannot be understood without knowing where such wholesale removals are proposed. *Id*., p. 86.

In addition, the monitoring and performance criteria focus almost exclusively on maintaining the removals of non-native trees and plants. There are no performance criteria for native species that also pose significant fire risks in the East Bay hills. For example, there is only a stated concern that "exotic woody plant performance standards are being met." WVFMP, p. 81. Indeed, the unprecedented fires currently occurring in many parts of California, especially in and around the Bay area, are in habitats dominated by oak woodlands. The myopic attention to maintaining removals of non-native species omits any criteria for further treatment or removal of any native plants that increase in coverage over treated areas. There is no description of monitoring dangerous fire risk conditions that are posed by native vegetation. For example, native grasses, shrubs and trees have equal or greater flame length than even eucalyptus trees. See Close Report, p. 11 (Exhibit D). According to the Hills Emergency Forum, the flame lengths of oak/bay, brushes, and grass plant communities range from 17.5 to 41.5 feet in height compared to 13.5 feet for eucalyptus and 9 feet for Monterey pine. Id. In addition, areas treated to remove eucalyptus in Claremont Canyon in the past have not been transformed into no risk fire areas. Indeed, photographic evidence gathered by HCN and others over the years shows that highly flammable materials prone to ignition have been allowed to grow adjacent to active use areas. Exhibit L. To be effective, the WVFMP must address the fire risks of native vegetation as well as non-native.

Response O9-21

The commenter states that the fire risks of natives vs. non-natives should be addressed in the WVFMP. Treatments, specifically decisions as to which trees are to be removed, are not based on whether any plant is native or non-native, but rather the fuel characteristics of the area within which it is located. The retention and removal criteria for FHR treatments (see Section 4.1.2.3, "Fire Hazard Reduction Projects" in the WVFMP, Appendix A in Volume II of this Final EIR; refer also to the response to comment O6-9, regarding the extent and nature of vegetation removal) are not stated in terms of native- or non-native vegetation.

A goal of the monitoring plan (see Section 8, "Maintenance and Monitoring," of the WVFMP) is to avoid invasive exotic species, such as French broom (a woody plant), which comprises a hazardous understory, especially near roads. In areas where a eucalyptus or pine tree is removed, regrowth and regeneration would be prevented as a means to maintain treatment effectiveness.

Fuel models used to predict fire behavior do not consider whether the fuel is native or non-native since the native vs. non-native heritage does not determine flammability. As explained in Master Response 1, eucalyptus in the Hill Campus are highly flammable, and the characteristics of this species cause it to broadcast fire to a much great degree than most species. Treatments are aimed at changing the physical attributes of the environment to reduce fire hazard, especially ember protection and distribution.

Comment O9-22

Not surprisingly, this omission is carried over into the DEIR. In addition to failing to provide modeling comparing the effectiveness of selective thinning and eradication, and combinations of those options, there also is no modeling of the subsequent vegetation that would grow subsequent to those treatment options.3 Selective thinning would have a different type of regrowth than areas where eradication of trees will occur. The DEIR assumes that post-treatment monitoring will be able to keep up with changes in vegetation that will result from tree removal. The DEIR further assumes that wherever native plants emerge, fire risks are addressed. *See* DEIR, pp. 3.12-3 – 4. However, as Chief Close has explained, "[w]ildland fuel complexes are inherently dynamic. Several critical factors will change over time that in turn will change the fire hazard, both in nature and degree of severity." Close Report, p. 15. In order to evaluate the fire risks that will result from, for example, eradicating large areas of trees, model runs looking ahead 5 to 10 years must be done to evaluate and compare the fire risk results of various intensities of tree removal. *Id*.

[3] Notably, the modeling of existing conditions conducted by the University indicates that even the treated areas, such as at Signpost 29, where large trees have been removed, remains a high fire danger area. *See* ____.

Response O9-22

The comment asserts that modeling of the vegetation that would grow subsequent to proposed treatments is needed. This is not necessary to analyze impacts under CEQA. Rather the proposed treatment methods and desired post-treatment conditions are identified in the WVFMP, which was prepared by experts, and used as the basis for the analysis in the EIR. The EIR evaluates these conditions to determine if the WVFMP would result in significant impacts.

UC Berkeley retained an expert wildland fire manager/fire ecologist with over 40 years of directly related experience to develop and prepare the WVFMP. As described in Chapter 1, "Executive Summary," of the WVFMP (Appendix A of Volume II of this Final EIR), the Plan was reviewed by the UC Berkeley Fire Mitigation Committee, which is an inter-department committee headed by Scott Stephens, Wildland Fire Science professor from the College of Natural Resources, with representation from the university's Facilities Services, Environment Health & Safety, and police departments as well as LBNL Protective Services. The university chose to develop the Plan in coordination with an expert wildland fire manager and fire ecologist to achieve the Plan's primary objective to reduce wildfire risks in the Plan Area.

As described in Section 3.12.1, "Environmental Setting," in Volume II of this Final EIR, wildfire behavior is a product of several variables, primarily weather, vegetation, topography, and human influences, which intermix to produce local and regional fire regimes that affect how, when, and where fires burn. To characterize the existing wildfire risks within the Hill Campus, wildfire behavior within the Plan Area under existing conditions was modeled, using 20 mph and 40 mph wind speed scenarios. Refer to Section 3.11, "Fire Behavior Analysis," in the WVFMP for the results of the modeling. Vegetation treatment is the primary approach to wildfire management because it can reduce the intensity and severity of wildfire, slowing fire movement and creating favorable conditions for firefighting to protect targeted, high-value resources. The Plan was prepared to address wildfire risks in the Hill Campus by treating vegetation, consistent with current practices, as further described under "Vegetation (Fire Fuel) Management," in Section 3.12, "Wildfire," in Volume II of this EIR.

As described in Section 4.1.2 "Fire Hazard Reduction Treatments" of the WVFMP (Appendix A of Volume II of this Final EIR), the criteria for tree removal under FHR treatments includes flammability/fire hazard, consideration of tree health, structure, height, potential for failure/falling, and competition with other trees (including for water, space, and light), and high fuel volume production of small diameter fuels. Criteria for retention of trees includes fuel characteristics (flammability, fuel volume, amount of dead material), consideration of ability to slow spreading of invasive species and surface fuels, protection of understory, encouragement of nesting and improvement of flight patterns of raptors, prevention of erosion, and cost of removal. Trees will be removed following a variable density thinning strategy to prevent crown fire spread by creating gaps in tree canopy. Under the FHR projects, dead, unhealthy and structurally unsound trees will be cut, as will trees prone to torching or burning with high fire intensity. Shrubs and short trees under tall trees to be retained will be removed, such that a vertical separation of 2.5 times the height of understory tree or shrub and with the overstory tree canopy will be created. FBs would be strategically located linear strips where vegetation will be treated or removed to slow the spread of a fire or reduce the likelihood of crown fire transition, and to provide a defensive position for firefighting. In selected locations, usually near intersections of roads and fire trails, all trees and shrubs will be removed in an approximately 200-foot diameter from the edge of pavement or fire trail to create an area of low-fuel volume for a firefighter and evacuee TRA. In order to provide an area where fire behavior would be survivable, the resulting fuel characteristics would consist of low volume, short fuels. Vegetation treatment for evacuation support focuses on removing highly flammable trees, understory shrubs and small trees that could enable torching, and trees that may block access/egress should they fall. The goal for evacuation support treatments is to improve public safety and reduce loss from wildfires by supporting the conversion of the existing fire-prone forest to vegetation with more favorable burning characteristics. Together, the vegetation treatments proposed by the WVFMP and evaluated in the EIR are intended to achieve the overarching objective of substantially reducing wildfire risks in the Hill Campus. Refer also to Master Response 1 regarding wildfire hazards associated with eucalyptus trees and responses to comments O2-3 and O6-10 regarding the effectiveness of the proposed WVFMP.

The comment also correctly states an assumption in the WVFMP and EIR that post-treatment monitoring would be reasonably expected to allow for identification of changes in vegetation that will result from tree removal, and subsequent maintenance needed. It does not assume post-treatment regrowth will be uniform across all treatment areas nor does it assume that wildfire risks will be addressed wherever native plants emerge. As summarized in Section 2.5.3, "Treatment Maintenance and Monitoring," in Volume II of this Final EIR, post-treatment maintenance and monitoring would be used to address regrowth in all treated areas regardless of the initial treatment type or activity, including in areas where native plants may emerge. Post-treatment monitoring would be conducted immediately following vegetation treatments and on an annual basis to determine whether maintenance strategies need to be adjusted to meet the goals of the Plan. Permanent photographic points would be established within each treatment area to track regrowth following initial treatments. Monitoring would consist of evaluating native and exotic vegetation composition, canopy cover, woody plant resprouting, wood chip placement and depth, and erosion and soil stability. A monitoring report consisting of photo points describing the status of each treatment area would be prepared annually for the first 5 years following the initial treatment, then every other year (years 7 and 9), and would conclude with a final, year 10 monitoring report, although follow-up treatments would continue to occur. It is anticipated that the WVFMP would be updated by year 10, which could alter post-treatment maintenance and monitoring methods and intervals. Annual reports for each treated area would be submitted to Facilities Services and the Physical and Environmental Planning departments by March 31 each year following implementation. The annual report would detail the monitoring activities and findings of the previous year. Through this process, UC Berkeley would evaluate the effectiveness of maintenance activities and incorporate adaptive management through use of new or different maintenance approaches, as needed, to achieve established performance standards for each treatment area and the objectives of the WVFMP.

Figure 15 in the WVFMP, included as Appendix A in Volume II of this Final EIR, includes predicted flame lengths with a 20 mph winds. Small areas of long flame lengths were identified south of Signpost 29 and are likely due to areas with trees with understory vegetation that hasn't been treated since 2005. However, in the immediate area of Signpost 29, no fire is predicted.

Comment O9-23

V. The DEIR Fails to Reasonably Address Impacts to the Threatened Alameda Whipsnake.

The DEIR's treatment of potential impacts to Alameda whipsnake again demonstrates the University attempting to avoid confronting difficult environmental issues rather than highlighting them, as intended by CEQA. Thus, although the DEIR acknowledges the presence of the threatened Alameda whipsnake, no effort at establishing a clear baseline of the snake's presence and its abundance within the Project area is attempted. In addition, the University fails to explain how it can proceed with the proposed WVFMP and the Identified Treatment Projects without first obtaining an incidental take permit to maintain the University's compliance with the federal Endangered Species Act.

Response O9-23

The comment suggests that the EIR did not establish a clear baseline of the presence and abundance of Alameda whipsnake in the Plan Area. CEQA requires disclosure of special-status species that are likely to be present in the project area and could be adversely affected by the project. Section 3.5.1, "Environmental Setting," in Volume II of this Final EIR establishes that Alameda whipsnake, a special-status species, is assumed to be present in the Plan Area and that suitable habitat for the species occurs within the Plan Area. Table 3.5-3 in Section 3.5.1 discloses that Alameda whipsnake are known to occur in the Plan Area, that the Plan Area is within the range of the species, and that individuals have been documented in several locations within and adjacent to the Plan Area. Furthermore, Table 3.5-3 identifies the areas within the Identified Treatment Projects where Alameda whipsnake has been observed according to the California Natural Diversity Database (CNDDB) (i.e., within the E-W FB and adjacent to the Claremont FHR and Frowning FHR project areas). Furthermore, Section 3.5.1 describes and maps the vegetation communities within the Plan Area (refer to Figure 3.5-1), and Table 3.5-3 discloses that Alameda whipsnake could potentially use the mosaic of scrub patches embedded within grassland and woodland communities within the Plan Area as habitat, including nonnative eucalyptus and conifer forests.

The comment also suggests that the EIR should establish the abundance of Alameda whipsnake in the Plan Area. Because Alameda whipsnake are highly mobile, secretive, and difficult to observe, live trapping surveys for Alameda whipsnake would be required to estimate the abundance of the species. This type of demographic study would require multiple surveys and identification of individuals to ensure snakes are not double counted. Furthermore, these surveys typically require incidental take authorization due to the potential adverse effects of the survey on whipsnakes, such as increased predation upon release or injury during handling. This type of research study is not recommended by the USFWS for the purpose of determining project effects on the species (USFWS 2004) nor is it required by CEQA to establish a likelihood of presence in the Plan Area upon which the impact analysis is built. Presence of the species is assumed due to both known occurrences and the presence of suitable habitat in the Plan Area, which sufficiently establishes baseline physical conditions for Alameda whipsnake under CEQA.

Finally, the comment states that the EIR does not explain how UC Berkeley will comply with the federal endangered species act. However, Section 3.5.2, "Regulatory Setting," in Volume II of this Final EIR identifies the federal endangered species act as a regulation that is applicable at the program and project level, and Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II both describes how UC Berkeley will comply with the federal endangered species act and ensures this compliance by requiring consultation with USFWS under certain circumstances. Mitigation Measure BIO-2b requires consultation with USFWS and obtaining take authorization if necessary before implementing treatment activities in areas where a qualified biologist determines that disturbance, injury, or mortality of Alameda whipsnake cannot be avoided by implementing the avoidance and minimization measures from Mitigation Measure BIO-2b. Additional measures, potentially including compensatory mitigation, may be required by USFWS through incidental take authorization, if warranted, pursuant to Mitigation Measure BIO-2b. Mitigation Measure BIO-2b (Implement Alameda Whipsnake Avoidance and Minimization Measures) states:

> If a qualified biologist determines that disturbance, injury, or mortality of Alameda whipsnake cannot be avoided through implementation of additional measures, then UC Berkeley would consult with CDFW and USFWS before treatment activities occur and implement any additional measures, including avoidance or compensatory actions, determined through consultation and/or required by incidental take authorization to mitigate impacts on Alameda whipsnake pursuant to CESA and ESA… No actions that could adversely affect Alameda whipsnake will be allowed if disturbance, injury, or mortality of Alameda whipsnake could result, unless consultation with CDFW and USFWS is completed and additional measures are implemented as required through consultation.

Therefore, implementation of Mitigation Measure BIO-2b ensures compliance with the federal (and state) endangered species acts by requiring UC Berkeley to determine where initial and maintenance treatment activities could be fully or partially implemented with avoidance and minimization measures such that federal or state take authorization for Alameda whipsnake would not be required, versus where treatment activities could only be implemented after the university completes consultation with the USFWS or CDFW in compliance with the federal and state endangered species acts.

Comment O9-24

A. The DEIR Fails to adequately disclose the environmental baseline for the Alameda whipsnake.

Although the University retained consultants to conduct baseline surveys for various species within the FHRs and other WVFMP areas, no such detailed baseline surveys were conducted for the threatened Alameda whipsnake. Thus, field survey reports have been provided for special status plants (Appendix E-1), vegetation communities (Appendix E-4), California red-legged frog (Appendix E-2), and San Francisco dusky-footed woodrat nests (Appendix E-3). However, for the Alameda whipsnake, the DEIR relies instead on general information and assessments of habitat suitability for the snakes, especially in the FHRs. This is odd given that the Alameda whipsnake poses the greatest challenge to the University's implementation of its vegetation management plans without taking or otherwise harming this federally-listed species. The only survey reports cited by the DEIR regarding the snakes is for two live-trapping surveys done on properties in Dublin and in northwestern Contra Costa County. SBI, 2000; SBI2012.

The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. *Communities for a Better Environment v. So. Coast Air Qual. Mgmnt. Dist.* (2010) 48 Cal.4th 310, 321. Section 15125(a) of the CEQA Guidelines (14 C.C.R., § 15125(a)) states in pertinent part that a lead agency's environmental review under CEQA:

> "…must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant."

See, *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125 ("*Save Our Peninsula*.") By failing to ascertain any baseline for the threatened Alameda whipsnake in the FHRs and other areas of the WVFMP, the University cannot properly disclose the impacts of the WVFMP and FHR projects and has failed to address potential impacts to the whipsnake.

Response O9-24

Refer to the response to comment O9-23, regarding the establishment of the CEQA baseline for Alameda whipsnake. As the comment states, surveys for several other species/sensitive biological resources were conducted for the CEQA baseline in order to determine the likelihood of these species to occur within the Plan Area (e.g., California red-legged frog) or to determine the location of a primarily immobile resource that could later be avoided (e.g., special-status plants). Unlike for these resources, surveys for Alameda whipsnake were not warranted. Alameda whipsnake is assumed present in the entire Plan Area and therefore surveys for individuals were not needed to determine the likelihood of the species or the location of an individual mobile whipsnake at one point in time. As explained in the response to comment O9-23, USFWS suggests that determining a project's effects on Alameda whipsnake should be based on the presence of suitable habitat and not on surveys for individual whipsnake (USFWS 2004). Instead of surveys for individuals, a detailed habitat assessment was conducted for Alameda whipsnake to establish the baseline and the impacts were assessed based on habitat suitability.

As described in Section 3.5, "Biological Resources," Swaim Biological Inc. (SBI) mapped vegetation communities in the Plan Area (refer to Figure 3.5-1 in Section 3.5.1, "Environmental Setting") and provided a detailed assessment of habitat suitability for Alameda whipsnake (refer to Figure 3.5-3 in Section 3.5.3, "Impact Analysis and Mitigation Measures") through analysis of aerial images and extensive field studies during the fall of 2019. SBI provided technical information regarding the likelihood and relative frequency of Alameda whipsnake occurrence in the different types of habitat within the Plan Area, including the Identified Treatment Projects. Alameda whipsnakes are most frequently found in and near scrub, successional grassland, and oak-bay woodland. However, whipsnakes also occur in other habitats (i.e., non-native forest or forest edge) to move between more preferred habitats, disperse, and search for mates. The impacts disclosed under Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR (refer to Table 3.5-4 and Impact BIO-2) assume that if suitable habitat occurs within or adjacent to a treatment area, the likelihood of occurrence in that area is considered elevated. If habitat is degraded/unsuitable within and adjacent to the treatment areas, the likelihood of occurrence is likely lower.

Comment O9-25

B. The Identified Treatment Projects will violate ESA by creating an imminent threat of harm to Alameda whipsnake without obtaining an incidental take permit under the Endangered Species Act.

The most glaring omission in the DEIR of impacts to the whipsnake is its failure to address likely impacts to the snake should the Identified Treatment Projects, especially the FHRs, include the complete eradication of eucalyptus and pine trees. According to the USF&WS, removal of existing canopy in the eucalyptus forests would result in the presence of Alameda whipsnakes in these areas. Biological Opinion ("BO"), p. 114. In contrast, thinned eucalyptus forest would not be suitable whipsnake habitat. *See Id*., p. 117. Thus, assuming the University's FHR Projects include eradication of eucalyptus and other non-native tree species, any post-treatment maintenance may adversely impact the whipsnake. USF&WS confirmed this in their Biological Opinion for UC's original FEMA project. "UCB follow-up vegetation treatment and maintenance activities may result in the temporary displacement of Alameda whipsnakes and disruption of feeding, sheltering, and breeding activities over a total of 263.8 acres of restored habitat for the Alameda whipsnake at Strawberry Canyon, Claremont Canyon, and Frowning Ridge for between 4 and 18 days every

year over the 10-year period (Table 16)." Biological Opinion, p. 114. In addition, "[h]igh-impact activities involving the use or staging of heavy machinery (e.g., tree and shrub removal) within suitable habitat for the Alameda whipsnake, … may crush Alameda whipsnakes or their burrows resulting in the injury or mortality of Alameda whipsnakes." *Id*., p. 100. These likely impacts are not discussed in the DEIR. Instead, the DEIR only emphasizes the potential benefits of expanding habitat for the whipsnake while completely sidestepping the adverse impacts that would result from repeated subsequent maintenance and incursions into these areas. DEIR, p. 3.5-42.

Response O9-25

First, the comment is premised on the flawed assumption that "the University's FHR Projects include eradication of eucalyptus and other non-native tree species." They do not. As explained throughout these responses to comments (see, e.g., response to comments O6-9 and O9-10), the proposed WVFMP will implement a program of variable density thinning and will not involve clear cutting or the "eradication" of any specific species. Second, Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR describes the adverse impacts from the elements of the WVFMP that may affect special-status wildlife, including Alameda whipsnake. Impact BIO-2 discloses potential adverse impacts from treatment activities (e.g., mechanical treatment, manual treatment), biomass disposition, access roads and landings, and treatment maintenance and monitoring. Potential impacts from treatment activities, including those used for maintenance, are disclosed under Impact BIO-2 and include injury or mortality of Alameda whipsnake, disturbance causing substantial disruption of essential behavior patterns (e.g., breeding, feeding, or sheltering) to such an extent that injury or mortality is likely, or substantial degradation of habitat function if treatments occur in native scrub habitat. Although the proposed WVFMP analyzed in this EIR is not the exact same project proposed in a USFWS Biological Opinion that is referenced by the comment, the project areas largely overlap and many of the adverse impacts described in the Biological Opinion are substantially similar to these disclosed under Impact BIO-2.

As the comment states, the EIR does identify potential benefits to Alameda whipsnake from vegetation treatment, especially in areas with nonnative tree stands. Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR states that indirect beneficial effects in the form of improved native habitat conditions and reduced severity of wildfire would likely result from the proposed removal of nonnative eucalyptus and Monterey pine because habitats dominated by these species would be converted to more native-dominated habitats such as oak-bay woodland, grassland, and scrub communities, which are more suitable for Alameda whipsnake. However, Impact BIO-2 goes on to state that under Impact BIO-2 that "[r]egardless of the overall long-term benefit implementation of the WVFMP would have for this species, in the short term, active treatments could result in…" significant adverse impacts (i.e., disturbance, injury, mortality, or habitat modification). These adverse impacts could occur during initial treatment or during treatment maintenance, as described under Impact BIO-2.

Comment O9-26

The DEIR also fails to explain how the University will comply with the federal Endangered Species Act ("ESA"), 16 U.S.C. § 1531, et seq. A lead agency may not approve a project with significant unavoidable impacts unless it is "otherwise permissible under applicable laws and regulations." PRC § 21002.1(c). The DEIR admits that the Project will have numerous significant unavoidable adverse environmental impacts. See DEIR, p. 5-1. Because the University has not applied for an incidental take permit under Section 10 of ESA, 16 U.S.C. § 1539, nor taken any steps to prepare the prerequisite habitat conservation plan for obtaining a permit, the University will not be in a position to approve the WVFMP and the FHR Projects because any eradication of eucalyptus forests would require an incidental take permit under ESA in order to maintain and further treat those areas under the WVFMP. This legal problem would be avoided by the University by clarifying that the FHR Projects and other Identified Treatment Projects employed only selective thinning, ground fuel controls, and maintained the tree canopy. As USF&WS emphasizes, thinned eucalyptus forests would not create suitable habitat for Alameda whipsnakes. See BO, p. 117 ("proposed thinning of eucalyptus forest is not likely to result in a significant increase in PCEs because 50 percent of the eucalyptus canopy cover would be retained in EBRPD treatment areas…"). Until and unless the DEIR clarifies and evaluates the actual tree removal proposed for the FHRs, the possibility of complete eradication requires the University to prepare an HCP and obtain an incidental take permit.

Response O9-26

The comment implies there may be significant and unavoidable impacts to endangered species. This is not correct; see, for instance, the discussion of Alameda whipsnake under "Significance after Mitigation" in Impact BIO 2 (Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications) in Section 3.5, "Biological Resources" (page 3.5-47) in Volume II of this Final EIR. As described, the impact would be reduced to a less-than-significant level after implementation of mitigation. Comment O9-26 provides no evidence to the contrary. Again, the commenter erroneously assumes "eradication" of eucalyptus forests. As explained in the response to comment O9-25, this assumption is incorrect.

Refer to the response to comment O9-23, regarding UC Berkeley's compliance with the federal endangered species act. Contrary to the comment's assertion, CEQA does not compel an agency to require an applicant to obtain an incidental take permit from another agency. *Association of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1397. Nonetheless, as described under response to comment O9-23, UC Berkeley will comply with the federal and state endangered species acts as specified in Mitigation Measure BIO-2a. If conditions warrant removal of nonnative trees such that suitable habitat is created, maintenance treatment activities would also be subject to Mitigation Measure BIO-2a (Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR). Mitigation Measure BIO-2 will apply during both initial treatment and subsequent maintenance activities, ensuring that potential impacts to Alameda whipsnake will be avoided and minimized and further ensuring that, if necessary, incidental take authorization will be obtained prior to conducting the specific treatment or maintenance activities. The WVFMP EIR can be approved without securing incidental take authorization as long as take authorization is obtained before implementing activities that require it.

Mitigation Measure BIO-2a (Impact BIO-2) and Mitigation Measures BIO-2b (Impact BIO-2) have been revised to clarify that these measures apply to initial treatment activities and treatment maintenance under the WVFMP. Mitigation Measure BIO-1a explicitly states that a reconnaissance survey and habitat suitability assessment will be conducted prior to initial treatment and treatment maintenance.

Removal of eucalyptus and pine that facilitates the restoration of native vegetation would improve habitat for Alameda whipsnake in the long term, as explained in the response to comment O9-25. Refer to the response to comment O9-4, regarding proposed tree removal in the FHR treatment areas.

Comment O9-27

VI. The DEIR's Identification and Discussion of Alternatives is Unreasonable and Contrary to CEQA.

One of CEQA's fundamental requirements is that the DEIR must identify the "environmentally superior alternative." 14 Cal.Code Regs. §15126.6(e)(2); Kostka & Zischke, *Practice Under the California Environmental Quality Act* §15.37 (Cont. Educ. Of the Bar, 2008). As a result, the University may not design the alternatives considered by the DEIR to include elements that would make alternatives easy to reject. "The purpose of an EIR is not to identify alleged alternatives that meet few if any of the project's objectives so that these alleged alternatives may be readily eliminated." *Watsonville Pilots Assn. v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1089 (emphasis supplied). "Since the purpose of an alternatives analysis is to allow the decision maker to determine whether there is an environmentally superior alternative that will meet most of the project's objectives, the key to the selection of the range of alternatives is to identify alternatives that meet most of the project's objectives but have a reduced level of environmental impacts." *Id*. In Watsonville Pilots, the Court of Appeal made clear that it was incumbent under CEQA for the City:

> to include within its alternatives analysis a reduced development alternative that would have satisfied the 10 objectives of the project that did not require the level of development contemplated by the project. Analysis of such an alternative would have provided the decision makers with information about how most of the project's objectives could be satisfied without the level of environmental impacts that would flow from the project.

Id.

Response O9-27

The comment cites relevant sections of the State CEQA Guidelines and case law. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment; although, the relevance of the information to responses to subsequent comments in this letter is noted. Refer to responses to comment O6-7 and O9-30 regarding the alternatives analysis provided in the EIR, and the determination of Alternative B as the environmentally superior alternative.

Comment O9-28

The DEIR identifies three alternatives to the proposed WVFMP Project, including a no project alternative. There are no alternatives specifically provided to evaluate the FHR Projects.

Response O9-28

The comment states the number of alternatives that are evaluated in the EIR, and that there are no alternatives included that evaluate the FHR projects specifically. As described in Section 6.1 "CEQA Requirements for Alternatives" in Volume II of this Final EIR, the State CEQA Guidelines Section 15126.6(a) requires EIRs to describe "… a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation." An EIR is not required to consider alternatives to a component of a project and should instead focus on the project as a whole, as this EIR does. *California Native Plant Soc'y v. City of Santa Cruz* (2009) 177 Cal.App.4th 975, 994. The alternatives evaluated in the EIR were developed specifically to meet the requirements prescribed by CEQA, as further detailed below.

As summarized in Section 6.1.1, "Summary of Alternatives Screening Criteria," in Volume II of this Final EIR, the WVFMP would result in the following significant and unavoidable impacts:

- Aesthetics and Visual Resources (one significant and unavoidable impact related to long-term landscape alteration by all treatment types that would be implemented under the overall WVFMP and from implementation of the Identified Treatment Projects)
- Air Quality (two significant and unavoidable impacts related to: 1) potential toxic air contaminants from increased prescribed burning under the overall WVFMP and 2) objectionable odors from increased prescribed burning under the WVFMP)
- Noise and Vibration (one significant and unavoidable impact related to temporary exceedances of local noise standards during manual, mechanical, and prescribed burning treatment activities that would occur under the overall WVFMP and during implementation of the Identified Treatment Projects)

As shown above and in Table ES-1, there are no significant and unavoidable impacts that would occur as a result of implementation of the Identified Treatments that wouldn't also occur under the proposed WVFMP. Therefore, there are no alternatives evaluated specific to the FHR projects (or any of the Identified Treatment Projects) because alternatives specific to any of the proposed Identified Treatment Projects would not reduce any of the significant environmental effects of the WVFMP. In addition, because of the strategic nature of siting the Identified Treatment Projects, it is not feasible to relocate the Identified Treatment Projects and also achieve the wildfire risk reduction objectives.

Comment O9-29

Alternative A, entitled the "McBride Plan Alternative," includes the treatment of 400-500 acres of Strawberry and Claremont Canyons and conversion of those areas to native vegetation, various areas of non-shaded fuel breaks, no chipping of trees, and miscellaneous infrastructure improvements. DEIR, p. 6-12. Because it is unclear what the University is proposing for specific treatments to be conducted in the FHRs, it is not possible to determine whether Alternative A differs from the Project. The University does claim, again without specificity, that:

> UC Berkeley currently removes exotic trees and vegetation, including eucalyptus, Monterey pine, and French broom seedlings, which is similar to the eucalyptus and conifer conversion under Alternative A, although the locations and areal extent of specific treatments may differ.

DEIR, p. 6-13. Assuming that is an accurate statement, Alternative A does not appear to encompass an alternative distinctive from the proposed Project.

Response O9-29

As described under "Alternative Description," in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this EIR, there are several key differences between the McBride Plan and the WVFMP. Under the McBride Plan, no broadcast prescribed burning would be conducted, no TRAs would be developed, a 300-foot-wide FB would be created on the ridgeline between Strawberry and Claremont Canyons (as opposed to a 126-foot-wide non-shaded FB that would extend from Frowning Ridge down to Claremont Canyon under the proposed WVFMP), water tanks would be installed on Grizzly Peak Boulevard, fire roads would be widened, no chipping of biomass or reuse onsite would occur, and an Alameda whipsnake preserve would be created. Please refer to Figure 2-2 in Chapter 2, "Project Description," in Volume II of this Final EIR and Map 3 through Map 8 in Appendix I, "Alternative A: The McBride Plan Alternative," of the DEIR for the specific locations of the differing treatments proposed under the WVFMP and Alternative A: the McBride Alternative, respectively.

Comment O9-30

Alternative B, entitled the "Reduced Treatment Alternative," would utilize only shaded fuel breaks within 100 to 200 feet from roadways and structures and would be limited to manual treatments, and would not use any herbicides. DEIR, p. 6-20. The DEIR claims that Alternative B is the same as the alternative outlined by HCN in its scoping comments. Id. Alternative B does capture some of the key elements of HCN's proposed alternative. These include maintaining the forest canopy, relying on selective thinning within 200 feet of roadways and structures, and removing of ladder fuels and ground fuels in these zones. See HCN Scoping Comment (Dec. 20, 2019). However, nothing in HCN's alternative saddles its alternative with a restriction limiting the work to manual treatments without the aid of mechanical treatment. *Id*.

Alternative B does provide a true alternative to the proposed Project because it provides clarity that selective thinning will be used for the portions of the FHRs within 100 to 200 feet of roadways and structures. This Alternative would preclude the wholesale eradication of large trees and removal of the existing tree canopy. There would be no treatment more than 200 feet away from roads and structures within the FHRs. The alternative also would implement shaded, rather than non-shaded, fuel breaks and temporary refuge areas.

The University acknowledges that "Alternative B would implement evacuation route treatments, shaded fuel breaks, and fire hazard reduction treatments by thinning vegetation and removing ground and ladder fuels throughout the Hill Campus to reduce the risk of wildfire." DEIR, p. 6-20. The DEIR also acknowledges that "[b]ecause Alternative B would treat the same area as the WVFMP using similar but substantially fewer vegetation treatment types and activities, this alternative is potentially feasible." *Id*., p. 6-21.

However, the additional constraint of only using manual treatment added to HCN's proposal by the University is used to justify reasoning that Alternative B's effectiveness and feasibility are questionable as well as its relative impacts. Thus, by hobbling Alternative B with manual treatment, the University claims it will take substantially longer to implement than the Project, prolonging the areas exposure to fire risk. DEIR, p. 6-20. Rather than allowing mechanical and manual treatment for this alternative, the University has unreasonably set up Alternative B to be easily rejected, contrary to the reasonableness standard and University's duty to craft alternatives that attempt to minimize environmental impacts. *Watsonville Pilots Assn.*, 183 Cal.App.4th at 1089.

The EIR further claims that Alternative B suffers from a lack of specificity compared to the Project. As discussed above, there is no specificity whatsoever in the DEIR or WVFMP describing what types of treatment will occur in what areas of the Plan. Essentially any treatment type could happen anywhere under the Project. To the contrary, Alternative B specifies a selective thinning treatment. This rationale asserted by the University is not supported by the rest of the DEIR or any substantial evidence.

Most blatantly, by limiting Alternative B to manual treatment only, the University then relies on that restriction to conclude that Alternative B "would not attain objectives that call for a variety of vegetation treatment activities that could be selected based on effectiveness and other factors because it only includes manual treatment…" DEIR, p. 6-21. This is a blatant poison pill which entirely undermines the point of an alternatives analysis. Alternative B and the use of selective thinning to achieve the Project's fire risk reductions does not preclude the use of any of the various vegetation treatment activities described in the DEIR. Both manual and mechanical treatments should be used. Managed herbivory and controlled burns would not be precluded as tools to achieve selective thinning and shaded fuel breaks. Only the University's decision to arbitrarily include a prohibition on using certain treatments provides it the pretense to reject Alternative B.

Response O9-30

As described in Section 6.1, "CEQA Requirements for Alternatives," in Volume II of this Final EIR, The State CEQA Guidelines Section 15126.6(a) requires EIRs to describe "… a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

As described under "Alternative Description" in Section 6.3.3, "Alternative B: Reduced Treatment Alternative," in Volume II of this Final EIR and acknowledged by the commenter, Alternative B is based on a NOP comment letter that was received from the Hills Conservation Network (HCN) that proposes an alternative to the WVFMP. The alternative proposed by HCN in its NOP comment letter proposes selective thinning as an alternative to the WVFMP's proposed variable density thinning. The alternative was not presented as a "stand-alone" alternative in the Draft EIR because it clearly would not avoid or substantially lessen any of the significant effects of the proposed WVFMP.

The *Watsonville Pilots Assn.* case cited by the commenter demonstrates exactly why Alternative B was framed as it was in the EIR. In that case, the EIR was flawed because it analyzed only alternatives that proposed the same level of development as the City's proposed project and relied solely on the "no project" alternative to show that the City had considered a reduced development alternative. *Watsonville Pilots Assn.*, 183 Cal.App.4th at 1089. Here, to present an alternative that considers issues raised by the public and interested organizations while also lessening significant environmental effects as required by State CEQA Guidelines Section 15126.6(d), Alternative B was further developed to prohibit herbicide use, and exclude the implementation of mechanical treatments and prescribed burning, which result in significant and unavoidable impacts under the proposed WVFMP. Nonetheless, as requested by the commenter, the HCN Alternative has been added to Section 6.2, "Alternatives Considered and Eliminated from Detailed Analysis," in Volume II of this Final EIR. As described therein, the alternative would not avoid or substantially lessen any of the significant effects of the proposed WVFMP; therefore, it has been considered and eliminated from detailed analysis using the criteria specified in State CEQA Guidelines Section 15126.6(a).

As described in Section 6.4, "Environmentally Superior Alternative," in Volume II of this EIR, Alternative B was determined to be the environmentally superior alternative because the use of only manual treatment activities to implement vegetation treatments would reduce impacts to almost every environmental resource area and avoid

significant and unavoidable impacts to air quality from prescribed burning. Significant impacts related to noise during treatments would be less under Alternative B relative to the other alternatives because no mechanical treatment activities or prescribed burning would occur. In addition, significant long-term aesthetic impacts would also be less under Alternative B relative to the other alternatives because treatments would take substantially longer to implement, and regrowth would occur more rapidly without herbicide use to eliminate undesirable vegetation. Although Alternative B would be potentially feasible and would attain many of the objectives of the proposed WVFMP, it was found to be less effective relative to the proposed WVFMP at reducing wildfire risk for several reasons, which are described in Section 6.4, "Environmentally Superior Alternative," in Volume II of this EIR.

Regarding the comment's statements about lack of specificity, refer to responses to comments O6-9 and O7-6. The EIR provides a level of specificity that corresponds to the specificity involved in the underlying activity, consistent with State CEQA Guidelines Section 15146, and provides objective criteria that will guide the specific fuel treatments.

Comment O9-31

The University asserts that, although Alternative B "would reduce the risk of wildfire in the long-term, it would not be as effective as the WVFMP at reducing wildfire risks" and attain the primary objective of the Project. DEIR, p. 6-21. The DEIR then asserts it would not achieve the objectives "to the same degree as the WVFMP" because of its reliance only on manual treatments. "[B]ecause Alternative B would be implemented entirely using manual treatment activities, which would take more time to achieve wildfire risk reduction relative to the WVFMP, it would not increase the pace of implementation. This alternative would not be consistent with this objective to the same degree as the WVFMP." *Id*. Again, only because of that arbitrary restriction – manual treatment – would treatments under Alternative B take longer and require larger crews. *Id*. Nor is there evidence to support even that assertion. The areas to be treated would be reduced under Alternative B. The University provides no analysis showing how the numbers of crews would increase under that proposal. Nor is it logical that preventing regrowth of less removed vegetation would be more difficult than preventing regrowth of greater areas of vegetation.

Response O9-31

See the response to comment O9-30, regarding the development of Alternative B, including the rationale for prohibiting herbicide use and excluding the implementation of mechanical treatments. As described in Section 6.3.3 "Alternative B: Reduced Treatment Alternative" in Volume II of this Final EIR, treatments under Alternative B would be expected to occur throughout the same Plan Area shown on Figure 2-1 in Chapter 2, "Project Description," which would result in the treatment of approximately 200 acres per year. Typical crew sizes proposed for each treatment activity are shown in Table 2-1 in Chapter 2 "Project Description" in Volume II of this Final EIR. As shown, crew sizes would be the largest when implementing manual treatments and prescribed broadcast burning and would consist of 6 to 15 personnel. Given that only manual treatments would occur under Alternative B, it is reasonable to assume that on average, larger crews would be required to implement treatments under Alternative B related to the proposed WVFMP. In addition, although treatments would take more time without the use of mechanical equipment, herbicides, and prescribed burning, it is assumed that the same quantity of vegetation would be treated each year (i.e., up to 200 acres). Treatments would be more difficult to maintain without the use of herbicides and managed herbivory because of rapid regrowth of vegetative fuels in treated areas and substantially more follow-up hand labor that would be required relative to the WVFMP.

Comment O9-32

While on the one hand adding the "manual treatment only" element to Alternative B in order to manufacture a rationale for the University to try to justify its rejection, the University also omits a few other components from its version of Alternative B – not because HCN said they should not be included or would not make sense to include – but simply to be able to say Alternative B is incomplete and thus, subject to rejection. For example, the University chooses not to include an adaptive management component for Alternative B. Why not? HCN's alternative did not say the University should not apply adaptive management to implement or maintain treated areas. Indeed, logically, the same process would apply as is proposed by the Project. Indeed, under Alternative B, the process of monitoring and need for adjustments over time would be the same as the Project (though fewer problems would likely arise).

Response O9-32

See the response to comment O9-30 regarding the development of Alternative B. As described in the response to comment O9-30, the alternative proposed by HCN in its NOP comment letter would not avoid or substantially lessen any of the significant effects of the proposed WVFMP; therefore, if presented as a stand-alone alternative, it would have been considered and eliminated from detailed analysis using the criteria specified in State CEQA Guidelines Section 15126.6(a). To present an alternative that considers issues raised by the public and interested organizations that also lessens significant environmental effects, Alternative B was further developed to prohibit herbicide use, and exclude the implementation of mechanical treatments and prescribed burning, which result in significant and unavoidable impacts under the proposed WVFMP. Because the NOP comment letter did not propose adaptive management (or specific treatment activities), and the inclusion of adaptive management would not lessen or reduce any of the identified significant environmental effects of the proposed Plan, it was not included in Alternative B. As further detailed above in the response to comment O9-30, the alternative submitted by HCN in an NOP comment letter was the basis for the development of Alternative B; however, it was further developed to avoid or lessen significant environment impacts so that it could be brought forward for detailed analysis in the EIR. CEQA does not require an EIR to consider "each and every conceivable variation of the alternatives stated." *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 491.

Comment O9-33

Likewise, the University adds a prohibition of managed herbivory to Alternative B, a constraint not proposed by HCN's original alternative. The University then claims, along with its manual treatment constraint and the proposal not to use pesticides in this alternative, that Alternative B "would require frequent follow-up treatments to maintain treated areas and prevent regrowth of removed vegetation…." DEIR, p. 6-21. Alternative B should include managed herbivory, especially to maintain treated areas. By adding this constraint, the University only seeks to tip the scales towards a blanket "no" of anything but its proposal, rather than a reasonable effort to explore reasonable alternatives that would feasibly achieve its objectives with less impacts on the environment.

Response O9-33

See the responses to comments O9-30 through O9-32 regarding the development of Alternative B. As described in the response to comment O9-30, Alternative B was developed based on a comment received on the NOP from the HCN and was further developed to avoid or lessen the significant effects of the proposed WVFMP. Because the NOP comment letter did not propose the use of prescribed herbivory, and the inclusion of prescribed herbivory would not lessen or reduce any of the identified significant environmental effects of the proposed Plan, it was not included as a treatment type for use under Alternative B.

Comment O9-34

Lastly, the University cites to Alternative B's proposal that no pesticides be used to claim that would be less feasible. In terms of a reasonable alternative, it seems rather obvious that, to the extent the University has evidence to support this claim, the University should be evaluating Alternative B with an adjustment to allow pesticide use. HCN does not believe the University has provided evidence to show that herbicide use is necessary to prevent eucalyptus regrowth or that non-pesticide measures are infeasible. For example, the University's immediate neighbor above Grizzly Peak Road – EBMUD – has been managing the eucalyptus forest using selective thinning and without pesticide applications. EBMUD, East Bay Watershed Master Plan, p. 52 ("Prior to any harvest activities, ensure that adequate stump-sprouting control methods are available to reduce fire hazards and protect water quality. ***Herbicides will not be used to control stump resprouts***") (emphasis added) (https://www.ebmud.com/recreation/east-bay/east-bay-watershed-master-plan-update/) (Exhibit K (excerpt)). As the Grizzly Fire exemplifies, EBMUD's efforts have proven very effective not only to control but, in that case, stop a fire which began on the University's lands where 1,900 trees were removed.

Response O9-34

The commenter's opposition to herbicide use and information provided regarding EBMUD's East Bay Watershed Master Plan is acknowledged and will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. As described under "Feasibility" in Section 6.3.3, "Alternative B: Reduced Treatment

Alternative," in Volume II of this Final EIR, Alternative B was found to be feasible, even though only manual treatment activities would be used and no herbicide application would occur. Refer also to the response to comment O9-30, regarding the development of Alternative B in response to comments received on the NOP and the reasons for its identification as the environmentally superior alternative.

As described in Section 2.5.2, "Description of Vegetation Treatment Activities," in Volume II of this Final EIR, the vegetation treatment activities proposed to implement treatments in the Plan Area includes the targeted ground application of herbicides, as well as manual treatment, mechanical treatment, prescribed broadcast burning, and managed herbivory (livestock grazing). Herbicide use involves only ground-level application, and UC Berkeley does not use aerial applications of herbicides. The vegetation treatment types would be implemented using various combinations of the treatment activities. The treatment activity or activities selected 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. During the planning phase for a vegetation treatment, the appropriate treatment activity or activities would be selected that best match the operational needs and treatment constraints on the landscape.

As explained under "Fire Hazard Reduction treatments" in Section 2.5.1, "Description of Vegetation Treatment Types": "Fire hazard reduction treatments would…be primarily implemented in areas where eucalyptus trees were previously removed but regrowth occurred because of ineffective follow-up treatments." The history of eucalyptus management in the Plan Area is described in Section 2.4.3 of the WVFMP (Appendix A of this Final EIR) and summarized under "Past Vegetation Treatments" in Section 3.12, "Wildfire." As explained in the response to comment O7-4, a treatment, or the maintenance of an initial treatment, is considered ineffective if the removed species quickly re-establishes in the treated area. The WVFMP is informed by decades of vegetation management experience in the Hill Campus. Applying the lessons learned from past treatments, the proposed WVFMP identifies treatments of known effectiveness with a commitment of follow-up maintenance and monitoring to ensure regrowth is prevented. In the experience of the university, as evidenced by eucalyptus growth patterns in the Plan Area, herbicide use is necessary to effectively prevent eucalyptus regrowth. Refer also to Master Response 3 regarding herbicide use proposed under the WVFMP, the results of the Herbicide Risk Assessment that was prepared for the WVFMP that concluded that none of the herbicides proposed for use were found to pose significant risks to applicators or the public based on application techniques and safety precautions included in the WVFMP, and the comprehensive suite of measures that would be implemented to avoid and minimize adverse effects to surface and groundwater quality, soils, human health, and wildlife.

EBMUD's vegetation treatment strategy is effective when applied to a small treatment area. However, the labor required to cut stumps and maintain treated areas would be infeasible for larger treatment areas, such as the Hill Campus. In addition, funding for fire mitigation often fluctuates; this could endanger the success of a strategy requiring substantial manual treatment, because without the necessary labor, regrowth could outpace treatment and result in a wildfire hazard.

Comment O9-35

Nor does the University discuss or provide any evidence showing the relative costs of its proposed Project with Alternative B. Removing large trees is very expensive. Close Report, p. 19 (Exhibit D). Ample evidence is available showing that a selective thinning alternative would be much less costly than completely removing all or almost all trees in the FHRs. As Chief Close has pointed out, the cost of EBRPD's vegetation management focused on selective thinning is less than half the per acre cost of completely removing all trees in the Strawberry and Claremont FHR areas. Exhibit D. The DEIR should assess the relative costs in order to reasonably compare the feasibility of its proposed Project and Alternative B.

Response O9-35

As described in Section 6.1.1, "Summary of Alternatives Screening Criteria," in Volume II of this Final EIR, the potential economic feasibility of each alternative was evaluated in determining whether to evaluate it in the EIR, as required by State CEQA Guidelines Section 15126.6. Refer to Master Response 2 for more information on economic considerations. The proposed Strawberry and Claremont FHR projects would not entail removing all or almost all

trees in the treatment areas, contrary to what is stated in this comment. Refer to the response to comment O6-9, regarding the criteria for removal and retention of trees in the FHR treatment areas.

Comment O9-36

The lead agency is required to select the environmentally preferable alternative unless it is infeasible. Including the arbitrary limitations placed on Alternative B, the DEIR concludes that "Alternative B would be the environmentally superior alternative…." DEIR, p. 6-24. The DEIR focuses on the absence of mechanical treatment and prescribed burning as the basis for the reduced impacts. Id. However, the same conclusion would result even with mechanical treatment in Alternative B. Because Alternative B would remove less vegetation and fewer trees from fewer areas within the FHAs, it would still have substantially less impacts from mechanical treatment compared to the proposed FHA Projects. Likewise, for the FHAs, because no prescribed burning is called for in the proposed FHA projects, its absence in Alternative B would not make Alternative B more impactful. Most importantly, by limiting the area of intense tree removal, Alternative B will have substantially fewer impacts on Alameda whipsnakes and other wildlife than the proposed FHR projects. DEIR, p. 6-25 (Table 6-2). And, as discussed above, there is no evidence that a selective thinning alternative would be less effective than whatever range of tree removal (from selective thinning to complete eradication) the University may be proposing for the FHR Projects. Instead, the evidence shows that maintaining shaded fuel breaks and management of ground fuels would create less fire risks than the potential complete eradication that the University is contemplating. Likewise, there is no evidence that the GHG impacts of Alternative B would be greater than the proposed Project. Again, fewer treated areas results in fewer emissions. Likewise, Alternative B's lower risk of fire amounts to lower GHG emissions in the future. Thus, because Alternative B is feasible and is the environmentally superior alternative, the University is required by CEQA to select that alternative as the approved FHR Project.

Response O9-36

As described under "Alternative Description" in Section 6.3.3, "Alternative B: Reduced Treatment Alternative," in Volume II of this Final EIR, Alternative B includes the implementation of evacuation support treatments, shaded FBs, and FHR treatments through manual treatment activities. The key differences between Alternative B and the WVFMP, which are considered in the environmental analysis of Alternative B, are:

- There would be no non-shaded FBs or TRAs created.
- No mechanical treatments, herbicide application, managed herbivory or prescribed burning would be conducted.
- All biomass would be hauled offsite for disposal.

Treatments under Alternative B would be expected to occur throughout the same Plan Area shown on Figure 2-1 in Chapter 2, "Project Description." Although Alternative B would include fewer GHG emissions-generating activities than the WVFMP from the use of only hand-operated power tools during manual treatments (as opposed to prescribed burning and mechanical equipment use under the proposed WVFMP, which are more emissions-intensive), haul trips to dispose of all biomass offsite would substantially increase under Alternative B. While the analysis recognizes that treatment activities under Alternative B would reduce wildfire risk in the Hill Campus, which would be expected to reduce future GHG emissions from wildfires and increase carbon sequestration in the long term, because of the extended duration of time required to achieve substantial wildfire risk reduction as a result of using only manual treatment methods and likely rapid regrowth of vegetative fuels, it would not reduce vegetation and associated wildfire risk to the same extent as the WVFMP. As shown in Table 6-2, "Summary of Environmental Effects of the Alternatives Relative to the WVFMP," in Volume II of this Final EIR, Alternative B was found to result in less environmental impacts to almost every environmental resource topic, with the exception of GHG emissions and climate change and wildfire. Refer to "Environmental Analysis of Alternative B" in Section 6.3.3, "Alternative B: Reduced Treatment Alternative," in Volume II of this Final EIR for the analysis of environmental effects of Alternative B relative to the proposed WVFMP.

Public Resources Code Section 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]" Public Resources Code section 21061.1 defines "feasible" to mean "capable

of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors." (See also *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 565.). The decision on whether an alternative is feasible is ultimately left to the decision maker. While an alternative may be potentially feasible in an EIR, the decision maker may come to a different conclusion on feasibility based on the ability to attain project objectives, environmental factors, or other relevant information in the record. With respect to a project for which significant impacts are not avoided or substantially lessened, a public agency, after adopting proper findings, may nevertheless approve the project if the agency first adopts a Statement of Overriding Considerations setting forth the specific reasons why the agency found that the project's "benefits" rendered "acceptable" its "unavoidable adverse environmental effects." (CEQA Guidelines, Sections 15093, 15043, subd. (b); see also Pub. Resources Code, Section 21081, subd. (b).) If the UC Regents choose to move forward with the proposed WVFMP, it will adopt CEQA findings pursuant to Section 15091 of the State CEQA Guidelines, and a statement of overriding considerations for any significant and unavoidable environmental impacts, pursuant to Section 15093 of the State CEQA Guidelines. (See CEQA Guidelines section 15096(h).).

Refer also to the response to comment O9-30, regarding the development of Alternative B as evaluated in the EIR and responses to comments O2-3 and O6-10 regarding the effectiveness of the proposed WVMFP.

Comment O9-37
CONCLUSION

Thank you for this opportunity to comment on the draft EIR and proposed Project. We look forward to reviewing the University's responses to these comments and having an opportunity to review a recirculated DEIR incorporating substantial changes to its discussion and analysis and the proposed Project which address the significant shortcomings identified above.

Response O9-37
The comment references comments provided elsewhere in the comment letter. Responses to the specific issues raised in this letter are included in the responses to comments O9-1 through O9-36.

Any text changes to the WVFMP and EIR resulting from consideration of HCN's comments does not constitute significant new information requiring recirculation of a draft EIR, as defined by State CEQA Guidelines Section 15088.5. Pursuant to State CEQA Guidelines Section 15088.5(a), "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." State CEQA Guidelines Section 15088.5(b) states that "Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR." The clarifying text does not substantially modify any of the analysis or change any conclusions in the EIR. Therefore, recirculation is not warranted.

Letter O10 East Bay Pesticide Alert

Maxina Ventura, Chronic Effects Researcher
October 5, 2020

Comment O10-1
To Whom It May Concern,

In submitting comments earlier, we realized we mis-dated the submission of the comments (had written 10/6/20 rather than 10/5/20). In rereading just after submitting at 4:59 with a list of attachments, we realized an attachment which had been part of the group of attachments we did not list in the list of attachments. We also realized that another was 'zipped' so since we were going to re-submit this evening with the correct date, we took the time to add submission dates to the document names of those attachments and slightly changed the names to have the document names better match what's in the documents, and made a corrected list of attachments, which is below. Not attachments have been added, though the last one is renamed.

NO CONTENT IN THE DOCUMENTS HAS BEEN CHANGED OTHER THAN THE FOLLOWING CORRECT LIST OF ATTACHMENTS WHICH SHOWS UP IN THE DOCUMENT OF THE HILL CAMPUS dEIR COMMENTS FROM EAST BAY PESTICIDE ALERT, and the corrected submission date of that document which also is pasted into this email:

Response O10-1
The comment summarizes minor errors associated with the submittal of a previous comment letter and notes that nothing substantial has changed between this submittal and their previous submittal. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. Each attachment provided by the commenter was reviewed and considered in the following responses (O10-3 through O10-8).

Comment O10-2
EAST BAY PESTICIDE ALERT'S FORMAL COMMENTS IN RESPONSE TO THE UC HILL CAMPUS dEIR, SUBMITTED BY MAXINA VENTURA, CHRONIC EFFECTS RESEARCHER FOR EBPA, 10/5/2020

To Whom It May Concern:

I have attached the following documents, most but not all of which have been submitted formally over time. This dEIR document includes summaries of former comments, but we ask that the final EIR retain our full comments and citations for the purpose of the public and attorneys having direct access to these writings and links to other resources offered, all in context.

Response O10-2
The comment notes that additional documents are attached and would like their full comments and citations retained. These will be included in the project's administrative record. Each attachment provided by the commenter was reviewed and considered in the following responses (O10-3 through O10-8).

Comment O10-3
We have some basic demands:

1) Stop referring to deforestation or pesticiding as wildfire safety. All these comments and documents clarify that this is disingenuous and misleading

Response O10-3
The WVFMP does not propose large-scale removal of forest vegetation or conversion of forests to nonforest vegetation types but rather variable density thinning to reduce dead and dying vegetation, reduce ladder fuels, and promote resiliency of vegetation communities in the Plan Area. Treatments would not remove all vegetation. For these reasons, deforestation would not occur under the WVFMP. As described in Section 3.8, "Hazards and Hazardous Materials," in Volume II of this Final EIR, herbicides are a type of pesticide that are used to selectively control specific types of vegetation or to non-selectively remove vegetation in a particular area; control and removal of hazardous vegetation is necessary to reduce wildfire risk.

Comment O10-4
2) Use no herbicides but utilize controlled burns or mechanical methods of removal if you insist it's needed in some areas in consideration of so many people moving into the hills, creating danger with a gasoline grid covering the hills, gas appliances, and gas tanks

Response O10-4
The commenter's expression of opposition to the use of herbicides will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted.

Comment O10-5
3) Replant Eucalyptus and other tall trees, including Firs, which do well in this area and under present circumstances to keep the hills moist

Response O10-5
The commenter's request to replant eucalyptus and other tall trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Eucalyptus planting as an alternative to the WVFMP is addressed in Section 6.2.2, "No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives," in Volume II of this Final EIR.

Comment O10-6
4) Realize that Joe McBride and Claremont Conservancy's and Sierra Club's demands for deforestation are not based in Biology, nor are they consistent with Joe McBride's excellent, very specific research and writings of the past, much of that specific to Eucalyptus plantations. In fact, to do this would consign our neighbors over the hills to massive wildfires due to the Golden Gate winds whipping up minor fires into conflagrations because of all the dry grasses and through manufactured wind tunnels which so far Eucalyptus and other tall trees have helped obstruct, one of the historical reasons Eucalyptus has been planted all over California, since the mid-19th century

Response O10-6
The commenter's expression of opposition to suggestions provided by Joe McBride, the Claremont Conservancy, and the Sierra Club will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer also to MR-1 regarding eucalyptus tree removal and wildfire risk reduction. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted.

Comment O10-7
5) Look closely at the links provided for photos and videos of 2020 California fires, and account for the reality of trees not being the cause of fires. UC's own David Ackerly had to admit that about the '91 fire when at a public lecture people were yelling that Eucalyptus trees were the cause of the '91 hills fire

Response O10-7
The links and photos provided by the commenter were reviewed during preparation of this Final EIR. Refer to MR-1 regarding fire hazard posed by eucalyptus.

Comment O10-8
Attachments to UC dEIR comments from East Bay Pesticide Alert submitted 10/5/20: Article published in Berkeley Daily Planet: There's No Quick Fix! (3/15/2005) EBPA NOP Vegetation Management comments (12/20/19)

EBPA softball LRDP EIR Addendum comments(1/17/20)

EBPA UC Regents, Herbicide use comments (1/23/20)

Max Ventura's NOP LRDP comments (4/2020)

People's Park Committee's NOP LRDP group & indiv.(4/27/20)

EBPA's NOP LRDP comments (5/15/20)

EBPA's Mt. Sutro dEIR comments (9/11/20)

EBPA's dEIR East Bay Hills Veg. Mgmt. comments (9/12/20)

UC IPM policy page from the Herbicide Task Force document (late 2019 or early 2020) People's Park aerial photo 4/2018 East forest intact

People's Park aerial photo 4/2019 showing destruction after 42 trees demolished by UC the past winter

Wildfire photos, video Aug/Sept/Oct 2020

EBPA's UC Hill Campus dEIR comments 10/5/20

LRDP response, People's Park 2020

*** LRDP = Long Range Development Plan

*** NOP - Notice of Preparation

*** UC = University of California

*** Mt. Sutro UCSF land

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We're sorry for the resubmission technically late but, in fact, I have neurological effects due to pesticide poisoning and what is simple for others, such as doing something like attaching documents, ends up taking me hours where it could take someone else without this neurological impact possibly mere minutes. I do this work not receiving any money, but because I want to keep others from the kind of damage most East Bay Pesticide Alert members have suffered from Multiple Chemical Sensitivity caused by pesticides and other petrochemicals so I would ask for what has been the kind of accommodation my kids and I have had in education institutions due to these issues, which is some leeway with deadlines.

Additionally, by including this later submission, for those reviewing the dEIR comments, they are likely to be more useful with the dates and the slightly altered document titles I'm sending now. Thank you for your consideration of disability accommodation.

Response O10-8

The comment includes a list of attachments included with the comment letter and provides personal background information related to the commenter. Each of the documents and links provided in the comment letter were reviewed during preparation of this Final EIR. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, but the comment will be provided in the record for consideration by UC Regents in its decision-making process.

2.2.4 Individuals

Letter I1 Bronwyn Ayla, LAc.

August 14, 2020

Comment I1-1

I strongly oppose the use of herbicides for fire prevention. Many of us are beekeepers on Panoramic Hill and these herbicides pose a direct threat to bees, humans, and other wildlife. While fire prevention is essential, poisoning our environment with herbicides is not.

Response I1-1

The commenter expresses opposition for the use of herbicides as a part of the proposed WVFMP. Master Response 3 addresses the effects of the use of herbicides with respect to human health and wildlife.

Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR presents the significance criteria for determining the impacts from proposed WVFMP treatments on biological resources in the Plan Area. Significance criteria include substantial adverse effects on special-status species, substantial interference with movement of native wildlife species, or impeding the use of native wildlife nursery sites. Table 3.5-3, "Special-Status Wildlife Species Known to Occur in the Project Vicinity and Their Potential for Occurrence in the Plan Area" in Volume II of this Final EIR includes two special-status bumble bee species, Crotch bumble bee and western bumble bee, neither of which are expected to occur within the Plan Area. The analysis of impacts from herbicide application on beekeeping (i.e., keeping honeybees, which are not native to North America and do not have any protected status in California) are outside the scope of biological resources considered in the EIR. However, as explained in Master Response 3, herbicides would be applied in a targeted manner, by hand, and according to the manufacturer's label directions. Application of herbicides would be consistent with EPMs which limit herbicide use in sensitive areas or under conditions that could lead to misapplication and require each project to be prepared to respond to a spill. Because projects implemented under the WVFMP would integrate these protective measures into treatment design, including for the Identified Treatment Projects, risk of substantial degradation to surface or groundwater quality, soils, or adverse effects to human health or wildlife from herbicide application would be avoided and minimized.

Letter I2 Kevin Ma

August 14, 2020

Comment I2-1

As a Berkeley graduate, I support any plan that removes as much eucalyptus trees as possible, along the lines of the Sierra Club's 3R alternative. Eucalyptus is not a native plant and is notoriously dangerous in wildfires; keeping them endangers the university and the people living around it. They should instead be replaced with native plants.

Response I2-1

The commenter's expression of support for eucalyptus removal will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. The Sierra Club's 3Rs Alternative is addressed in Section 6.2.3 in Volume II of this Final EIR.

Letter I3 Nadesan Permaul

August 14, 2020

Comment I3-1

As the first and former Emergency Preparedness Officer for the campus, I strongly support wildland management by the campus on its properties. I was in the campus EOC during the Oakland Hills Fire and know first hand how important it is to control wildland vegetation in advance of fire seasons.

Response I3-1
The commenter's expression of support for wildland management will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I4 Alfred Twu

August 14, 2020

Comment I4-1
Please get rid of all the Eucalyptus Trees. They are the biggest hazard to our neighborhood, and are NOT visual resources. There is nothing scenic about constantly being reminded that the entire city could burn to the ground.

Response I4-1
The comment expresses support for the removal of eucalyptus trees and that they should not be considered visual resources. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I5 Mike Vandeman, Ph.D.

August 15, 2020

Comment I5-1
This plan is utterly stupid on many levels!

Response I5-1
The commenter's expression of opposition to the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I5-2
1. It ignores fire detection. Instantaneous fire detection is necessary and sufficient to protect against fire. It's also the cheapest solution.

Response I5-2
The commenter suggests that fire detection mechanisms should be included in the proposed WVFMP. As described in Section 6.3, "Alternatives Evaluated in this EIR," in Volume II of this Final EIR, fire detection mechanisms, such as making sites available for PG&E to install fire detection cameras in Strawberry and Claremont Canyons, were submitted in comments during the scoping period. Installing cameras on PG&E owned utilities and property would require coordination with PG&E and they would need to be integrated into PG&E's existing wildfire detection system. Moreover, UC Berkeley has previously evaluated installing a wildfire detection system and determined that the location most visible to the Hill Campus would be on adjacent EBRPD parklands, and therefore UC Berkeley would not have control over installation, maintenance, and monitoring of cameras. Refer also to response to comment O6-13 regarding the scope of the WVFMP and consideration of non-vegetation management actions.

Comment I5-3
2. Joe McBride is a forester, not a biologist. His plan will destroy (and has already destroyed) habitat for native wildife. It is also a very expensive solution, since it requires yearly clearcutting along roads and trails. Forever!

Response I5-3
The comment expresses opposition to Alternative A: The McBride Plan Alternative. The comment does not provide reasons specifying why the EIR is inadequate. Therefore, a response regarding the adequacy of the EIR cannot be provided. The comment will be provided in the record for consideration by decision makers.

Comment I5-4

3. It makes mincemeat of the Endangered Species Act, by destroying (and has already destroyed) habitat for the federally Threatened Alameda whipsnake.

Response I5-4

The comment states that the proposed WVFMP would violate the Endangered Species Act because it would destroy habitat for the Alameda Whipsnake. Refer to responses to comments O9-23 through O9-26 regarding UC Berkeley's compliance with the federal endangered species act, particularly as it pertains to Alameda whipsnake. As described under response to comment O9-23, UC Berkeley will comply with the federal and state endangered species acts as specified in Mitigation Measure BIO-2a in Volume II of this Final EIR. If conditions warrant removal of nonnative trees such that suitable habitat is created, maintenance treatment activities would also follow Mitigation Measure BIO-2a (Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR). Mitigation Measure BIO-2a (Impact BIO-2) and Mitigation Measures BIO-2b (Impact BIO-2) have been revised to clarify that these measures apply to initial treatment activities and treatment maintenance under the WVFMP. Mitigation Measure BIO-1a explicitly states that a reconnaissance survey and habitat suitability assessment will be conducted prior to initial treatment and treatment maintenance.

Comment I5-5

4. Invasive non-native plants have been destroying habitat for native wildlife. That is what you should be removing, not native plants.

Response I5-5

The comment expresses support for the removal of invasive, non-native plants and opposes the removal of native plants.

Refer to Section 2.5.1, "Description of Vegetation Treatment Types," in Volume II of this Final EIR for of a discussion of the types of vegetation removal that would occur under the Plan. FHR treatments would focus on reducing hazardous fire conditions in the Plan Area to help promote landscape resiliency and improve native habitat. This proposed treatment type would be primarily implemented in areas where eucalyptus trees were previously removed but regrowth occurred because of ineffective follow-up treatments.

Letter I6 Emmerich Anklam

August 16, 2020

Comment I6-1

I'm writing to support the removal of eucalyptus trees as relates to the Wildland Vegetative Fuel Management Plan.

As a Berkeley resident who's spent his entire life in the Bay Area, I empathize with those who consider eucalyptus, in the words of the Plan, a visual resource. However, it is time for us to prioritize safety and ecological health. Eucalyptus is a dangerous invasive, and this week alone has demonstrated that fires at the wildland-urban interface aren't going away anytime soon. Removing eucalyptus is a crucial step toward keeping our communities safe, so that we can help prevent a future natural occurrence from becoming a human tragedy.

If we want to support preservation of natural features, we should prioritize native plants and wildlife, rather than protecting recently introduced trees that drive out native plants and wildlife where they take hold.

Thank you for putting together this plan, and for giving such thoughtful consideration to the safety and environmental health of this community.

Response I6-1

The commenter's expression of support for the proposed WVFMP and the removal of eucalyptus trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 1 regarding the consideration of eucalyptus in the WVFMP and EIR.

Letter I7 Jordan Burns

August 16, 2020

Comment I7-1

Please remove flammable eucalyptus trees from Berkeley. They are putting our community in danger. If possible, replace them with native plants-- but first things first, we have to get rid of them before disaster strikes.

Response I7-1

The commenter's expression of support for the removal of eucalyptus trees and possible replacement with native plants will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I8 Dana Kilian

August 16, 2020

Comment I8-1

As a Cal alumni and current Berkeley Hills resident, I am in favor of reducing our fire danger by removing Eucalyptus trees in the hills. It's clear that we have imminent danger and should do everything we can to mitigate it including removing insidious, non-native and highly flammable trees.

Response I8-1

The commenter's expression of support for the removal of eucalyptus trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I9 Sam Mountain

August 16, 2020

Comment I9-1

I'm a third year Urban Studies student and plan to focus my future career on urban sustainability. I'm writing to call for the removal of eucalyptus trees from the UC Berkeley campus. These trees, while beautiful, are both invasive and a massive fire hazard. Given the deleterious effects of recent wildfires on students, faculty, and City of Berkeley residents alike, I find it unconscionable that the University's current planning practices favor aesthetics over safety.

There are plenty of beautiful tree species that are far less flammable and more suited to the climate and native flora that the campus provides. We cannot abide having what is essentially a giant pile of fuel in the middle of our campus while dealing with some of the worst fire seasons on record.

Response I9-1

The commenter's expression of support for the removal of eucalyptus trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I10 Emily Pothast

August 16, 2020

Comment I10-1

Hello! I am a current resident of Berkeley and like many residents, I'm very concerned about the growing threat of wildfires. I would like to urge (or even beg) you to please remove the highly flammable eucalyptus trees as a preventative measure. They're beautiful, but not worth losing the whole campus over!

Response I10-1

The commenter's expression of support for the removal of eucalyptus trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I11 David Ying

August 16, 2020

Comment I11-1

As a 2019 UC Berkeley alum, I want to express my support for removal of eucalyptus trees from the UC Berkeley hill campus. Eucalyptus trees exacerbate fire risk, a danger that is obvious to everyone through our 4 consecutive severe fire seasons. An outbreak in the Berkeley hills would easily threaten not just the campus but the urban neighborhoods around it and thousands of lives. The eucalyptus trees also create environmental problems by suppressing native plant growth. They may be part of the campus' past, but for its present and future, it's time for the eucalyptus trees to go.

Response I11-1

The commenter's expression of support for the removal of eucalyptus trees will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I12 Scott Owades

August 20, 2020

Comment I12-1

Hi, I just wanted to send a note requesting that you remove flammable eucalyptus trees from the Berkeley hills as soon as possible. They are non-native and highly flammable, and I can't think of a reason to keep them other than laziness. Please cut 'em down!

Response I12-1

The commenter's request to remove eucalyptus trees from the Berkeley hills will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I13 Henry DeNero

September 3, 2020

Comment I13-1

I have reviewed the above referenced plan and Draft Environmental Impact Report and find this project to be an exemplary effort to mitigate fire risk in an environmentally sound manner. Congratulations.

Response I13-1

The commenter's expression of support for the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I14 Sara Baldwin

September 14, 2020

Comment I14-1

I recently purchased a residence at [redacted] and am embarking upon an ambitious renovation effort this week. While efforts to remediate future flammability are much appreciated, I am concerned about several aspects of the proposal (the document I read seems rather vague).

1. Should herbicide be used in Strawberry Canyon where it can leach into the creek? What sort of parameters exist for this remedy?

Response I14-1

As discussed in Section 3.9.3, "Impact Analysis and Mitigation Measures," in "Hydrology and Water Quality" (Section 3.9) of Volume II of this Final EIR, herbicides would be applied in a targeted manner, by hand, and according to the manufacturer's label directions, existing laws and regulations, and consistent with EPMs which limit herbicide use in

sensitive areas or under conditions that could lead to misapplication. The university would also be prepared to respond to an accidental spill through the preparation of a spill prevention and response plan. Because herbicide application under the Plan would be targeted and integrate protective measures into treatment design, the risk of substantial degradation to surface or groundwater quality from herbicide application would be avoided and minimized. Refer also to Master Response 3 regarding herbicide use proposed under the Plan and specific protections and measures that would be implemented to minimize impacts to the environment, including prevention of water quality degradation.

Comment I14-2

2. I just invested a **huge** amount of money in this home, primarily because of the amazing view into the canyon, especially of the live oaks. How exactly will this view change? How will it affect the value of my property? Where are the firebreaks being located? I'd like to see a detailed plan and map.

Response I14-2

The comment inquires about the locations of the proposed fuel breaks. As shown in Figure 2-2 in Chapter 2, "Project Description," in Volume II of this Final EIR, there are nine Identified Treatment Projects proposed within the Plan Area. Refer to the figure and description in Section 2.5, "Plan Description," for specific details regarding the proposed vegetation treatments. As shown in Figure 2-2, two fuel breaks are proposed. The East-West FB would be located on Claremont Ridge between UC Berkeley property and Claremont Canyon Regional Preserve and would be up to approximately 7,314 feet (1.4 miles) in length and 126 feet wide. The Hearst Gate FB is proposed between the Hill Campus and the Hearst Gate to LBNL. It would be up to approximately 559 feet (0.1 mile) in length and 93 feet wide.

The comment also inquires about how views would change from the commenter's residence. The long-term visual changes that could occur as a result of implementation of the Plan, including the Identified Treatment Projects, are described and evaluated under Impact AES-2 in Section 3.2.3, "Impacts and Mitigation Measures," in Volume II of this Final EIR. As described therein, implementation of the proposed treatment types would require the removal of trees or other vegetation, which would alter the landscape and potentially remove eucalyptus trees, which have a strong visual identity and may be considered a visual resource to some viewers. In addition, prescribed broadcast burning could be used to implement or maintain any of the treatment types. The burned area would become dark gray/black, which would temporarily degrade the visual character and quality of public views until successional vegetation reestablishes. Implementation of each of the Identified Treatment Projects would remove trees and vegetation, including eucalyptus trees, which would alter the landscape and reduce vividness, intactness, and unity of public views.

Recognizing the commenter's view from its house is not a public view, the measures presented in the EIR to avoid and reduce impacts to public views may also affect views from private residences. As required by Mitigation Measure AES-2, UC Berkeley will conduct a visual reconnaissance of treatment areas prior to implementation to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the treatment may be implemented without additional visual mitigation. If UC Berkeley identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, with lengthy views (i.e., longer than a few seconds) of a proposed treatment area, UC Berkeley will, before implementation, identify any change in location of the treatment site to reduce its visibility from public viewpoints. If no changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed treatment, UC Berkeley will thin and feather adjacent vegetation to break up the linear edges of treatment areas and strategically preserve vegetation at the edge of the treatment area, to help screen public views and minimize the contrast between the treatment area and surrounding vegetation.

The comment also inquires how implementation of the proposed WVFMP would affect property values. Pursuant to State CEQA Guidelines Section 15131, economic effects are not environmental impacts, and therefore are not considered in the EIR. To this point, courts have found that potential effects on property values need not be analyzed under CEQA (e.g., *Porterville Citizens for Responsible Hillside Development v. City of Porterville (2007)*).

Comment I14-3

3. I am concerned about the abundant wildlife being displaced by too much of an area being burned at the same time. In the two weeks that I've owned the property, I've seen turkeys, gray foxes, huge deer, etc. in my yard. I'm delighted to have them, but I'd rather not have them fleeing for their lives into my yard.

Response I14-3

The primary purpose of the WVFMP is to reduce the risk of catastrophic wildfires, thereby reducing the potential that a large area in the Hill Campus would burn at once.

As discussed in Section 2.5.2, "Description of Vegetation Treatment Activities" in Volume II of this Final EIR, prescribed burns in the Plan Area would require the preparation of a burn plan that includes a smoke management plan (SMP) approved by the Bay Area Air Quality Management District (BAAQMD). BAAQMD Regulation 5 requires all burn activity to only occur with written approval of a SMP by BAAQMD and only be conducted on permissive burn days. Given the challenges involved in executing a broadcast burn, broadcast burning under the WVFMP would typically be relatively small scale and infrequent. In addition, several mitigation measures would be implemented to avoid and minimize adverse impacts to special-status species from prescribed burning. Refer to Impact BIO-2 in Section 3.5.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR for the evaluation of potential impacts to wildlife from prescribed burning and the description of mitigation measures that would be implemented to protect wildlife.

Comment I14-4

In summary, I am worried about potential threats to the value of my home and to my peace and quiet from an overly aggressive approach and will feel more comfortable if I can access a more detailed plan and map.

Response I14-4

The comment summarizes detailed comments provided elsewhere in the comment letter. See responses to comments I14-1 through I14-3. Figure 2-2, "Identified Treatment Projects," in Chapter 2 of Volume II of this Final EIR shows the location of the proposed Identified Treatment Projects. The closest identified treatment project to the commenter's identified residence would be the East-West FB, approximately 0.3 miles east. Figure 3.10-1 in Section 3.10, "Noise and Vibration," of Volume II of this Final EIR shows the location of the commenter's street in relation to the East-West FB in the context of noise exposure during implementation of this Identified Treatment Project. For later projects conducted under the WVFMP, UC Berkeley will post project documentation on the Facilities Services website and may directly contact adjacent neighbors with notification of anticipated dates and hours during which treatment activities are anticipated to occur and contact information of a project representative.

Letter I15 Isis Feral

September 14, 2020

Comment I15-1

This Plan does not protect life, but increases fire danger, threatens public safety, and contributes to ecological devastation.

The scientific consensus about climate and air quality is that we need every tree we can get. Too many trees have already been removed in the East Bay hills, and continue to be, largely because of nativist ideology turned into policy:

The EIR continues to perpetuate the myth that non-native trees are greater fire hazards than native ones, when this is not always true, and more importantly, all trees contribute to fire safety, no matter their origin: trees do not catch fire easily, and they provide moisture and windbreaks that help prevent the spread of fire.

Applying nativist ideology to fire safety contradicts that we live in a natural wildfire zone where native species evolved fire dependent, and are threatened with extinction by fire prevention itself, as well as herbicide use and human development, the very activities this ideology and this EIR promote.

Human-built structures are far more flammable, "high hazard fuels" than any trees. The Oakland-Berkeley Mayors Task Force that investigated the 1991 hills fire concluded it was primarily houses that spread the fire, not any trees. Often houses set trees aflame, not the other way around.

Response I15-1
The commenter's opposition to the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 1 regarding wildfire risks associated with eucalyptus trees, the consideration of eucalyptus in the WVFMP and EIR, and the proposed treatment of eucalyptus under the WVFMP.

Comment I15-2
Instead of vegetation management, what will make the hills fire safe is for any further development to stop. But UC has repeatedly shown it won't let environmental laws get in the way of killing every tree in its path to expansion:

The Hill Campus this EIR targets was one of several agencies' projects, already reviewed in FEMA's East Bay Hills EIS, which together would have destroyed half a million trees on thousands of acres on university, park district, and Oakland land. Under the guise of fire hazard mitigation, UC attempted to appropriate public emergency funds for this same development scheme it continues to propose across multiple EIRs.

In 2014, before the EIS was finished, UC illegally clearcut Frowning Ridge, another of the proposals to FEMA. In 2016, UC's projects, including Hill Campus, were stopped in court by hills residents, as was the addendum to the previous LRDP EIR with which UC tried to sneak the project past CEQA.

Response I15-2
The comment expresses opposition to the proposed WVFMP and mentions previous efforts to remove vegetation in the East Bay hills. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I15-3
This EIR offers no "Alternative" that protects the forest. The "No Project Alternative" would continue the deadly activities UC has been engaging in for years, killing trees and spreading toxic chemicals. Alternative A promotes more of the same.

Alternative B is considered the "Environmentally-Superior Alternative", because all vegetation management would be manual, and would eliminate the use of herbicides, which many of us have been demanding on all UC land for decades.

But a long overdue pesticide ban would come at a monstrous price if it required the removal of so-called "small diameter" trees, the younger generations of trees, from the forest community.

I support none of the proposals in this EIR, and demand a "No-Project-At-All Alternative" that ends all of UC's ongoing deforestation and pesticide activities.

Response I15-3
The commenter's opposition to the proposed WVFMP and all of the alternatives, and request for a "No-Project-At-All Alternative" will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

As described in Section 6.3.1, "No Project Alternative," in Volume II of this Final EIR, CEQA Guidelines Section 15126.6(e)(2) states that the no project alternative shall describe "what would be reasonably expected to occur in the foreseeable future if the project were not approved." For the revision of a regulatory plan, policy or ongoing operation, "the no project alternative will be continuation of the existing plan, policy, or operation into the future." (CEQA Guidelines Section 15126[e][3][A]). Accordingly, under the No Project Alternative, UC Berkeley would continue to implement vegetation treatments through the existing UC Berkeley 2020 Hill Area Fire Fuel Management Program that are covered under the 2020 Long Range Development Plan Environmental Impact Report.

Alternatives to the WVFMP that involve no vegetation removal are addressed in Section 6.2.2, "No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives," in Volume II of this Final EIR.

Letter I16 Anastasia Glikshtern

September 14, 2020

Comment I16-1

I'd like to resubmit my comment – removing support for No Project Alternative - because No Project means continuation of what's happening now: mature so-called "exotic/invasive" tree removals and herbicide use.

Response I16-1

The commenter's opposition to the No Project Alternative will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I16-2

I.

The "targeted ground application of herbicides" proposed by the EIR is unacceptable.

As a science organization you should know that they must not be used anywhere on Earth:

- They are more toxic, more persistent, more mobile and more dangerous than their manufacturers disclose;
- Numerous scientific studies associate exposure to herbicides with cancer, developmental and learning disabilities, nerve and immune system damage, liver or kidney damage, reproductive impairment, birth defects, and disruption of the endocrine system;
- There is no safe dose of exposure to those chemicals because they persist in soil, water, and animal tissue, so even low levels of exposure could still accumulate and harm humans, animals, and the environment;
- Especially vulnerable individuals include infants, children, pregnant women, the elderly, people with compromised immune systems and chemical sensitivities;
- Toxic runoff from herbicides pollute streams and groundwater, and therefore the drinking water sources;
- Herbicides are harmful to pets and wildlife – including threatened and endangered species, plants, and natural ecosystems;
- Herbicides are harmful to soil microbiology and contaminate soil into the future, reducing biodiversity in sensitive areas.

People have a right not to be involuntarily exposed to herbicides in the air, water or soil that inevitably result from chemical drift and contaminated runoff.

Response I16-2

The comment expresses opposition to herbicide application under the WVFMP. As discussed in Section 3.9.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, herbicides would be applied in a targeted manner, by hand, and according to the manufacturer's label directions, existing laws and regulations, and consistent with EPMs which limit herbicide use in sensitive areas or under conditions that could lead to misapplication. The university would also be prepared to respond to an accidental spill through the preparation of a spill prevention and response plan. Because herbicide application under the Plan would be targeted and integrate protective measures into treatment design, the potential impacts to human health and the environment from herbicide application would be avoided and minimized. Refer also to Master Response 3 regarding herbicide use proposed under the Plan and specific protections and measures that would be implemented to minimize adverse impacts, including from potential herbicide drift and runoff.

Comment I16-3
II.

As all recent catastrophic fires clearly demonstrated so-called "native" species are as flammable as so-called "exotic invasive species".

So-called "restoration" is actually the destruction of existing habitat.

Even though the so-called "native" trees are selected by staff – it doesn't mean they wouldn't burn. They are as much – or more - fire hazard as the big, mature, healthy "exotic" trees being mindlessly killed. And, of course "native" grasslands and shrubs burn best.

This plan for fire prevention is more likely to cause fire than prevent it.

Every tree killed increases the heat and dryness, and eliminates moisture that prevents fire. With elimination of trees there is more wind - another major fire problem.

We need every tree we can get, particularly the species that are most drought resistant, including Eucalyptus, Acacia, and Douglas Fir. The fog drip from these long-lived trees keeps some of the understory green year round.

Keep the trees. Ban herbicides.

Response I16-3
The commenter's expression of opposition to the removal of trees and use of herbicides under the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 1 regarding wildfire risks associated with eucalyptus trees, the consideration of eucalyptus in the WVFMP and EIR, and the proposed treatment of eucalyptus under the WVFMP. Alternatives to the WVFMP that involve no vegetation removal are addressed in Section 6.2.2, "No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives," in Volume II of this Final EIR.

Letter I17 Marg Hall

September 14, 2020

Comment I17-1
I give permission for you to read my comments below at the public meeting tonight. I object to the fact that this public hearing was set up in such a way to exclude our real voices. Zoom? Webinar?

Response I17-1
The comment expresses discontent with the format of the September 14th, 2020 public meeting. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I17-2
The loss of even one mature, healthy tall tree is a tragedy. Both humans and non human beings need trees. Trees are essential to the future of our planet. UCB has demonstrated a callous disregard for this reality. This draft EIR carries on that tradition. It shamelessly promotes the lie that native plants are somehow less fire prone. It fails to understand the need to PLANT new trees, species of trees that will have a future in a warming drought plagued California. Eucalyptus trees have a good chance of survival here long term, but some (quote) "native" trees do not. We shouldn't cut them down. Fuel breaks, evacuation routes and areas of refuge could benefit from the preservation of shade trees.

Response I17-2
The commenter's expression of opposition to the removal of trees under the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 1 regarding known wildfire risks associated with eucalyptus trees, the consideration of eucalyptus in the WVFMP and EIR, and the proposed treatment of eucalyptus under the WVFMP. Alternatives to the WVFMP that involve planting

trees and no vegetation removal are addressed in Section 6.2.2, "No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives," in Volume II of this Final EIR.

Comment I17-3
I support alternative plan B with this modification: develop reforestation plans including preservation of some of the small eucalyptus trees. Two of the downsides of alternative B mentioned in the draft can easily be addressed. Hazardous trees in danger of imminent failure can be removed on an individual basis, providing there is careful vetting to ensure that such a determination isn't based on outright prejudice against a specific species (ie eucalyptus). Using hand labor for maintenance isn't a problem because people need jobs and this is important work. We must find a way to live without using pesticides.

Response I17-3
The commenter's support for Alternative B with the changes suggested will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. As described in Section 4.1.2.3, "Fire Hazard Reduction Projects," of the WVFMP, eucalyptus trees would not be fully eradicated under the proposed WVFMP. Trees, including eucalyptus, would undergo variable thinning under the FHR projects proposed by the WVFMP, which would selectively leave eucalyptus and other trees in place. In addition, as described in Section 6.3.3, "Alternative B: Reduced Treatment Alternative," in Volume II of this Final EIR, Alternative B proposes some of same vegetation treatment types as the WVFMP (exceptions include non-shaded fuel breaks and TRAs), and emphasizes maintaining the existing overstory/tree canopy. Therefore, Alternative B would also retain some of the eucalyptus trees in the Plan Area.

Comment I17-4
Western wildland/urban fires are terrifying. I support vegetation management that is both based on science and respect for trees. We can and must do both.

Response I17-4
The comment expresses support for vegetation management plans that are based on science and respect trees. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I18 Mary Sue Meads

September 14, 2020

Comment I18-1
The poisons themselves are extremely dangerous to humans who might be nearby or in the way of the wind; likewise for all wildlife, especially birds; long-term damage to soil, and an increase in public health issues such as asthma, cancers, and other ailments.

The poisons are much more dangerous than mentioned often in their labels because they build up in the soil over time and usually applicators use these poisons frequently, thereby being exposed more. Poisons also get blown by the wind into areas they should never have gone.

Response I18-1
The comment expresses concern about bioaccumulation and herbicide drift. As discussed in Section 3.9.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, herbicides would be applied in a targeted manner, by hand, and according to the manufacturer's label directions, existing laws and regulations, and consistent with EPMs which limit herbicide use in sensitive areas or under conditions that could lead to misapplication. The university would also be prepared to respond to an accidental spill through the preparation of a spill prevention and response plan. Because herbicide application under the Plan would be targeted and integrate protective measures into treatment design, the potential impacts to human health and the environment from herbicide application would be avoided and minimized. Refer also to Master Response 3 regarding herbicide use proposed under the Plan and specific protections and measures that would be implemented to minimize adverse impacts.

Comment I18-2

That being noted about poisons, we must keep the trees themselves: It has been shown that living trees rarely catch fire as the trunks are moist, thus repelling flames. Less fire resistant (none in fact) are the dry grasses that result from the loss of the tree canopy, which in addition to fog drip (especially from the very tall trees) is the loss of cooling shade. Trees are a "carbon sink" that take in the heavy air and expel cleaner air (photosynthesis), a refuge for wildlife, have roots to stabilize soil on hillsides to reduce mudslides and flooding. Our climate is changing as we can observe by the increase of wildfires all over this state, but destroying the very trees developed in drier climates (such as the Australian transplants) is foolhardy at best and dangerous at most. More often it is the structures built near the forests that burn the fastest. The wildfire prevention plan therefore should concentrate on structures being built with more fire resistant materials such as tile roofs instead of wood shingles. Perhaps they shouldn't be built near the wildlands at all. In short the destruction of trees needs to stop. Instead, more trees must be planted. It takes many years (20+) for trees to mature, so replanting trees, while necessary for a safer future, is not going be very helpful for a significant period of time, so existing trees must remain. They are our safety net. Trees in the way of fire, whose bark has been singed do not need to be destroyed either as they are healthy inside (an observation of seeing dozens of cut logs piled up) and many have proven their ability to survive fires and continue living. It would be wonderful if the UC planners could actually read up on the subject and pay attention to what is actually needed rather than blindly destroying areas to appease ignorant people or their need for continued building. The best plan is to leave the hillsides (whats left) alone--keep the trees, plant more, and stop using poisons.

Response I18-2

The commenter's expression of opposition to tree removal and herbicide use under the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. Refer to Master Response 1 and responses to comments O2-3 and O6-10 regarding eucalyptus trees and associated wildfire risks and the effectiveness of the proposed Plan at reducing the risk of wildfire within the Plan Area. Alternatives to the WVFMP that involve planting trees and no vegetation removal are addressed in Section 6.2.2, "No Vegetation Treatment/Increased Vegetative Growth and Replanting Alternatives," in Volume II of this Final EIR.

Letter I19 Henry DeNero

September 15, 2020

Comment I19-1

1. Regarding the objections to the removal of trees, since your plan will remove trees only or essentially only in areas designated as fire breaks, it seems that you will achieve significant fire risk reduction without removing the vast majority of trees in The Hill Campus. Notwithstanding the arguments that trees reduce carbon in the atmosphere and contribute to ground moisture, it seems reasonable that narrow bands of trees be removed at the boundaries of a very large area to create a defensible space to stop a fire from spreading into or out of The Hill Campus.

Response I19-1

The comment expresses support for the removal of trees to create defensible space and fuel breaks, as is proposed in the WVFMP. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I19-2

2. Regarding the objections to the use of herbicides, I would agree that herbicides should not be used if at all possible. If ongoing maintenance can be used as a means of preventing re-growth of trees in areas where they have been removed, this would be a preferred alternative to the use of herbicides.

Response I19-2

The comment expresses opposition to the use of herbicides, if possible. Alternative B: Reduced Treatment Alternative does not include herbicide application (refer to Section 6.3.3 in Volume II of this Final EIR).

Comment I19-3
Thank you for adding these comments to the public record. I continue to believe that you have developed a good plan to mitigate a significant risk at a reasonable cost.

Response I19-3
The comment expresses support for the proposed Plan and believes it will mitigate significant risks at a reasonable cost. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I20 Bev Von Dohre

September 18, 2020

Comment I20-1
I am concerned that this plan for fire prevention is more likely to cause catastrophic fire than prevent it. If we eliminate the money to be made from killing trees and poisoning the environment, then there is no rational reason for most of this plan.

Every shrub or tree killed increases the heat and dryness, and eliminates moisture that prevents fire. Plus, the more areas are opened up, the more they are inviting the main cause of fire: arson.

Wind is another major fire problem, so why open our lands to more sun and wind?

The most at risk environment for fire are the open grasslands. We are told that most of the East Bay was rolling hills, but the original huge Redwood forest once extended to Moraga and Lafayette.

As our native oaks are dying, we need every tree we can get, which includes the species that are most drought resistant, including the maligned but fire resistant Eucalyptus, Acacia, and native Douglas Fir (who tolerates cold, heat and rain, and happily grows with both Redwoods and native Pinus Sabinia in drier areas.) The fog drip from these magnificent long-lived trees keeps some of the understory in the East Bay green year round. After some of our most fire-ravaged areas, the Eucalyptus were unscathed and helped protect buildings. (Friends in the 1991 hills firestorm credit Eucalyptus with saving their homes.)

Response I20-1
The commenter's expression of opposition to tree removal under the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. As described under "Wildfire Risk Reduction," in Section 3.12, "Wildfire," in Volume II of this Final EIR, vegetation treatment is the primary approach to wildfire management because it can reduce the intensity and severity of wildfire, slowing fire movement and creating favorable conditions for firefighting to protect targeted, high-value resources. Fire fuel reduction has proven successful where it is targeted at protecting specific resources in limited geographic areas, such as in areas of extreme fire danger or in the wildland urban interface. Areas that are treated often exhibit different fire progression characteristics and reduced fire severity compared to areas that are not treated. Reducing fuels through mechanical treatments and prescribed fire have been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale over an extended period of time. Refer to "Vegetation (Fire Fuel) Management," in Section 3.12, "Wildfire," in Volume II of this Final EIR for more information regarding the effectiveness of vegetation treatments like those proposed under the WVFMP.

Refer also to Master Response 1 and responses to comments O2-3 and O6-10 regarding eucalyptus trees and associated wildfire risks and the effectiveness of the proposed Plan at reducing the risk of wildfire.

Comment I20-2
Another serious problem is pesticide use that contaminates the earth, air, and water. No amount is safe, and if those advocating the use were the ones who actually got lymphoma and other cancers, they would likely ban it. It is already in all of our bodies, and contaminating ground water. It also pollutes where it's manufactured. Glyphosate has helped make the problem of toxic algae in our water ways. There is no excuse ever to use pesticides.

Response I20-2

As discussed in Section 3.9.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, herbicides would be applied in a targeted manner, by hand, and according to the manufacturer's label directions, existing laws and regulations, and consistent with EPMs which limit herbicide use in sensitive areas or under conditions that could lead to misapplication. The university would also be prepared to respond to an accidental spill through the preparation of a spill prevention and response plan. Because herbicide application under the Plan would be targeted and integrate protective measures into treatment design, the potential impacts to human health and the environment from herbicide application would be avoided and minimized. Refer also to Master Response 3 regarding herbicide use proposed under the Plan and specific protections and measures that would be implemented to minimize adverse impacts.

Comment I20-3

The use of heavy machinery listed in your plan also does tremendous harm, leaving trees and shrubs more flammable, and compacting the earth. Machinery also causes fires and poisons the land with oil, fuel, and other toxic materials that then washes into the creeks, and into the bay. One local agency even says: "Service and fuel heavy equipment only in areas that will not allow grease, oil, fuel, or other hazardous materials to pass into streams or retained vegetation. Remove from the site and properly dispose of all refuse, litter, trash, and non-vegetative debris resulting from vegetation treatment operations; Ensure that hazardous materials spill kits are available on all heavy equipment." How about not doing any of this?

Response I20-3

The comment expresses concern about the impacts of using heavy equipment during proposed treatments (mechanical treatment activity). As described under Impact GEO-1 in Section 3.6.3, "Geology and Soils," to address potential disturbances to soils, including compaction from heavy equipment use, several EPMs would be implemented. EPM BIO-7 minimizes ground disturbance from vehicles, EPM GEO-1 requires suspension of mechanical soil disturbance during and after precipitation, EPM GEO-2 requires stabilization of disturbed soil areas, and EPM GEO-3 prohibits use of heavy equipment on slopes steeper than 30 percent. Together, these EPMs would avoid and minimize the potential impacts to soils as a result of heavy equipment use.

As described under Impact HAZ-1 in Section 3.8.3 "Impact Analysis and Mitigation Measures" in Volume II of this Final EIR, equipment and vehicles used to implement the WVFMP would be fueled, lubricated, and serviced at fueling stations and repair facilities, which would minimize the potential to release these substances into the environment. Also, implementation of environmental protective measure (EPM) HAZ-1 would minimize releases of hazardous materials from the use of heavy machinery by requiring that all equipment be inspected for leaks before the start of treatment activities, and EPM HYD-2 would require that fuels, heavy equipment, and other potentially hazardous materials be kept at a sufficient distance from water courses to provide protection from accidental leaks or spills. These EPMs would minimize leaks and the potential for any leaked substances or spills to enter water courses. Furthermore, UC Berkeley would comply with all applicable laws that regulate the use, transport, storage, and disposal of hazardous materials.

As described under Impact WIL-1 in Section 3.12.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, heavy equipment use would not occur during extreme fire danger conditions such as red flag warnings, as posted by local CAL FIRE units. In addition, inspections for fire would be conducted following felling, yarding, and mechanical loading activities occurring during the dry season (EPM WIL-1); machine-powered hand tools would have federal- or state-approved spark arrestors (EPM WIL-2); and tree cutting crews would carry one fire extinguisher per chainsaw and one long-handle shovel and one axe or Pulaski, which would minimize the risk of accidental wildfire ignition. In addition, smoking is not allowed within the Plan Area or anywhere on university-owned land. Therefore, the presence and use of vehicles and equipment needed to implement treatments would not substantially exacerbate fire risk.

Comment I20-4

Instead of so harming the environment, killing countless animals, and increasing fire risk, plant trees until the land is protected by a dense, moist forest? I suggest the versatile, long-lived, fast-growing Douglas Firs that can reach the height of Redwoods and who can water themselves from the fog drip they bring down. They are ideal for Berkeley.

Response I20-4
The comment expresses discontent with the proposed Plan and suggests planting trees such as Douglas-firs. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I21 Kate Bernier

September 19, 2020

Comment I21-1
Some time ago I found a gov ? website (don't remember if it was gov't) that linked agent orange pesticide application in Vietnam to grass fires, a phenomenon unheard of in tropical environments such as Vietnam. The website was taken down overnight.

Pesticides and synthetic fertilizers, which the City of Berkeley at some point in the last decade switched over to (synthetic fertilizers), contribute to the formation of crippling toxic blue green algae in water supplies globally. At the very least pesticide application kills healthy soil.

Response I21-1
The comment describes information linking the use of agent orange to grass fires and states that pesticides and synthetic fertilizers contribute to the formatting of toxic blue green algae and degrade soils. Refer to Master Response 3 regarding the proposed use of herbicides under the WVFMP and specific measures that would be implemented to further minimize the potential impacts to human health and the environment. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I22 Sheryl Drinkwater

September 21, 2020

Comment I22-1
As a City of Berkeley resident, I support the University of California, Berkeley's Wildland Vegetative Fuel Management Plan (WVFMP), Draft Environmental Impact Report and Appendices.

I support the four implementation treatment types and five vegetation treatment activities identified in the plan as compatible with the regional approach. The identified projects and their ongoing maintenance plans are critical to reduce wildfire hazards in the East Bay. The projects' locations make them an important link in the chain of fuel reduction projects throughout the East Bay hills protecting not only the campus, but also the residents of Berkeley, the City of Oakland, East Bay Municipal Utility District's critical San Pablo watershed and East Bay Regional Park Districts' environmentally sensitive parklands.

I encourage the University of California to finalize the Draft EIR and begin implementation.

Response I22-1
The commenter's support for the proposed WVFMP will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Letter I23 Tamia Marg

September 29, 2020

Comment I23-1
As a private landowner with around 1000 feet of shared property line with UCB in the hills campus (represented approximately by the red line in the photos below), I am always appreciative of all the work that UC operations has done on your side of the fence. However, I am hopeful that the extreme vegetation buildup on UC's side of our fence can be mitigated within 100 feet of structures, stated as UC's intention. I have been observing vegetation on UC's side of our fence becoming more dense every year so that impenetrable thickets are pressed against our fence next to

our managed landscape and structures. See the Google Earth images below from 2004, shortly after UC completed euc removal in that area; in 2007, when vegetation was still open but beginning to move back in; and the most current readable image from Google Earth in 2019, in which vegetation has been well managed near Grizzly Peak Blvd (where I know ignition threat is the highest), but not within 100' of structures further down the hill.

Response I23-1
The comment expresses appreciation for the past vegetation treatments the university has conducted and requests that the university consider treating vegetation in specific areas within 100 feet of structures due to buildup. Refer to Section 2.4, "Past and Current Vegetation Treatments," in Volume II of this Final EIR for a description of the ongoing defensible space treatments the university conducts within 100 feet of any structure; each year areas within 100 feet from structures along the university property boundary in the Plan Area are inspected and treatments tailored to that site. For example, the university is currently exploring the use of goats to reduce vegetative fuel volumes further down the slopes along the boundary at Signpost 24. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I23-2
Furthermore, I would like to point out that both during the 1970 and the 1991 fires, a dozer line was put in along our mutual property line under the duress of emergency as it appeared to be the best place to prevent fire from traveling from Gwin Canyon further north into Claremont Canyon. Both times those lines became the northern extent of the fire. While Joe McBride's plan presents a fire break along the entire UC property line from Grizzly Peak Blvd to Claremont Ave, I believe it is the uppermost portion that is the most prey to a wind-driven fire and would be a valuable focus for your plan.

Response I23-2
The comment notes that the property line between the commenter and the university has served as a fuel break in past fires, and that maintenance of the upper portion of that site is advisable. Part of this area was included in the annual and ongoing work in the WVFMP, as shown in Figure 2 of the WVFMP (Appendix A in Volume II of this Final EIR). In response to this comment, the defensible space treatment area shown in Figure 2 of the WVFMP has been extended to the north to ensure complete defensible space on university property within 100-feet from structures. This extension is also reflected in revisions to Figure 4-1, "Ongoing Vegetation and Fire Fuel Management Treatments in the Hill Campus," in Volume II of this Final EIR.

Comment I23-3
Other comments:

My understanding about SOD in our area (from Garboletto) is that pruning oaks should happen when a period of a couple of months can be anticipated without rain so that wounds can heal and be less vulnerable to the pathogen when moisture is present.

Response I23-3
The comment notes that timing of pruning of oak trees is important to minimize the spread of sudden oak death. Section 6.1, "Best Management Practices for Fire Mitigation" notes, "Large oak and pine trees should be pruned between November and April to avoid attracting pathogens." However, suddenoakdeath.org recommends avoiding pruning in winter and spring months, as the commenter suggests. Text on that page has been changed to indicate that pruning of oaks should occur during months of dry weather.

Comment I23-4
In my experience, grass and other flashy fuels will often regrow after June 15 given sufficient fog drip. Flashy fuels should be mowed in a timely way so regrowth will not be substantial after cutting back.

Response I23-4

The comment observes grasses and fine ignitable vegetation can re-grow with fog drip even late in the season and without rain. The annual and ongoing vegetation management as part of defensible space treatments includes monitoring of grass regrowth. The university mows grass due to regrowth, as needed, and will continue to treat and maintain vegetation throughout the year in order to achieve the objectives of the WVFMP.

Comment I23-5

Better proofreading is needed in places. A couple things caught my attention—

1/4 not 1.4 mile:

Garlon 4 not 14:

Response I23-5

The corrections identified in the comment have been made in the WVFMP and EIR.

Comment I23-6

Finally I would like to encourage UCB to move forward with creating a more firesafe hills environment. Given the acceleration in fire activity in California, delay is not an option. For the record, I wholeheartedly support the use of appropriately applied herbicides to control eucalyptus. As one who has worked decades to reduce our eucalyptus grove, I know that it cannot be done effectively without herbicides. Also, I support the use of periodic controlled burns to reduce vegetation, and would be happy to work with UC on hardening our side of the fence in anticipation of such a practice.

Response I23-6

The commenter's expression of support for university wildfire risk reduction efforts, including the removal of eucalyptus trees, the appropriate use of herbicides, and the use of prescribed burns in vegetation management will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I23-7


Imagery Date: 6/20/2019 37°52'05.88" N 122°13'2

Response I23-7

The comment provides three pictures from Google Earth that are referenced in comment I23-1. The provided pictures were considered in the response to comment I23-1. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I23-8

Flame Length (Figure 12)

As shown on Figure 12, almost half of the 800-acre Plan Area is expected to burn with flames longer than 8 feet (330.55 acres), indicating direct attack methods would not be appropriate, and that indirect suppression would be necessary. Land that is expected to burn with flames between 4-8 feet in length totals 219.72 acres, and the area that is expected to burn with low flames lengths, shorter than 4 feet, totals 36.97. in the Plan Area, 181.47 acres is not expected to carry fired, due to the lack of vegetative fuel.

Long flame lengths are associated with forested areas with a dense understory of shrubs and short trees, as well as in stands of thick, dense shrubs. The areas of longest flame length are located in the higher portion of the Hill Campus: northeast of LBNL, surrounding the Botanical Garden, throughout Hamilton Gulch, as well in Claremont Canyon. Areas of shorter flame lengths are located in areas where a dense forest canopy overstory is present over a thin leaf litter of surface fuel. These areas are found in the western portion of the Plan Area, in lower Strawberry Canyon, in the Botanical Garden, on the southern side of Claremont Canyon, and atop Chaparral Hill.

Rate of Fire Spread (Figure 13)

Fast-moving fires are those where the rate of spread is greater than 20 chains[9] per hour (or a 1.4 mile per hour); a total of 282.29 acres in the Plan area is expected to burn in this category of spread rates. The rate of fire spread in almost 300 acres is expected to be slow to moderate, or 1 to 20 chains/hr. fire spread is not expected or barely moving in 189.21 acres. The slower spread rates in the Plan Area are found in lower Strawberry Canyon and south of Claremont Avenue, and on Chaparral Hill. Fast-moving fires are expected north of the Botanical Garden, north of Claremont Avenue, and on the west-facing slope of Frowning Ridge.

fencing, mineral block, supplemental food and/or a watering site to keep the animals within the desired area. In addition, portable electric fencing is typically used for prescribed herbivory.

Prescribed herbivory is not new to the Hill Campus; both Strawberry and Claremont canyons were dairy farms in the 1940s. Since the 1980s, goats were used to manage grasslands and shrublands in the Plan Area including below the Lawrence Hall of Science, Math Science Research Institute and FSSBER. Currently, a herd of goats is reducing fuel hazards in the 29-acre FSSBER managed by the Office of Laboratory Animal Care (OLAC); OLAC and Facilities Services have an agreement to graze four locations in the Hill Campus to evaluate the potential of this treatment.

[9] A chain is a unit of length equal to 66 feet, commonly used in surveying and forest operations. Conveniently, 80 chains is equivalent to a mile. Chain is abbreviated ch.

5.5 HERBICIDE APPLICATION

Herbicides are chemicals that damage or kill plants and are categorized as selective or non-selective. Selective herbicides kill only a specific type of plant, such as broad-leaved plants, which allows the herbicide to be used to control weeds while maintaining grass species. Other herbicides, such as glyphosalte (Roundup®), are non-selective and kill any type of plant. UC Berkeley could use Garlon 4[12] or Garlon 3A (triclopyr) and Stalker[13] (imazapyr) Transline, Glyphoshate, Snapshot, and Surflan, using cut stump or basal bark application, which are described below. UC has a rigorous review procedure regarding the use of Tier 1 herbicides and prohibits all other herbicides.

To prevent resprouting of removed trees, an herbicide solution will be applied by a licensed California Qualified Applicator to the cambium ring of eucalyptus and acacia stumps within three minutes of felling. The herbicide mixture will likely consist of a combination of Garlon 14 or Garlon 3A (triclopyr) and Stalker[15] (imazapyr) in solution of methylated seed oil, water, and marking dye. If application within 60 feet of running or standing water is necessary,

Garlon 3A will be used, which is approved for use near aquatic areas. A typical tree requires 1 or 2 ounces of diluted solution. Foliar spray with a hooded spray wand is also considered.

Use of herbicides will be subject to the restrictions described on the product label, specified in the recommendation by the Pesticide Control Advisor, and by the 2014 Final Hazardous Fire Risk Reduction Environmental Impact Statement East Bay Hills, California.

5.5.1 CUT STMP APPLICATION

To maximum the efficacy of treatment the tree must be cut leaving a stump not more than four inches in height above soil surface and the cut surface of the stump must be treated with an herbicide within minutes of the cut. The herbicides applied to the outer portion of the cut surface, including the cambium of the tree. The herbicide is translocated to the roots and disrupts the transportation of nutrients and water, causing the plan to die.

5.5.2 BASAL BARK APPLICATION

[12] Garlon is a registered trademark of Dow AgroSciences.

[13] Stalker is a registered trademark of BASF.

[14] Garlon is a registered trademark of Dow AgroSciences.

[15] Stalker is a registered trademark of BASF.

Response I23-8

The comment includes direct text from the Draft WVFMP, with typos highlighted in yellow. Response to comment I23-5 addresses the typos pointed out by the commenter, which have been revised in the Final WVFMP included as Appendix A in Volume II of this Final EIR.

Letter I24 Joe R. McBride

October 2, 2020

Comment I24-1

I have reviewed the EIR for the proposed WVFMP and would like to direct your attention to the following concerns I have about the EIR:

Section 3.12 (Wildfire) of the EIR evaluates the effects of the implementation of WVFMP implementation on wildfire and wildfire-related risks. I believe that the analysis is inadequate for the following reasons:

1. The analysis uses fire behavior modeling to determine fire characteristics (flame length, rate of spread, ember casting, etc.) and areas burned based on the Landscape Fire and Resource Management Planning Tools Project (LANDFIRE Version 1.40) and fuel models that were based on LANDFIRE data on August 29, 2019 (see WVFMP Figure 11). This data represents the fuel conditions prior to the proposed treatments under the WVFMP. It does not really evaluate the impact of the proposed treatments which would require a modification of the fuel model after the treatment and re-running of LANDFIRE Version 1.40. The impact analysis only assumes that the treatments will result in a more fire safe situation without really testing the treatments using the model.

Response I24-1

The comment asserts that modeling of post-treatment conditions should be conducted to evaluate the effectiveness of proposed treatments. Refer to response to comment O9-22 regarding post-treatment modeling.

Comment I24-2

2. The vegetation Map (WVFMP, p.34 - Figure 10. Current vegetation types, from 2016 LandFire data) incorrectly identifies several vegetation types. For example, see maps below:

A close up of a map Description automatically generated[1]

This misidentification affects the results of the fire models. Eucalyptus plantations have much larger fuel loading, exfoliating bark, and aromatic compounds in the leaves which contribute a much greater fire danger, greater fire line intensity, greater propensity to torching and crown fires, and greater production of embers that can cause more spot fires than California Coastal Live Oak Woodlands. Baccharis brushland, on the other hand, presents much less fire hazard than Southern California Dry Mesic Chaparral.

Response I24-2

The comment states that vegetation types are misidentified in the WVFMP, which affects the results of the fire models used therein. It is accurate to state that the fuel characteristics of vegetation affect how they burn. The fuel characteristics are sometimes separate from the vegetation types. LANDFIRE has a vegetation map, but the fire behavior analysis is based on the fuel models. The fuel models in LANDFIRE are the best available data, (in part because they are uniform across boundaries) and are separate from the vegetation types. The fuel model inputs to the fire behavior prediction software are classified as a function of the fuel volume, vertical and horizontal continuity, percent of live and dead material, as well tree height, base of tree canopy, and tree foliage density. These are all factors that describe the fuel conditions directly, and separate from vegetation types.

In addition, the fire behavior outputs informed, but did not dictate the treatment locations and types. The projects identified in the WVFMP were based on on-site conditions.

Comment I24-3

3. The plan is focused on the area of land in Strawberry Canyon, Claremont Canyon, and at the Smyth-Fernwald area (referred to as the Hill Campus - Plan Area) and evaluates environmental impacts in terms of acres potentially burned in this area of land. Future fires will not stop at the boundaries of University property but under highly probable fire weather condition they will burn onto adjacent private or agency owned property. To suggest that the planned fuel management treatments will reduce the areas burned in different types of fires (crown vs surface fires) or reduce the flame length or spotting distance does not really address the impact of fires starting in highly flammable vegetation in the Hill Campus – Plan Area adjacent to private property along Panoramic Way and adjacent to the Lawrence Berkeley Lab property. These areas are particularly vulnerable to fire that can burn from eucalyptus and/or conifer plantation immediately adjacent to them on University property.

Response I24-3

As described in Section 2.1, "Plan Overview," of Volume II of this Final EIR, the WVFMP includes implementation of four vegetation treatment types across the Plan Area, which includes areas adjacent to Panoramic Way and LBNL. These four vegetation treatment types, using the five proposed treatment activities, are reviewed for use throughout the entire Plan Area (Figure 2-1). On average, UC Berkeley would implement vegetation treatment activities on 200 acres per year within the Plan Area. The Plan also identifies two fuel break projects, four TRAs, and three FHR projects within the Plan Area. Fuel breaks are proposed on Claremont Ridge and between the Hill Campus and the Hearst Gate to LBNL. The TRAs are proposed adjacent to Claremont Avenue, in two areas along Jordan Fire Trail, and adjacent to Centennial Drive in the Lawrence Hall of Science parking area. The FHR projects include vegetation treatments in Strawberry Canyon, Claremont Canyon, and on areas along Frowning Ridge. These nine specific projects are collectively referred to as the "Identified Treatment Projects" and are shown on Figure 2-2 in Volume II of this Final EIR.

The university does not have jurisdiction to implement vegetation treatments on private property or other areas outside of university jurisdiction. The university does conduct defensible space treatments under existing conditions, which have occurred in areas adjacent to private property, and previously implemented a fuel break at the eastern end of Canyon Road and Mosswood Road adjacent to residential areas. As described in Chapter 8, "Maintenance and Monitoring," of the WVFMP (see Appendix A to Volume II of this Final EIR), most maintenance actions have been conducted annually, however some treatments, such as the maintenance of the fuel break at the eastern end of Canyon Road and Mosswood Road on Panoramic Hill, are conducted on a periodic basis (i.e., every 3-5 years). The

[1] Based of subsequent correspondence with the commenter, it was determined that the map that was meant to be included in the comment is Figure 10 from the WVFMP.

university will continue to implement maintenance treatments adjacent to private property and LBNL, at intervals determined through ongoing monitoring.

Comment I24-4

Limiting the impact analysis, the Hill Campus – Plan Area does not completely evaluate the impact of the proposed plan. In the EIR the exposure of people to toxic air contaminants emitted by prescribe burning is addressed (Page E-8) and mitigation measures identified. This exposure is not limited to people who might be in the Hill Campus –Plan Area during prescribed burning, but to all people within the drift zone of the smoke created by the prescribe burns. Why was not such an expanded view taken in evaluating the wildfire impact?

Response I24-4

The comment points to the analysis of toxic air contaminants emitted by proposed prescribed burning under the WVFMP as an example where receptors beyond the Plan Area are considered and questions why wildfire risk beyond the Plan Area isn't similarly considered. As correctly identified by the comment and described in Section 3.3, "Air Quality," the analysis of exposure to toxic air contaminants considered receptors that could be exposed to smoke, which is not restricted to within the boundaries of the Plan Area.

As described in Section 3.12.3, "Impact Analysis and Mitigation Measures," in Volume II of this Final EIR, the analysis of environmental impacts on wildfire risk focuses on the potential for new or increased risks associated with wildfire, including impairment of an emergency response plan, exposing people or structures to uncontrolled fire, and post-fire risks such as slope instability or landslides, which included the general public within and outside of the Plan Area. As described under Impact WIL-1 in Section 3.12, "Wildfire," in Volume II of this Final EIR, a prescribed burn conducted under the Plan would exacerbate fire risk and could expose people or structures to uncontrolled spread of wildfire if a prescribed burn escaped beyond its designated area. However, given the extensive planning and preparation required prior to a prescribed burn, active monitoring and maintenance during a burn, and implementation of safety protocols, prescription burning under the Plan would not expose people or structures to uncontrolled spread of wildfire or otherwise substantially exacerbate fire risk. In the long term, as one of the primary purposes of the WVFMP, implementation of the treatment activities and maintenance treatments would reduce wildfire risk, which would benefit the public within and outside of the Plan Area.

As explained in response to comment O2-3, the WVFMP considers the potential for wildfire ignition outside the Plan Area. Because of this concern, the WVFMP considered a buffer of almost one-quarter mile outside the Plan Area in its modeling analysis (refer to figures 10 through 22 in the WVFMP, which is presented as Appendix A in Volume II of this Final EIR).

Comment I24-5

4. The "Regulatory Setting section of the EIR evaluates plans, policies, regulations, or laws applicable to the WVFMP. Under CAL Fire no mention is made of CAL FIRE's instructions for creating defensible space, which includes ""Remove branches that hang over your roof…" (https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/defensible-space/

The WVFMP (p. 18) states "Maintain at least 8 feet of vertical clearance between roof surface and overhanging portions of trees." This is in direct contradiction to CAL FIRE instructions.

Response I24-5

As described under "CAL FIRE" in Section 3.12.2, "Regulatory Setting," in Volume II of this Final EIR, PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on non-federal SRA lands, or non-federal forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material. The PRC, beginning with Section 4427, includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with internal combustion engines; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on site for various types of work in fire-prone areas. The WVFMP is being funded through a CAL FIRE grant and these requirements would apply to WVFMP treatments. PRC

Section 4291.5 requires that a person who owns, leases, controls, operations, or maintains a building or structure in, upon, or adjoining the areas described above shall maintain a tree, shrub, or other plant adjacent to or overhanding a building free of dead or dying wood. The WVFMP standards for defensible space, specifically the requirement to maintain at least 8 feet of vertical clearance between roof surfaces and overhanging portions of trees, does not contradict PRC Section 4291. Additional clarifying text has been added under "CAL FIRE" in Section 3.12.2, "Regulatory Setting," in Volume II of this Final EIR regarding fire safety statutes that are applicable to the proposed WVFMP:

> CAL FIRE is the California Department of Forestry and Fire Protection. It is dedicated to the fire protection and stewardship of over 31 million acres of the state's privately-owned wildlands. PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on non-federal SRA lands, or non-federal forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material. The PRC, beginning with Section 4427, includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with internal combustion engines; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on site for various types of work in fire-prone areas. In addition, PRC Section 4291 includes specific requirements regarding defensible space; requires the removal of trees within 10 feet of a chimney or stovepipe outlet; requires maintaining trees, shrubs, or other vegetation adjacent to or overhanging a building free of dead or dying wood; and requires maintaining the roof of a structure free of leaves, needles, or other vegetative materials. UC Berkeley complies with these requirements. The WVFMP is being funded through a CAL FIRE grant and these requirements would also apply to WVFMP treatments. Specific requirements under PRC section 4427 regarding equipment are incorporated into the WVFMP as EPM WIL-2 and EPM WIL-3.

The webpage provided in the comment was reviewed during the preparation of this response.

Comment I24-6

5. The treatment proposed in Sec□on 2.5.1 (p. 2-5) under "Evacuation Support Treatments" states:

"Vegetation treatment for evacuation support would focus on removing (including pruning) all trees prone to torching up to 100 feet from either side of major evacuation routes that could potentially block access if they fall. In certain specific situations hazardous trees taller than 100 feet with the potential to fall on a roadway that are located further than 100 feet from the roadway may be removed."

This treatment will leave individual trees within the 100 feet of the evacuation routes that would be prone to falling onto and blocking the evacuation routes due to high winds during future fires. Trees that are growing in small clumps or in close approximation tend to buffer the wind as a group. When individual trees are left by the removal of trees around them, they are less wind firm and can be toppled by the wind. In view of current experience with high wind velocities driving wildfires in California, this impact should have been analyzed in the EIR.

The following references point out the susceptibility of trees to windthrow if they are exposed to wind following forest thinning:

Busby J.A. 1965. Studies on the stability of conifer stands. Scottish For. 19 : 86-102.

Cremer K.W., CJ. Borough, F.H. McKinnel and P.R. Carter. 1982. Effects of stocking and thinning on wind damage in plantations. N. Zeal. J. For. Sci. 12: 245-268.

Mitchell, S. J. 2012. Wind as a natural disturbance agent in forests: a synthesis. Forestry: An International Journal of Forest Research. Vol. 86 Issue 2: 147-157

Savill, P.S. 1983. Silviculture in windy climate. For. Abs., (Review article), 44: 473-488

Response I24-6

The comment concerns trees remaining after treatment for evacuation support will be vulnerable to falling from increased exposure to wind. The impact of windthrow is considered when selecting trees to be retained. Those trees with poor root connection, or those leaning towards the road would not be selected to be retained. The area where

Evaluation Support Treatment was recently implemented adjacent to Centennial Drive provides an example of trees that fit the criteria for retention; these are trees that were deemed by an arborist to survive high winds and not block roads. Most of the trees considered for retention along roadways are hardwoods, whereas the citations noted refer to conifers, which have a different root structure and greater vulnerability to windthrow. For these reasons, the WVFMP would not be expected to pose a hazard to the public from windthrow.

Comment I24-7

6. In section 2.5.2 (p. 2-9) Description of Vegetation Treatment Activities the following statement occurs: "The treatment activity or activities selected 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. During the planning phase for a vegetation treatment, the appropriate treatment activity or activities would be selected that best match the operational needs and treatment constraints on the landscape."

This statement does not specify the specific treatment that will be used in a given site. It seems, therefore, that the environmental impacts of the treatments cannot be analyzed. If at this point there are a given number of treatments (e.g., manual, mechanical, prescribed burning, managed herbivory, herbicide application) any of these could be chosen for use at a particular site. Without knowing what particular treatment will be used one cannot evaluate the environmental impact.

Response I24-7

In designing future vegetation treatment projects, the university would select among the vegetation treatment types and activities, depending on site-specific conditions and treatment objectives. Then, the university will conduct a detailed, site-specific evaluation of the later vegetation treatment project to determine whether it is within the scope of this EIR; in other words, whether the activity is consistent with the activities described in this EIR and whether all potential impacts were addressed. This is outlined in State CEQA Guidelines Section 15168. Such evaluations must ascertain whether these later vegetation treatment projects are consistent with the activities contained in the WVFMP and would have effects that were analyzed in the EIR. If the UC Regents find that the impacts were analyzed in the EIR and no new or substantially more severe significant effects could occur or no new mitigation measures would be required for a later treatment project, the project can be found to be within the scope of this EIR. The documentation used to substantiate the "within the scope" finding would provide the substantial evidence required to reach that conclusion. For the WVFMP, this documentation would be provided in the Environmental Checklist for Later Treatment Projects Under the WVFMP (see Appendix B of Volume II this EIR).

Comment I24-8

7. The analysis of Alternative A: The McBride Plan Alternative does not use the same tools (LANDFIRE Version 1.40) to evaluate the alternative. It dismissed that alternative on the basis of:

- „ No broadcast prescribed burning would be conducted.
- „ No temporary refuge areas would be developed.
- „ No chipping of biomass or reuse onsite would occur; accordingly, pile burning would substantially increase relative to the WVFMP.
- „ A 300-foot-wide non-shaded fuel break would be created on the ridgeline between Strawberry and Claremont canyons (the WVFMP includes a 126-foot-wide non-shaded fuel break that extends from Frowning Ridge to Claremont Canyon).
- „ Water tanks would be installed on Grizzly Peak Boulevard.
- „ An Alameda whipsnake preserve would be created on the upper south facing slopes of Strawberry Canyon.
- „ Fire roads throughout both Strawberry and Claremont canyons would be widened and graded to accommodate the Type 3 fire engines purchased.

Response I24-8

As described under "Alternative Description" in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR, the list included in the comment is a summary of the key differences between Alternative A and the proposed WVFMP, which aided in the evaluation of the potential environmental effects that would occur under Alternative A relative to the Plan. It does not represent a list of the reasons that Alternative A was not selected as the Environmentally Superior Alternative. As described in Section 3.10, "Vegetative Fuel Models," LANDFIRE Version 1.40 was used to model fuel behavior within the Plan Area under existing conditions, with varying wind speeds. The conditions post-WVFMP implementation were not modeled; therefore, the university also did not model post-treatment conditions under any of the alternatives. Refer also to response to comment O9-22 regarding the modeling that was conducted and included in the proposed WVFMP.

Comment I24-9

These comparison between the McBride Alternative and the WVFMP overlooked the primary difference in the treatment of Eucalyptus. In the McBride Alternative all eucalyptus was proposed for removal and conversion to other types, while in the WVFMP not all areas of eucalyptus were proposed for treatment. This difference should have been evaluated by using the same tools as were used for evaluating the WVFMP.

Response I24-9

A summary of management prescriptions included under Alternative A, including the conversion of eucalyptus plantations to native vegetation, and considered in the environmental analysis of Alternative A are included in Table 6-1 in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR. All of the feasible components of Alternative A, including the treatment of eucalyptus trees, were evaluated by comparison to the proposed WVFMP using the same criteria used to evaluate the proposed WVFMP. As described under "Environmental Analysis of Alternative A" in Section 6.3.2, "Alternative A: The McBride Plan Alternative," in Volume II of this Final EIR, for most of the environmental topics analyzed for the proposed WVFMP, potential impacts would be greater under Alternative A (e.g., aesthetics; air quality; archaeological, historical, and tribal cultural resources; hydrology and water quality) largely due to the more extensive vegetation removal that would occur under Alternative A. Refer also to response to comment O7-7 regarding the level of detail required in the analysis of alternatives.

Comment I24-10

I also feel that the dismissal of the proposals for wider fuel breaks along the ridgeline between Strawberry and Claremont canyons and along evacuation routes was dismissed without really addressing in any quantitative way the effect of the alternative on fire characteristics. Ember production (maximum spotting distance) from conifer plantations along the ridgeline between Strawberry and Claremont canyons and the Panoramic private property development range from 500 to 2,000 feet (p. 56 - Figure 22 – WVFMP). This creates a significant problem for the homeowners in the Panoramic development that could be avoided by the ridgeline treatment of conifer plantations proposed in the McBride Alternative.

Response I24-10

Refer to response to comment Z-6 regarding the commenter's suggested development of a fuelbreak near the Panoramic Hill Community that removes all conifers from the ridgeline to minimize production of embers.

Comment I24-11

The analysis of Alternative A (McBride Plan) did not apply the LANDFIRE Version 1.40 model to contrast the McBride Plan with either the existing conditions or the WVFMP. Such comparisons should have been done before Alternative A was rejected.

Response I24-11

The LANDFIRE model addresses the effectiveness of the project, not its environmental impacts.

According to Section 15126.6(d) of the State CEQA Guidelines, "the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparisons with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the

comparison." The comment requests a direct comparison, and analysis, of the effectiveness of the alternative to the project. CEQA is concerned with the impact differences between alternatives, not whether one alternative is more effective. An analogy would be an EIR for a retail-residential mixed-use project. If an alternative was proposed that had a higher mix of retail uses, the differences in impacts between that alternative and the project would be conducted, but the EIR would not opine which was the better proposal from the standpoint of its marketability.

In this case, applying the LANDFIRE Version 1.40 model to contrast the McBride Plan with either the existing conditions or the WVFMP was not warranted because the selection of the Environmentally Superior Alternative is primarily concerned with the extent to which an alternative would avoid or lessen any of the significant environmental impacts of the proposed WVFMP, which would not be informed by LANDFIRE Version 1.40 model results.

Letter I25 Bev Von Dohre

October 4, 2020

Comment I25-1

I am concerned that your plan for fire prevention will cause catastrophic fire, not prevent it. I can't believe we are still trying to convince you to stop killing trees and spreading poison when the reasons to do so are already well known. There is enough cancer and chronic illness and pollution already and never enough trees to help protect us from fire and heat, as well as improve our health. If the money motive from from killing trees and poisoning the environment were removed as incentive, there is no rational reason for most of this plan.

Every shrub or tree killed increases the heat and dryness, and eliminates moisture that prevents fire. Plus, the more areas are opened up, the more they are inviting the main cause of fire: arson.

The densest forests are the safest, which is why the 1991 Oakland fire never went into the parks. When trees are removed, then highly flammable poison hemlock, thistles, and grasses replace them, which UC Berkeley should know from experience after cutting trees down. The heat intensifies too. Using grazing to control grasses is the best plan for the most flammable plants, but only if they don't kill young trees and large shrubs. Removing small, young trees destroys the ecosystem where having all stages of tree growth present is healthiest.

Wind is a major fire problem, so why open our lands to more sun and wind?

The most at risk environment for fire are the open highly flammabe grasslands, which dry out quickly and with nothing to stop the wind. We are told that most of the East Bay was rolling hills, but the original huge Redwood forest once extended to Moraga and Lafayette. That forest affected the entire East Bay, in increasing creeks that flowed year round to the bay (unlike now, where they soon dry up), helping prevent wildfire.

As our native oaks are dying, we need every tree we can get, which includes the species that are most drought resistant, such as the maligned but fire resistant Eucalyptus, Acacia, and native Douglas Fir (who tolerates cold, heat and rain, and happily grows with both Redwoods and native Pinus sabinina in drier areas). The fog drip from these magnificent long-lived trees keeps parts of the understory in the East Bay green year round. Areas that have only Monterey Pine also keep grass underneath green, which can be see in the East Bay hills even now.

After seeing the aftermath of our previous fire-ravaged areas, most Eucalyptus were unscathed and acted as windbreaks, protecting buildings. (Friends in the 1991 hills firestorm credit Eucalyptus with saving their homes.) They are also the preferred nesting tree for raptors, from eagles to owls to hawks, as well as for many other birds. Monarch butterflies now depend on them for survival. (If not planted together, they do not spread and make a diverse ecosystem with other trees, which I can show you, if you'd like.)

Response I25-1

The comment reiterates previous comments submitted by the commenter in an earlier comment letter (I20). Refer to response to comment I20-1 above regarding the use of herbicides under the proposed Plan.

Comment I25-2
There is no excuse ever to use pesticides/herbicides. These poisons contaminate the earth, air, and water. No amount is safe, and if those people advocating the use were the ones who actually got lymphoma and other cancers from them, they would ban them. Glyphosate is already in all of our bodies, as well as our ground water. It also pollutes where it's manufactured. Glyphosate has helped cause the toxic algae in our reservoirs, lakes and creeks, as well as making sprayed areas more flammable.

Response I25-2
The comment reiterates previous comments submitted by the commenter in an earlier comment letter. Refer to response to comment I20-2 above regarding the use of herbicides under the proposed Plan.

Comment I25-3
The use of heavy machinery listed in your plan also does tremendous harm, leaving trees and shrubs more flammable, and compacting and damaging the earth. Machinery also causes fires and poisons the land with oil, fuel, and other toxins that then washes into the creeks, and into the bay. One local agency even says: "Service and fuel heavy equipment only in areas that will not allow grease, oil, fuel, or other hazardous materials to pass into streams or retained vegetation. Remove from the site and properly dispose of all refuse, litter, trash, and non-vegetative debris resulting from vegetation treatment operations; Ensure that hazardous materials spill kits are available on all heavy equipment." How about not doing any of this?

Response I25-3
The comment reiterates previous comments submitted by the commenter in an earlier comment letter (I20). Refer to response to comment I20-3 above regarding the use of heavy equipment under the proposed Plan.

Comment I25-4
Instead of so harming the environment, killing countless animals, and increasing fire risk, why not plant trees until the land is again protected by a dense, moist forest? I suggest the versatile, long-lived, fast-growing Douglas Firs that can reach the height of Redwoods and who can water themselves from the fog drip they bring down. They are ideal for Berkeley.

Response I25-4
The comment reiterates previous comments submitted by the commenter in an earlier comment letter (I20). Refer to response to comment I20-4 above regarding the expressed opposition to the proposed WVFMP.

Letter I26 Ariane Eroy, Ph.D.

October 5, 2020

Comment I26-1
At a time when human-driven climate changes ravage this planet, we find men woefully complacent or disinformed about the dangers besetting all life on this planet, as well as the life of the Planet itself, a living being.

Locally, in the San Francisco Bay Area, the Cities are rapidly thinning and clearing away some of their oldest trees, Eucalyptus trees. These trees were planted intentionally over a century ago, and must be considered part of the historic legacy of the Bay Area, gracing our hills and largest urban forests.

These are some of the most spiritually evolved of all trees, living in the most austere environments, thriving in non-arable soils under drought-like conditions, living off fog, and bestowing shade, medicine and a forest-haven to both animals and stressed-out city-dwellers alike. Stoic, invisible and divinely generous, they clean our air of toxic particulates, they diminish the City's din and whipping winds, they sequester tons of carbon dioxide in their towering trunks and roots, and they lower the dangerously escalating temperatures of the Planet.

Yet these trees are demonized and denigrated: People even claim that the Eucalyptus "don't belong here", stating that these trees are "non-native" as they originate from Australia. But aren't all the complaints arising from Americans who have immigrated from other lands?

Nativists employ bigoted tropes and relentlessly aim to condition ordinary people to believe that these trees are dangerous or "invasives" --even while humans number over 7 billion, and threaten all life on the Planet! (Certainly this must be considered an act of projection of our unwanted characteristics onto others--in this case, onto other life forms that have different ways of knowing and being).

People insist that these trees are "inflammatory", even though no plant nor animal, nor building, is impervious to fire. These majestic trees are blamed for forest fires, fires that are largely manmade, and ordinarily emerge out of native shrubs and grasses. (In the case of the 1991 Oakland Hills Fire, the Oakland Fire Department walked away from the fire while it lay nestling in the grasses. Twelve-hours later, the wind whipped up the embers, and instead of taking responsibility, the Fire Department blamed the trees.).

Let it be known: These vitally alive, drought-resistant trees work for us every day of their lives: They provide us with oxygen and are our silent comrades, invisibly fighting against catastrophic climate change. They are essential for the healing, and environmental protection of the Bay Area. Yet they are being felled in the tens of thousands by aggressive businessmen, greedy developers and money-worshipping speculators who claim we can continue an ethos of unsustainable and reckless expansion without end. University buildings will not give us oxygen!

What are these trees supposed crimes? The Eucalyptus are only 125 years old, but they can live to be 500 years old, if allowed to do so. They reside on highly coveted land.

These lands are part of the Commons, and as such, the forests belong to all of us.These trees are our neighbors. They are part of our communities. Each life is sacred, and each tree has a divine purpose to help save Humanity, from itself, from the lip of extinction upon which we all hover. Such forests belong both to the present and the future--should we hope to live!

Response I26-1

The comment expresses opposition to the removal of eucalyptus trees. Refer to Master Response 1 and responses to comments O2-3 and O6-10 regarding eucalyptus trees and associated wildfire risks and the effectiveness of the proposed Plan at reducing the risk of wildfire. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I26-2

SAVE Thousands of Trees on Mount Sutro Forest from Being Felled by UCSF

1. The fossil fuel companies and our government--with its institutions--aim to deflect responsibility from themselves. In order to thwart new laws and regulations, they convince Americans that the real change needs to be at the individual level, and that that should be adequate: That people need merely to recycle more, use screwy lightbulbs, or refuse plastic straws. We need to expose this fallacy--that it is our government, our corporations, and our institutions that need to stop deflecting responsibility. Public policies must be changed. Lifestyle changes are insufficient.

2. Forests that are destroyed can not be replaced. These are living ecosystems, and when these trees are killed, something invaluable is lost--in terms of what towering trees give us. We need the courage to speak up as they are our silent soldiers fighting on our side to save the planet. Truly our lives are dependent on theirs. Naomi Oreskes, the bestselling New York Times author of Merchants of Doubt, has identified fossil fuel usage and deforestation as the 2 major factors accelerating catastrophic climate change.

3. The communities that emit the least pollution are hit the hardest when it comes to the climate emergency. This is part of the reason why we need an objective discussion of what needs to be done--not leaving it to those with the least resources and the least resiliency to come up with solutions. We have a duty to help create policies that combat environmental racism.

"The Culture of creation is diversity, which is the basis of every nation and of every religion. Try to remove these differences and you only provoke destruction. You must respect the laws of diversity to maintain harmony or peace." [Maitreya, London]

4. Trump has dismissed Nixon & Reagan's environmental policies, despite their having addressed particulate pollution, mitigated ozone & acid rain. The White House has dismantled regulations on methane emissions--with methane being 85 times more potent a greenhouse gas than carbon dioxide and a product unleashed by fracking. Trump supports Brazil's development and decimation of the Amazon.

5. At present, UCSF intends to radically thin San Francisco's largest urban forest on Mount Sutro. They are fragmenting the forest by creating "open spaces" and native gardens which can only invite disease and dangerously desiccate the forest floor. (Presently Mt. Sutro's forest is damp all year long from the fog, which makes it impervious to fire.) By degrading Mount Sutro, UCSF prepares the Forest for development. In order to accomplish such a feat, the University has partnered with Nativists, who have repeatedly used the corporate-controlled media to condition the Pubic to fear, if not hate, certain species of trees. Employing the same kind of bigoted tropes against Eucalyptus trees that have been used against Native Americans for centuries, Nativists hope we will fail to see the holes in their rhetoric, for they deny that their clearcutting agenda accelerates climate change. And while promoting the replacement of towering 125-year old trees with native shrubs and grasses, they aim to incite fear against forests themselves. Like many populist movements, they attempt to determine what species "belong here". And while they denounce certain species as being "dangerous" and "invasive", they ignore the fact that—at present—humans could be denounced as "invasive", as Humanity threatens all life on Earth!

6. Merely 100 companies are implicated in releasing 71% of global carbon emissions. They are endangering all life on the planet. As such, they need to be taxed, regulated and eventually closed down. We can boycott or diminish usage of fossil fuels, while embracing a future where green energy choices grow increasingly plentiful and accessible to all. Mount Sutro is our local version of the Amazon--will we permit thousands of its trees to be razed?

Let it be Known: These trees reside on public land and are part of our community. UCSF has plenty of space to install native gardens at Mission Bay, on the roof of Milberry Garage, or over its miles' of sidewalks. UCSF's buildings will never provide us with oxygen, nor sequester carbon dioxide. Please take a stand about our world's most pressing problems and help protect our largest urban forest from reckless development. Educate yourself at: sfforest.org.

Response I26-2
The comment expresses discontent with tree removal and vegetation treatment projects being implemented by the University of California, San Francisco. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Letter I27 Isis Feral

October 5, 2020

Comment I27-1
This may be the most honest UC Draft EIR I've seen, at least in so far that for once the alternatives offered are not merely slightly altered versions of themselves, but demonstrate more clearly two opposing sides of a political and scientific debate that has been ongoing for many years (I've personally been in the fray of it since early 2005).

The so-called "No Project Alternative" is not, as one might expect, a ceasing of all vegetation management activity in the Hill Campus, but represents the established status quo of typical, routine UC Berkeley vegetation management practices, which includes pesticide use and removal of trees. I oppose this option.

Response I27-1
The commenter's opposition to the No Project Alternative, including tree removal and the use of herbicides, will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I27-2
"Alternative A - The McBride Plan Alternative" represents the ideology of nativist organizations, who irrationally vilify vegetation on the basis of origin, and fantasize about returning the East Bay landscape to an arbitrary point in recorded history, with a very different climate, by removing and poisoning most of the trees in the hills. I oppose this option.

Response I27-2
The commenter's opposition to Alternative A will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I27-3
"Alternative B - The Reduced Treatment Alternative" incorporates the end of toxic pesticide use that has been demanded by environmental health activists, especially those of us who have suffered disabling pesticide injuries, for many years, but it still targets entire generations of younger trees for removal, and continues to do so based on species-specific prejudice. I oppose most of this option, but support the trajectory of some of it.

Response I27-3
The commenter's opposition to tree removal under Alternative B and support for a prohibition on pesticide use under Alternative B will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I27-4
Unfortunately the DEIR does not adequately address the political and scientific debate that is at the core of this process, and the attempt to summarize public comment - as opposed to simply including them verbatim and allowing us our own voice, ends up brushing aside the political aspects of our comments as not relevant to the CEQA process, and not worthy of acknowledgement.

It should be reasonable to expect university experts to be familiar with all discourse in their field of expertise, and to be willing and able to discuss the contributions of others working in the field. But the work of experts I cited in my initial comments, and in comments I submitted to UC Berkeley many times over, has never been addressed in any of the university's environmental reviews I've participated in. The references in this DEIR are again one-sided, largely citing related agencies of continuously self-perpetuating bureaucracies, and no dissenting views are represented or discussed.

I know I was not the only one who urged authors of the EIR to especially consider the work of conservation biologist David Theodoropoulos, who wrote an important, and often cited critique and challenge of so-called "Invasion Biology", the pseudoscience that some of the actions in this DEIR are based on. I don't see him, or his colleagues who hold similar perspectives, cited or mentioned anywhere, except in the summary of our public comments. I even provided you with a link to a presentation Theodoropoulos gave to a full hall of local opponents of projects like the one discussed in this DEIR (in fact, including a previous iteration of this very project) (https://www.youtube.com/watch?v=n1i3RP7eDFc) , as well as a link to where he can be contacted (http://dtheo.org/InvasionBiology.htm).

The plan outlined in this DEIR, and the vilification of so-called "non-native" species as the primary source of fire danger, are in large part based on false premises that are not grounded in science, a concern that should certainly be relevant to an environmental review commissioned by a university. I request again that authors of the EIR educate themselves about the political, scientific, and above all ecological fallacies of this long outdated and debunked myth of "Invasion Biology".

Response I27-4

The comment includes links to a website and presentation by a conservation biologist, both of which were reviewed by the university and will be provided to decision makers regarding the proposed WVFMP. The exact text provided in each comment letter is provided in this response to comments documents; refer to Appendix A in Volume I of this Final EIR for a copy of each comment that was submitted during the public review period. Refer also to response to comment O9-22 regarding the professional wildland fire manager/fire ecologist that was retained by UC Berkeley to prepare the WVFMP, Master Response 1 regarding consideration of eucalyptus trees and associated wildfire risks, and responses to comments O2-3 and O6-10 regarding the effectiveness of the proposed Plan at reducing the risk of wildfire.

Comment I27-5

"Alternative A" is clearly described as "conversion" from the living forest that now occupies the Hill Campus to native vegetation. It is an aggressive native plant "restoration" project, that has nothing to do with fire safety, which is the stated purpose of this environmental review process, and should not be considered a legitimate proposal for protecting the East Bay from catastrophic fire events.

The "McBride Plan" follows a by now well established and deliberate pattern of panic mongering, of exploiting the public's fear of fire to push through ideologically based, unnecessary and destructive "restoration" projects. At the 2004 Symposium of Cal-IPC, the California Invasive Plant Council, it was reported in the archived notes of the Trees & Shrubs Working Group, that during a discussion about "Dealing with community opposition to weed removal projects" someone, citing the Golden Gate National Recreation Area (GGNRA) as an example, made the recommendation to "use threats of fire danger to help build support for invasive plant removal projects" (page 98, http://www.cal-ipc.org/docs/symposia/archive/pdf/18854.pdf).

It should be noted that Cal-IPC was started as the California Exotic Pest Plant Council (CalEPPC) in 1992 by representatives of various government agencies, environmental nonprofits, and the pesticide industry. Among its founding board members was Dr. Nelroy Jackson, Technical Development Manager for Monsanto, who helped develop glyphosate herbicides for "habitat restoration markets". Cal-IPC became the model for many more groups like it, which should be regarded as industry front groups, with priorities of profiteering, not of public or ecological health and safety.

Response I27-5

The commenter's expression of opposition to Alternative A will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP. The comment expresses opposition to Alternative A: the McBride Plan Alternative and provides background information regarding the Cal-IPC. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I27-6
This EIR is supposed to focus on protecting people from fire. Trees pose the least fire risk, and are considered a fire mitigation factor by professional firefighters. The greatest fire danger is posed by human development, not vegetation. Human infrastructure and activities are the primary cause of fire, including from electrical equipment, propane tanks, gas lines and gas guzzling vehicles, accidents, arson, and the exquisitely flammable tinder boxes people live and work in that are made of dead, dry trees and explosive fuels. That's where fire safety needs to be addressed.

Response I27-6
Refer to response to comment O9-22 regarding the professional wildland fire manager/fire ecologist that was retained by UC Berkeley to prepare the WVFMP, Master Response 1 regarding eucalyptus trees and associated wildfire risks, and responses to comments O2-3 and O6-10 regarding the effectiveness of the proposed Plan at reducing the risk of wildfire.

Comment I27-7
UC has repeatedly indicated that as part of its ongoing expansion it plans to build more housing and infrastructure, and further encroach on the forest in the Hill Campus area. Since this DEIR continues to promote the same nativist fallacies that do not serve to protect the community from catastrophic fires, it is obvious that it is simply another ruse to push through development under the guise of public safety. I urge the authors of this EIR not to allow your work to be used for this purpose.

While I certainly support safeguarding our communities from catastrophic fires, I cannot support the means proposed in this DEIR.

I wholeheartedly support that "Alternative B" would eliminate the use of pesticides in this project, and I urge the university to follow this trajectory to its natural conclusion and ban all pesticide use on all UC campuses once and for all!

But I continue to oppose the removal of large numbers of trees. Targeting trees under 18 inches in diameter would allow eliminating the entire younger generations of trees in the forest community. If it were a human community so targeted we would call it genocide, and the implications of doing so to a forest are no less dramatic.

Response I27-7
The commenter's expression of opposition to tree removal and herbicide use proposed under the WVFMP and support for the prohibition of herbicide use under Alternative B will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I27-8
Though some concerns I've brought up in previous comments may have been addressed to varying extent in this DEIR, I again include the short comments I submitted for the live online hearing on September 14, 2020, as well as my extended comments I submitted during the scoping period on December 20, 2019. I ask that all public comments received in this process be included in full in the Final EIR, so that they can contribute and facilitate much needed ongoing debate about these issues.

Response I27-8
The comment states that previous comments that have been submitted are included again and requests that they be included in the Final EIR. All of the comments received during the public review period for the Draft EIR are included in Appendix A in Volume I of this Final EIR. Refer to responses to comments I15-1 to I15-3 for the responses to comments submitted for the online hearing held on September 14, 2020.

Letter I28 Anastasia Glikshtern

October 5, 2020

Comment I28-1

I.

The "targeted ground application of herbicides" proposed by the EIR is unacceptable.

As a science organization you should know that they must not be used anywhere on Earth:

- They are more toxic, more persistent, more mobile and more dangerous than their manufacturers disclose;
- Numerous scientific studies associate exposure to herbicides with cancer, developmental and learning disabilities, nerve and immune system damage, liver or kidney damage, reproductive impairment, birth defects, and disruption of the endocrine system;
- There is no safe dose of exposure to those chemicals because they persist in soil, water, and
- animal tissue, so even low levels of exposure could still accumulate and harm humans, animals, and the environment;
- Especially vulnerable individuals include infants, children, pregnant women, the elderly, people with compromised immune systems and chemical sensitivities;
- Toxic runoff from herbicides pollute streams and groundwater, and therefore the drinking water sources;
- Herbicides are harmful to pets and wildlife – including threatened and endangered species, plants, and natural ecosystems;
- Herbicides are harmful to soil microbiology and contaminate soil into the future, reducing biodiversity in sensitive areas.
- People have a right not to be involuntarily exposed to herbicides in the air, water or soil that inevitably result from chemical drift and contaminated runoff.

Response I28-1

The comment reiterates previous comments submitted by the commenter in an earlier comment letter (I16). Refer to response to comment I16-2 above regarding the expressed opposition to the proposed WVFMP.

Comment I28-2

II.

As all recent catastrophic fires clearly demonstrated so-called "native" species are as flammable as so-called "exotic invasive species".

So-called "restoration" is actually the destruction of existing habitat.

Even though the so-called "native" trees are selected by staff – it doesn't mean they wouldn't burn. They are as much – or more - fire hazard as the big, mature, healthy "exotic" trees being mindlessly killed. And, of course "native" grasslands and shrubs burn best.

This plan for fire prevention is more likely to cause fire than prevent it.

Every tree killed increases the heat and dryness, and eliminates moisture that prevents fire. With elimination of trees there is more wind - another major fire problem.

We need every tree we can get, particularly the species that are most drought resistant, including Eucalyptus, Acacia, and Douglas Fir. The fog drip from these long-lived trees keeps some of the understory green year round.

Keep the trees. Ban herbicides.

Response I28-2
The comment reiterates previous comments submitted by the commenter in an earlier comment letter (I16). Refer to response to comment I16-3 above regarding the expressed opposition to the proposed WVFMP.

Letter I29 Stephanie Thomas

October 5, 2020

Comment I29-1
I am writing to oppose any aggressive Plans for cutting down trees on the UC property (which is public land) and of continued use of pesticides in these lands.

Response I29-1
The comment expresses opposition to tree removal and use of pesticides. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I29-2
I oppose the No project Alternative as it would keep the current UC practices which is cutting trees and using pesticides.

Response I29-2
The commenter's expression of opposition to the No Project Alternative will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

Comment I29-3
I also oppose Alternative A which labels many of the tree, which have been there for years, Invasive. Returning these lands to a past period in history is not practical and is dangerous. You need only to see all the fires spreading many of which are grass fires. Our hills w/ the tall trees w/ there fog drip are still standing. despite the unconscionable firworks activity on the outlooks.

Response I29-3
The comment expresses opposition to Alternative A and returning lands to historical grassland conditions. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I29-4
We need to keep the forest w/ the current habitat for our fire safety and for the protection of the plants and animals that live there.

Response I29-4
The comment expresses the desire for the continuation of current habitat conditions. No specific issues related to the content, analysis, or conclusions in the Draft EIR are raised in this comment. No further response is warranted, and the comment will be provided in the record for consideration by decision makers.

Comment I29-5
Some of UC's plans are to build structures on parts of its lands. This would be adding to the fire danger because humans would be encroaching w/ cars, and other equipment. Minimal breaking up of the lands is the safe plan

Response I29-5
As described in Section 2.1, "Plan Overview," in Volume II of this Final EIR, vegetation treatments are proposed within the Plan Area and are the subject of the EIR; no buildings or structures are proposed as a part of the WVFMP.

Comment I29-6
Alternative B sounds good as it reduces the pesticides, but too many younger trees are targeted. This plan has some good aspects.

Response I29-6
The commenter's expression of support for the prohibition of herbicide use under Alternative B will be provided to the UC Regents for consideration in its decision-making process regarding the WVFMP.

2.2.5 Comments Received Outside of Review Period

Letter Z **Joe R. McBride**

August 4, 2020

Comment Z-1
I am very impressed with science and understanding of fuel management that went into the plan. The modelling was very informative and the details of various fuel management methods were well developed. I was also impressed with the plans for treating the wood waste that would be generated by the various fuel management methods. Carol Rice and Wildland Resource Management should be complemented for an outstanding job.

Response Z-1
The comment complements the preparers of the WVFMP and the plan itself. The preparers acknowledge and appreciate the complement. No further response is warranted.

Comment Z-2
I do have a few questions that arose as I read the plan:

1. p. 18 – "Maintain at least 8 feet of vertical clearance between roof surface and overhanging portions of trees."

This is in contradiction to CalFire instructions for creating defensible space: "Remove branches that hang over your roof…" (https://www.readyforwildfire.org/prepare-for-wildfire/get-ready/defensible-space/)

Response Z-2
Refer to response to comment I24-5 regarding the contradiction raised in the comment.

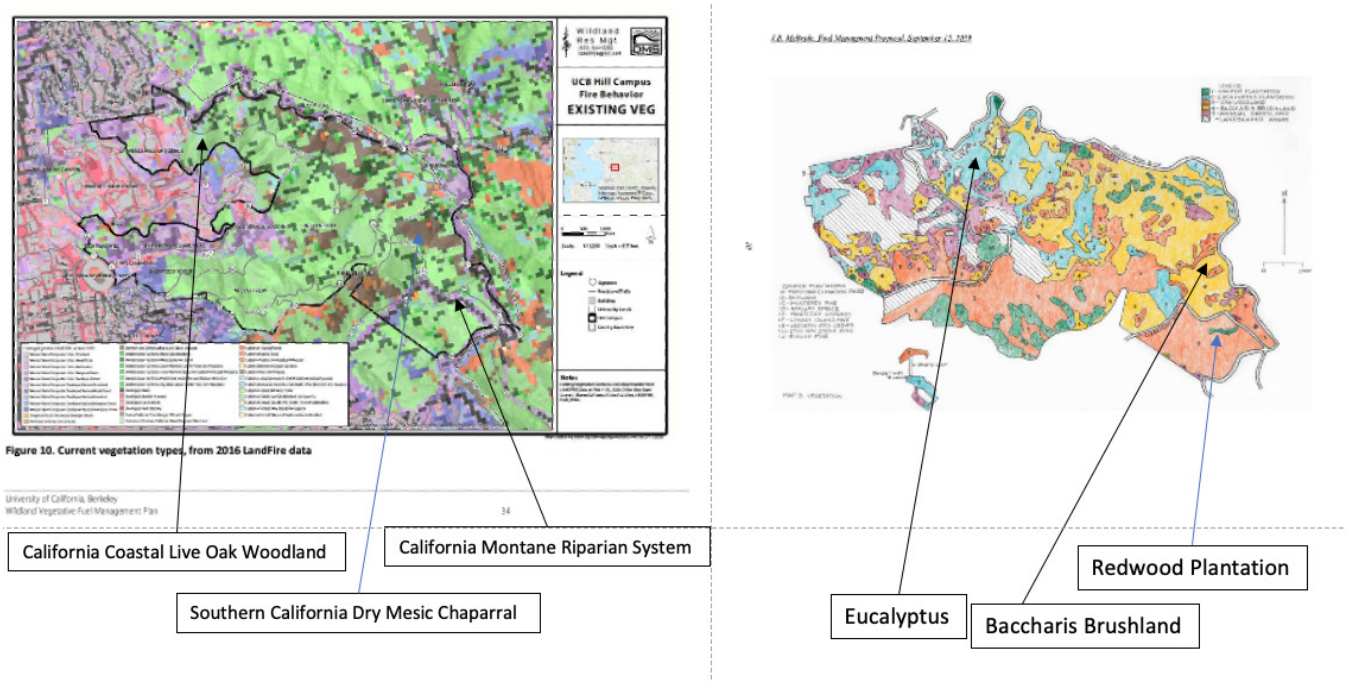
Comment Z-3
2. p. 19 – "Grassland vegetation and invasive weeds will be mowed to a 4-inch height or treated with herbicide annually."

Treating grass and weed with herbicides kills the plants and leaves in place dead fuel that dries out quickly. If herbicides are used the dead fuel should be removed. Mowing before annual grassed have set seed can usually result in some decay of the cut grass, but mowing once grasses have cured will only create a surface fuel problem. Grass cutting or grass and weeds that have been killed by herbicides should be removed to reduce fuel loading.

Response Z-3
In the past, herbicide application on grasses was timed early in the spring, prior to significant growth and almost always before it set seed, as a way to minimize the amount of herbicide used. Current university policy highly restricts the use of herbicides; however, text in Section 2.4.4.2, "Standards for Defensible Space" in the WVFMP (Appendix A in Volume II of this Final EIR) has been changed to indicate that herbicides would be applied to grass before it grows to four inches, on the average, in height. Past experience of the university with cutting grass in the Hill Campus has shown that the cut grass blows away or otherwise is distributed from the site. As the comment notes, cut grass first re-arranges the fuel such that it is compact. In small areas and in unusual circumstances, those locations where the cut grass remains on the ground, it burns with a slower rate of spread and shorter flame lengths because of its compact nature.

Comment Z-4

3. p.34 - The vegetation Map (Figure 10. Current vegetation types, from 2016 LandFire data) incorrectly identifies several vegetation types. For example, see maps below:



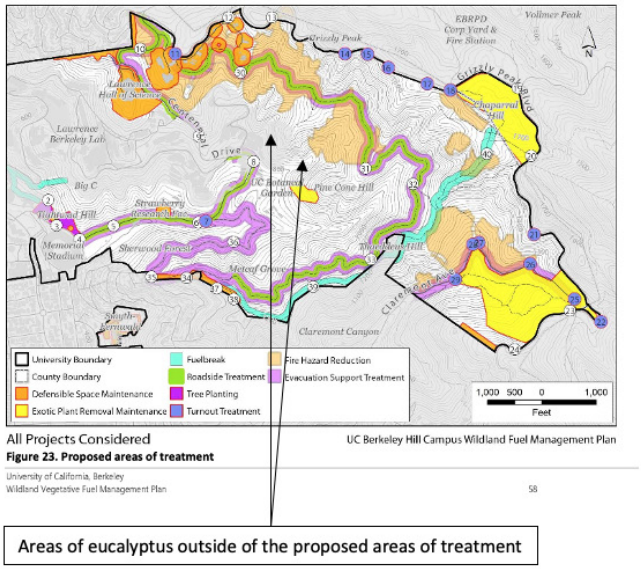
This misidentification affects the results of the fire models. Eucalyptus plantations have much larger fuel loading, exfoliating bark, and aromatic compounds in the leaves which contribute a much greater fire danger, greater fire line intensity, greater propensity to torching and crown fires, and greater production of embers that can cause more spot fires than California Coastal Live Oak Woodlands. Baccharis brushland, on the other hand, presents much less fire hazard than Southern California Dry Mesic Chaparral.

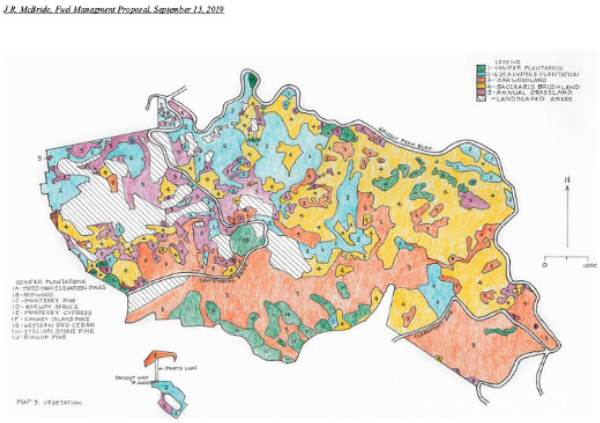
Response Z-4

Refer to response to comment I24-2 regarding the identification of vegetation communities.

Comment Z-5

4. p. 58 – Figure 23. Proposed areas of treatment shows 3 areas for exotic plant removal maintenance. These are areas where eucalyptus had previously been removed and came back via sprouting and seedling establishment. The map also shows several units designated as Fire Hazard Reduction. Both of these treatment areas support eucalyptus, but there are other areas of eucalyptus that are not designated for any treatment. I believe all areas of eucalyptus should be removed.





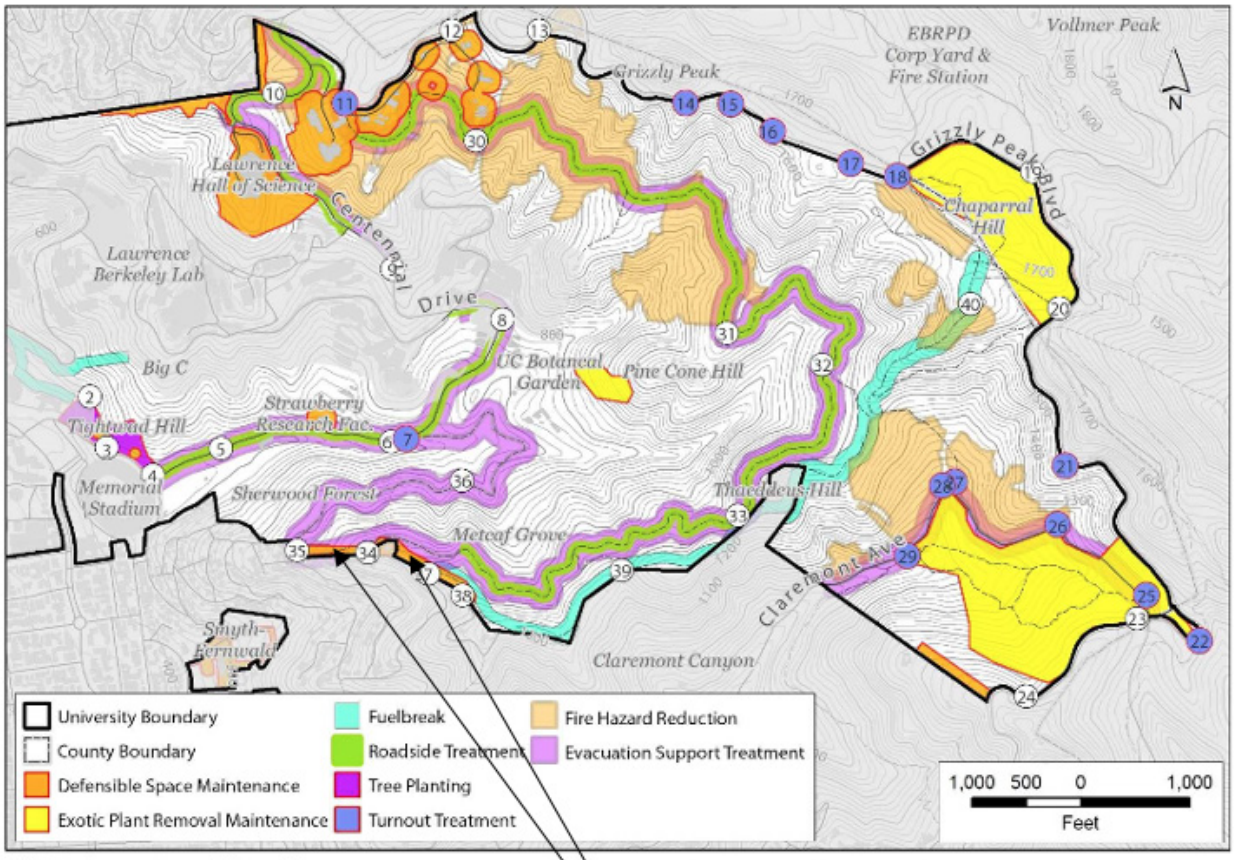
Areas of eucalyptus outside of the proposed areas of treatment

Response Z-5

The comment recommends removal of eucalyptus outside the Identified Treatment Areas. The commenter's recommendation will be considered for a future treatment under the WVFMP. The WVFMP and EIR consider future vegetation treatments and the long-term management of vegetation throughout the Hill Campus, as explained in response to comment O1-2.

Comment Z-6

5. p. 66 – Treatment indicates that Monterey pine will be removed from fuel breaks. The Proposed areas of treatment (Figure 23 – above) indicated that the fuel break coming down from Grizzly Peak Boulevard ends near the top of the Panoramic neighborhood and that the boundary between the Panoramic neighborhood and University property will be treated as defensible space maintenance zone. I do not think defensible space treatment will provide the adjacent property owners with the protection from fires moving up the north facing slope of Strawberry Canyon. I believe a continuation of the fuel break would be a better treatment of this area. Removal of the conifers from this ridge would also minimize the production of embers that could result in spot fires in the Panoramic neighborhood during a fire being driven by northeasterly (Diablo) winds. See below:



All Projects Considered

UC Berkeley Hill Campus Wildland Fuel Management Plan

Figure 23. Proposed areas of treatment

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Replace Defensible Space maintenance with Fuel break

Response Z-6

The comment recommends development of a fuelbreak near the Panoramic Hill neighborhood that removes all conifers from the ridgeline to minimize production of embers. Areas adjacent to structures along the border of university property have been designated for defensible space treatment and are currently maintained as such in ongoing treatments. Defensible space treatments are described in Section 2.4.4.1," Defensible Space and Roadside Treatments," in the WVFMP (Appendix A in Volume II of this Final EIR). Defensible space treatments remove more vegetation, are treated annually, and therefore provide greater localized protection than a fuelbreak. In defensible space treatments, grasses are cut annually and all dead material is removed. As in fuelbreaks, defensible space treatments prescribe that trees are to be pruned of lower branches, and shrubs are to be kept short under trees. Young pine trees are nearly absent in the stand. In the area of the Panoramic Hill neighborhood the conifers have recently been thinned, and branches typically start 20 feet or higher above the ground. In addition, the Jordan Fire Trail – a fuel-free zone 15-20 feet wide - bounds this stand to the north. Stands with these fuel characteristics have an extremely low chance of torching, because the flames from mowed grass or chips will have to reach the forest canopy 20 feet above the ground, which is unlikely. As in the past, unhealthy and dying Monterey pine trees in the area are removed.

If conditions change, the strategy in Section 8.5, "Adaptive Management," of the WVFMP allows for modification of treatments, possibly to include a proposed fuel break in the area identified by the commenter. The programmatic nature of the EIR provides a framework for this flexibility, as explained in response to comment O1-2.

Comment Z-7

6. p.86 – I do not believe the 80/20 rule should be applied to Eucalyptus. Where eucalyptus was previously cut and re-emerged from stump sprouts and seedlings it took over sites. The last line of section 8.4.1 (Exotic species management) states:

"To prevent the successful resprouting of treated exotic trees, all observed resprouts must be removed/treated within one year of the initial treatment (generally the cut-stump method) of exotic trees."

I think this needs to be amended by stating that all observed resprouts that occur beyond one year of the initial treatment must be removed. Monitoring of the areas where eucalyptus has been removed (as described in section 8.2.5) will be very important in the removal of the eucalyptus.

Thank you very much for considering these proposed changes to the UC Fire management Plan.

Response Z-7

The comment recommends revising text in Section 8.4.1, "Exotic Species Management," of the WVFMP to state that all observed resprouts that occur beyond one year of the initial treatment must be removed. The university monitors and re-treats (e.g., pulls up) eucalyptus sprouts in many areas of the Hill Campus, as shown in the Exotic Plant Removal Area of Figure 2 in the WVFMP. It is the university's intent to keep areas of treated eucalyptus from resprouting and or free from eucalyptus seedlings; clarifying text has been added in Section 8.4.1 of the WVFMP (see Appendix A of Volume II of this Final EIR) to reflect this intent.

3 REFERENCES

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2020. California Fire Hazard Severity Zone Viewer. Accessed October 28, 2020. https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414

Byram, G.M. 1959. Combustion of forest fuels. In Forest fire: control and use. Edited by K.P. Davis. McGraw-Hill, New York. pp. 61–89.

East Bay Regional Park District. 2009 (July 17). *Wildfire Hazard Reduction and Resource Management Plan*. Oakland, CA. Prepared by LSA Associates, Inc., CA.

EBRPD. *See* East Bay Regional Park District.

Federal Emergency Management Agency. 2014 (November). Final Hazardous Fire Risk Reduction Environmental Impact Statement.

FEMA. *See*. Federal Emergency Management Agency.

Holland, R. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game Natural Heritage Program. Sacramento, CA.

Koo, E., P.J. Pagni, D.R. Weise, and J.P. Woycheese. 2010. Firebrands and spotting ignition in large-scale fires. *International Journal of Wildland Fires*, 19: 818-843.

Martin, R.E., M.A. Finney, and J.J. Valentino. 1988. E. Fuel Conditions and Potential Fire Behavior at Angel Island State Park. Final Report to California Department of Parks and Recreation. April 1988.

Rice, C.L. and R.E. Martin. 1985. The use of BEHAVE on the shrublands at the urban interface. pp. 270-275. In Proceedings, 8th Conf. on Fire and For. Meteorology. Linda Donaghue and Robert E. Martin, Editors. May 1985. Society of American Foresters. 303p.

Rothermel, R.C. 1983. How to Predict the Spread and Intensity of Forest and Range Fires Gen Tech Report 143. https://www.fs.fed.us/rm/pubs_int/int_gtr143.pdf

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation*. Second edition. California Native Plant Society Press, Sacramento, California, USA.

Trelles, Javier and P.J. Pagni. 1997. Fire-induced Winds in the 20 October 1991 Oakland Hills Fire. In Yuji Hasemi (ed.), *Fire Safety Science - Proceedings of the Fifth International Symposium* pp. 911-922.

U.S. Fish and Wildlife Service. 2004 (April). Draft Guidelines for Section 10(a)(1)(A) Permits Specific to the Alameda Whipsnake. April 14, 2004.

———. 2020. National Wetlands Inventory. Available: https://www.fws.gov/wetlands/data/mapper.html. Accessed May 18, 2020.

USFWS. *See* U.S. Fish and Wildlife Service.

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