UNIVERSITY OF CALIFORNIA
WILDLAND FIRE HAZARD REDUCTION PROJECT

Addendum No. 1 to the
LBNL 2006 Long Range Development Plan
Final Environmental Impact Report
and
UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan
Final Environmental Impact Report

Prepared by:

University of California
Lawrence Berkeley National Laboratory
One Cyclotron Road
Berkeley, California 94720
and
University of California, Berkeley
Physical & Environmental Planning
200 A&E Building
Berkeley, California 94720-1382

Contact: UC LBNL Campus Planning Department
Jeff Phillliber, Sr. Site & Environmental Planner
jgphilliber@lbl.gov

UC Berkeley Physical & Environmental Planning
Raphael Breines: Sr. Planner
rbreines@berkeley.edu

October 2023

TABLE OF CONTENTS

Tables

Figures

Appendices

1.0 PROJECT INFORMATION

Project Title:	UC Wildland Fire Hazard Reduction Project
Lead Agency:	The University of California Lawrence Berkeley National Laboratory (UC LBNL, the University, or Berkeley Lab) and UC Berkeley
Location:	Lawrence Berkeley National Laboratory One Cyclotron Road Berkeley, California 94720 University of California, Berkeley Physical & Environmental Planning 200 A&E Building Berkeley, California 94720-1382
Applicant:	See Lead Agency Above
Existing LRDP Designation:	**UC LBNL:** Academic & Research; Perimeter Open Space **UC Berkeley:** Hill Campus West; Hill Campus East
Existing On-site Land Use:	Two of the project sites are undeveloped land. The third site includes undeveloped land and a parking lot.
Surrounding Land Uses:	LBNL lab/office buildings and open space; UC Berkeley open space, athletic facilities, and student housing.
Description of Project:	See Project Description in **Section 3.0** of this document.
Responsible Agencies:	N/A

Previous documents incorporated by reference:

This environmental analysis incorporates by reference the text in the following documents:

- Lawrence Berkeley National Laboratory 2006 Long Range Development Plan Final EIR (SCH No. 2000102046) https://gcr.lbl.gov/community/environmental-documents
- Seismic Life Safety, Modernization and Replacement of General Purpose Buildings, Phase 2 Project (Including Supplementation of the UC LBNL 2006 LRDP EIR with respect to Traffic Impacts at One Intersection) Final EIR (SCH No. 2008122030) https://gcr.lbl.gov/community/environmental-documents

- Building 59 Upgrade & Installation and Operation of NERSC-9 (Including Supplementation of the 2006 LRDP EIR with respect to Greenhouse Gas Emissions and Energy Impacts) Final EIR (SCH No. 2016062007) https://gcr.lbl.gov/community/environmental-documents
- UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan Final EIR (SCH No. 2019110389) https://capitalstrategies.berkeley.edu/environmental-review

The UC LBNL documents are available for review at the following location:

- Lawrence Berkeley National Laboratory
  c/o Jeff Philliber
  1 Cyclotron Road, Bldg. 76
  Berkeley, California 94720-8281

The UC Berkeley documents are available for review at the following location:

- UC Berkeley
  Physical & Environmental Planning
  200 A&E Building
  Berkeley, California 94720-1382

2.0 INTRODUCTION

2.1 PURPOSE OF THIS ADDENDUM

The University of California, Lawrence Berkeley National Laboratory (UC LBNL or Berkeley Lab) and the University of California, Berkeley propose to jointly implement a wildland fire hazard reduction project in three areas of the Berkeley Lab campus and adjoining areas of UC Berkeley on lands owned by the Regents of the University of California. This proposal is hereinafter referred to as the project. The primary project goal is to reduce wildfire risk on and in the immediate vicinity of the Berkeley Lab in order to protect Berkeley Lab and the City of Berkeley Hill community in the event of a wildfire event. A second goal is to ensure the integrity of Berkeley Lab's primary evacuation/emergency vehicle ingress route via Cyclotron Road.

The project would be undertaken by the University of California (UC or University). As the lead agency, the University must evaluate the potential environmental impacts of the proposed project in compliance with the California Environmental Quality Act (CEQA). The project is unique in that while the project sites are owned by the University, the project sites are located on both UC LBNL- and UC Berkeley- managed lands. Consistent with the CEQA mandate to analyze the whole of a project, the University has prepared a single document that provides an evaluation of the proposed project pursuant to Sections 15153,15162, 15163, 15164, and 15168 of the *State CEQA Guidelines* and demonstrates that the project is within the scope of the prior program EIRs prepared by UC LBNL and UC Berkeley pursuant to Section 15168.

In 2007, the University certified the UC LBNL *2006 Long Range Development Plan Final EIR (SCH No. 2000102046*), a program EIR prepared pursuant to Section 15168 that analyzed and disclosed the environmental impacts from the growth and development of the LBNL campus, The EIR contained a programmatic analysis of environmental impacts and was designed to assist with the streamlined review of subsequent projects proposed on the UC LBNL campus. The EIR identified vegetation management for fire fuel reduction as an ongoing program that would be continued under the 2006 LRDP and analyzed the environmental impacts of vegetation management at a program level. Although the proposed project is not specifically identified in the 2006 LRDP EIR, the types of activities that would be undertaken under the project are anticipated and analyzed in the 2006 LRDP EIR. Utilizing the streamlined review provisions of CEQA, for the portion of the current fire fuel reduction project that would be located on UC LBNL-managed lands, the University has completed an evaluation to determine whether the project is within the scope of the program analyzed in the UC LBNL 2006 LRDP EIR), as updated and supplemented in 2010 by the *Seismic Life Safety, Modernization and Replacement of General Purpose Buildings, Phase 2 Project (Including Supplementation of the UC LBNL 2006 LRDP EIR with respect to Traffic Impacts at One Intersection) Final EIR (SCH No. 2008122030*), and the *Building 59 Upgrade & Installation and Operation of NERSC-9 Project (Including Supplementation of the 2006 LRDP EIR with respect to Greenhouse Gas Emissions and Energy Impacts) Final EIR (SCH No. 2016062007*), inclusively referred to hereinafter as the "UC LBNL 2006 LRDP EIR."

In 2021, the University certified the *UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan Final EIR* (*SCH No. 2019110389),* a program EIR prepared in compliance with Section 15168 to provide a programmatic analysis of future fire fuel reduction projects as well as a project EIR for specific fire fuel reduction projects on the UC Berkeley Hill Campus. Although a small portion of the current project was addressed at a project level in the EIR, the majority of the project was not addressed in the EIR at a project level. However, future fire fuel reduction projects, similar to the proposed project, were analyzed at a program level. Under the streamlined review provisions of CEQA, for the portion of the proposed project located on UC Berkeley-managed lands the University has completed an evaluation to determine whether the project is within the scope of the program analyzed in the *UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan Final EIR* (hereinafter "UCB WVFMP EIR"*)*.

The proposed project fits within the criteria in CEQA Guidelines Section 15168 in that the project is part of a series of actions that can be characterized as related as discussed in CEQA Guidelines Section 15168(a)(1).

The *State CEQA Guidelines* hold that if the lead agency can find that, pursuant to Section 15162, no new or substantially more severe significant impacts could occur and no new mitigation measures are required, then the project is within the scope of the previous EIR, no further evaluation is required, and an EIR addendum to the prior EIR may be prepared.

The purpose of this Addendum is to describe the proposed UC Wildland Fire Hazard Reduction Project and analyze whether it would have the potential to result in: new or substantially more severe significant impacts than those previously analyzed and disclosed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR; a requirement for new mitigation measures; or a requirement that a new CEQA document must be prepared.

2.1.1 CEQA Guidelines Regarding an Addendum

Public Resources Code (PRC) Section 21166 and Sections 15162 through 15163 of the *State CEQA Guidelines* describe the conditions under which a Subsequent EIR, Negative Declaration or Supplemental EIR would be prepared. In summary, when an EIR has been certified or a mitigated negative declaration (MND) adopted for a project, no Subsequent EIR, Negative Declaration or Supplemental EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- Substantial changes are proposed in the project that will require major revisions of the previous EIR or MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

- Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR or MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR or MND was certified as complete was adopted, shows any of the following:

    - The project will have one or more significant effects not discussed in the previous EIR or MND;

    - Significant effects previously examined will be substantially more severe than shown in the previous EIR or MND;

    - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

    - Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR or MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15164 of the *State CEQA Guidelines* provides that a lead agency may prepare an addendum to a previously adopted EIR if some changes or additions are necessary, but none of the conditions listed in Sections 15162 and 15163 calling for preparation of a Subsequent EIR, a Negative Declaration or a Supplemental EIR have occurred.

As the analysis in **Section 4.0, Consistency with the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR** shows, project implementation would not result in any new or substantially more severe significant impacts as compared to those previously identified in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. Furthermore, the proposed project would not require the adoption of any new or considerably different mitigation measures or alternatives. Therefore, an Addendum is a proper form of CEQA review for this project and a Subsequent EIR, Negative Declaration or a Supplemental EIR is not required.

2.2 ORGANIZATION OF THE ADDENDUM

This Addendum is organized into the following sections:

Section 1.0 – Project Information: provides a summary of information about the proposed project, including project location, lead agency, and contact information.

Section 2.0 – Introduction: summarizes the purpose of this Addendum, CEQA guidance regarding an addendum, and this document's organization.

Section 3.0 – Project Description: includes a description of the proposed project, including the elements that have triggered the preparation of this Addendum.

Section 4.0 – Consistency with the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR: analyzes, based on an environmental checklist for each resource topic, whether the proposed project would result in

new or substantially more severe significant environmental impacts than previously analyzed and disclosed in the two prior programmatic EIRs, and whether any of the conditions would occur as a result of the project that would require preparation of a subsequent or supplemental EIR.

Section 5.0 – List of Preparers: lists individuals, consultants, and agencies involved in the preparation of this document.

Section 6.0 – References: lists reference materials used in the preparation of this document.

Appendix A: Applicable LBNL 2006 LRDP and UCB WVFMP Mitigation Measures: lists mitigation measures that were previously adopted by the University in conjunction with its adoption of the 2006 LRDP and the WVFMP and that are applicable to the proposed Project.

3.0 PROJECT DESCRIPTION

3.1 REGIONAL SETTING AND CONTEXT

Lawrence Berkeley National Lab (LBNL) is a U.S. Department of Energy (DOE) Federally Funded Research and Development Center located on a 202-acre property owned by the Regents of the University of California in the eastern hills of Berkeley and Oakland, in Alameda County, with additional facilities located on the University of California, Berkeley campus, and in leased spaces at other locations in the San Francisco Bay Area (**Figure 1, Regional Location**). The University is the Management and Operating Contractor of LBNL under a contract with DOE and is referred to as "UC LBNL" (or Berkeley Lab) in this document. Approximately 100 acres of the 202-acre lab site is covered with wildland vegetation.

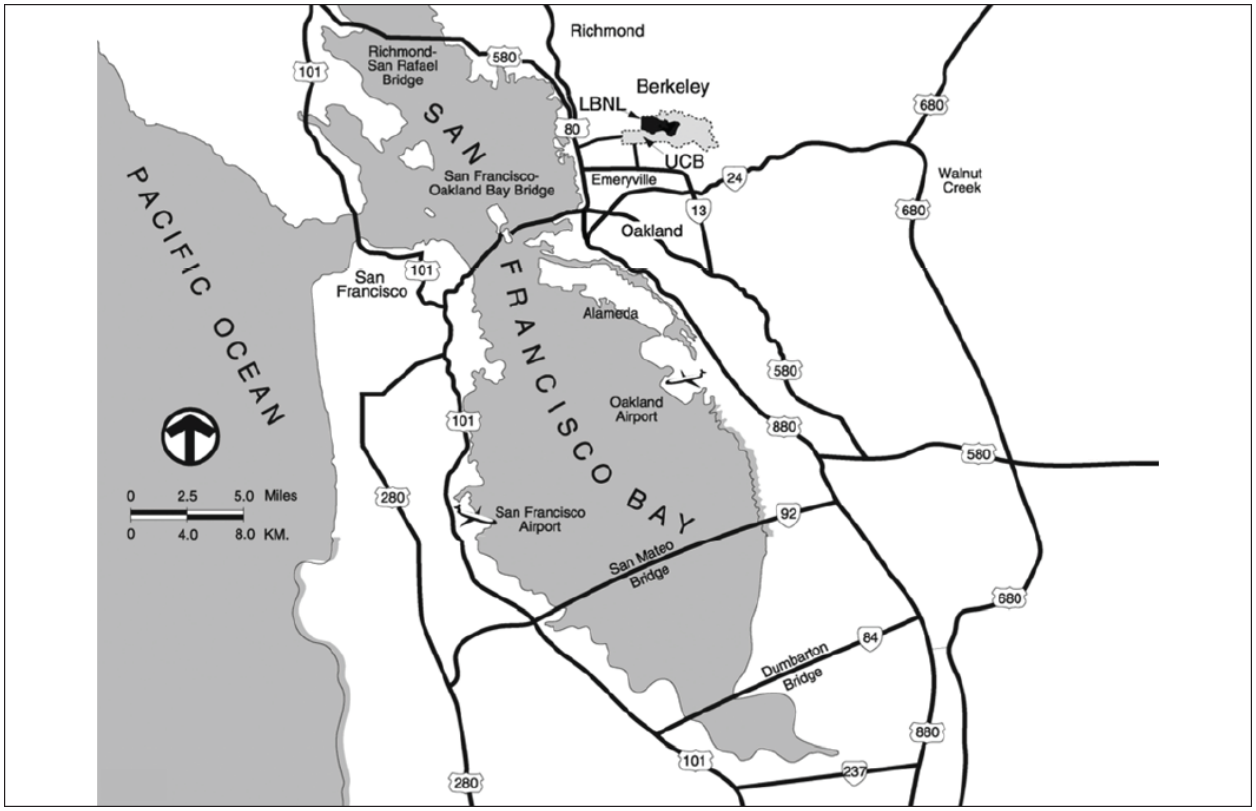

Figure 1: Regional Location

UC Berkeley's main campus (designated as Campus Park) and its Hill Campus, including the Strawberry Canyon open space areas, are adjacent to much of the northern, eastern, and southern boundaries of the Berkeley Lab. UC Berkeley Hill Campus comprises approximately 800 acres that are steep and rugged and largely undeveloped. The Hill Campus is primarily designated as open space and includes a Botanical Garden. The Hill Campus also includes the Strawberry Canyon Recreation Area and the Witter and Levine-Fricke sports fields as well as the Lawrence Hall of Science, Space Sciences Laboratory, and the Mathematical Sciences Research Institute, which are located on the ridge.

Residential neighborhoods and a small neighborhood commercial area in the City of Berkeley lie west and north of the Berkeley Lab, and regional open space, including the 2,000-acre Tilden Regional Park managed by East Bay Regional Park District, is located further northeast beyond the UC Berkeley Hill Campus.

Berkeley Lab and the UC Berkeley Hill Campus are in the same region and subject to intense and destructive wildland fires. Both campuses are characterized by steep terrain, native and invasive vegetation as well as landscaping, and extreme weather conditions (including drought, and fast-moving Diablo winds [hot, dry wind from the northeast during spring/fall]). The campuses are located in a Wildland Urban Interface (WUI), and in an area designated by the Forest Resource Assessment Program (FRAP) of the California Department of Forestry and Fire Protection (CAL FIRE) as a Very High Fire Hazard Severity Zone (VHFHSZ), indicating its potential for damage from wildland fire. Due to the high fire hazard, both campuses have developed and are implementing plans to reduce wildland fire risk. These plans include vegetation management programs to reduce fire fuel loads, create defensible space, and secure evacuation routes. The existing vegetation management plans are described in the following section.

3.2 EXISTING WILDLAND VEGETATION MANAGEMENT PROGRAMS

3.2.1 Lawrence Berkeley National Lab

UC LBNL's vegetation management program was first instituted in 1992 in response to the Oakland/Berkeley Tunnel Fire of 1991 and has been refined and improved over time. Under the program, on-site vegetation is managed to minimize potential wildland fire damage to structures. Annual program management measures for fire safety include removing tree limbs to a minimum of six to eight feet from the ground, mowing or grazing grasses, removing brush from most vegetated areas of the site, and planting mainly fire-resistant species near buildings. The vegetation management program also encourages the use of native plants known for their drought tolerance and fire resistance. Under the program, the Lab has removed a number of invasive non-native plants from many areas, including French broom, artichoke thistle, cape ivy, and pampas grass. Eucalyptus and other problematic trees across the Lab site are continually removed or thinned and native grasses are used in erosion control. Trees at the Laboratory are managed as part of a larger urban forest, with thinning and replacements made to promote long-term health of the stands (UC LBNL 2007).

UC LBNL's wildland fire risk reduction program is set forth in its Wildland Fire Management Plan (WFMP) The WFMP goals are to: (1) Protect human health and safety; (2) Protect UC LBNL facilities and research; (3) Enhance community protection; (4) Diminish risk and consequences of wildland fires; and (5) Maintain the health of the ecosystem. The WFMP aims at meeting these goals using fire prevention, fire suppression, and post-fire rehabilitation (UC LBNL 2023). This includes managing fuels to limit wildland fire intensity and spread. The Lab's preventative program limits fuels to those that burn with a slow spread rate and, more importantly, produce a flame length of less than two feet. This results in low-intensity, slow moving fires requiring minimal emergency response.

UC LBNL implements its fuel reduction program by the use of grazing and/or mowing of the grasses throughout the entire campus. Steep slopes are grazed with a controlled herd of goats, whereas

mowing using hand-held string mowers is performed in locations near buildings and in areas where goats cannot be contained, or where goats are unable to graze due to site constraints. Fuel reduction work begins in the late spring after the last rains and after the majority of plant growth has stopped. Particular attention is paid to areas that expose Berkeley Lab and the surrounding community to the greatest chance of fire and greatest potential damage. Other vegetation reduction programs administered by the UC LBNL Facilities Division include removal of brush around hydrants; reduction of "ladder fuels" from vegetation within 100-feet of structures; trimming tree branches that overhang roofs; clearing leaf litter from roofs and drains; and trimming trees to provide adequate clearance for fire response vehicles. In addition, several trees are cut and removed each year because they are dead or have the potential to fall and create damage (UC LBNL 2023).

In early 2021, UC LBNL also prepared a Vegetation Management Guide which provides a comprehensive framework for managing vegetation within the Berkeley Lab campus boundaries. The Guide applies to the design and execution of all work involving vegetation management. The Guide's vegetation management program goals are to: (1) Reduce wildfire risk on and around UC LBNL property; (2) Reduce generalized risk of injury or death to UC LBNL employees and visitors (via debris; dead, dying, or falling vegetation; pedestrian trips, slips, falls, wildfire, etc.); (3) Establish landscape management practices to maintain and improve campus aesthetics; (4) Support and maintain the local environment; and (5) Support the Lab's sustainability goals, including water conservation (UC LBNL 2021). The vegetation management methods in the Guide and the WFMP are consistent with the vegetation management program set forth in the UC LBNL 2006 LRDP and the 2006 LRDP EIR.

3.2.2 UC Berkeley

The UC Berkeley Hill Campus consists of approximately 800 acres of steep and rugged land surrounding Berkeley Lab in the East Bay Hills. The Hill Campus has a history of wildfires. The first known recommendations for fire management planning in the Hill Campus were recorded seven days after the 1923 Berkeley Fire, and several vegetation and fuel management plans have been prepared for the Hill Campus since then. In 2003, UC Berkeley developed the 2020 Hill Area Fire Fuel Management Program, which included a variety of vegetation removal activities in the Hill Campus to reduce wildfire risk (UCB 2021).

In 2019, UC Berkeley determined that it was necessary to develop an updated and comprehensive plan to reduce wildfire risk on the Hill Campus and commenced the preparation of an updated plan, titled UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan ("WVFMP" or "Plan"). In 2021, the University certified the WVFMP EIR and adopted the WVFMP that is designed to reduce wildfire risk on the UC Berkeley Hill Campus ("Plan Area"). The WVFMP directs the treatment of vegetation that could become fire fuel within the Hill Campus. Vegetation treatments described in the Plan are aimed at reducing the volume and arrangement of fuel available for a wildfire, thereby minimizing predicted flame lengths, torching and tree canopy consumption, ember cast (embers traveling by wind to new areas), and the rate of wildfire spread. In addition, vegetation treatments under the WVFMP are intended to provide improved emergency access and evacuation routes within the Plan Area, as well as strategic areas for effective firefighting and fire-retardant applications. To achieve these, the WVFMP includes four vegetation treatment types within the Plan

Area. These treatment types will be implemented at various Plan Area locations based on site-specific conditions and treatment objectives. The four proposed treatment types are: 1) evacuation support treatments, 2) temporary refuge areas, 3) fuel breaks, and 4) fire hazard reduction. Five vegetation treatment activities that will be used singularly or in combination to implement the four vegetation treatment types include: 1) manual treatment, 2) mechanical treatment, 3) prescribed burning, 4) managed herbivory (livestock grazing), and 5) herbicide application. On average, UC Berkeley expects to implement vegetation treatment activities on 200 acres per year within the Plan Area. Up to 600 acres of the 800-acre Plan Area are planned to 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 fuels (UCB 2021). The Hill Campus vegetation is now managed by UC Berkeley consistent with the WVFMP.

UC Berkeley has implemented a number of treatment projects on the campus lands since 2019 focused on improving conditions for evacuation on the Hill Campus. These projects include Centennial Drive Evacuation Support Project, which comprised 33.3 acres on the Hill Campus and involved fuel management activities within 100 feet of the edge of pavement along both sides of Stadium Rim Way and Centennial Drive; Claremont Canyon Evacuation Support Project, which comprised 18 acres on the Hill Campus and involved vegetation removal along a strip of land up to 100 feet from the edge of pavement on both sides of Claremont Avenue; Jordan Fire Trail Improvement Project, which comprised approximately 85 acres on the Hill Campus and involved vegetation removal conducted along a strip of land up to 100 feet from the edge of both sides of Jordan Fire Trail; and Gauss Way Evacuation Support Project, which comprised 3 acres on the Hill Campus and involved fuel management activities within 100 feet of the edge of pavement along both sides of Gauss Way, which provides access to UC Berkeley's Space Sciences Laboratory and Mathematical Sciences Research Institute from Centennial Drive.

3.3 PROPOSED PROJECT

UC LBNL and UC Berkeley have jointly identified three prime areas for wildfire hazard reduction ("treatment areas") on land owned by the Regents of the University of California (**Figure 2, Project Polygons**), and managed on behalf of the UC Regents by either UC LBNL or UC Berkeley. The identified work is prioritized based on risk factors identified in the UC LBNL WFMP, UCB WVFMP, by third party consultants, and UC Berkeley risk assessments of the area.

The primary goal of the project is to reduce wildfire risk in and immediately adjacent to the Berkeley Lab campus in order to further protect Berkeley Lab and the City of Berkeley Hill community in the event of a wildfire. A second goal is to ensure the integrity of Berkeley Lab's primary evacuation/ emergency vehicle ingress/egress route via Cyclotron Road, as well as Centennial Drive and other roads on the Lab site that would be used in an evacuation. The following four objectives have been identified for the project as a whole:

- **Objective 1:** As the primary access to the Berkeley Lab, removing hazardous trees and vegetation along Cyclotron Road within 100 feet of the road and including areas around UCB Foothill Parking lot, which is a designated fire staging area.

- **Objective 2:** Create a condition where flames will not exceed 2 feet in length through the implementation of defensible space standards to include shrub removal, pruning, and debris removal.

- **Objective 3:** Treat vegetation to reduce the expected ember cast that would be associated with a crown fire and bolster fire containment options by thinning trees to a spacing of 25 feet removing all trees smaller than 8 inches in diameter, and limbing the remaining trees to 8-feet height and removing leaf litter so that it is no more than 4 inches deep.

- **Objective 4:** Create better growing space for native trees and planted redwoods.

The project would be implemented in three phases, with each phase corresponding to the three treatment areas, as described below.

Phase One: Southwest Polygon

The Southwest Polygon is located in the southwestern portion of Berkeley Lab and the northwestern portion of the UC Berkeley campus. It encompasses a total area of about 24 acres. It includes Cyclotron Road and the Foothill Parking Lot and the vegetated hillsides adjoining these facilities. The area contains a mix of vegetation types and habitats, including eucalyptus stands, annual grassland, conifers and coast live oak, and coyote brush shrubland. An unnamed, intermittent drainage (informally referred to as "Cafeteria Creek") runs down the hillside in the eastern part of this treatment area before crossing under Cyclotron Road.

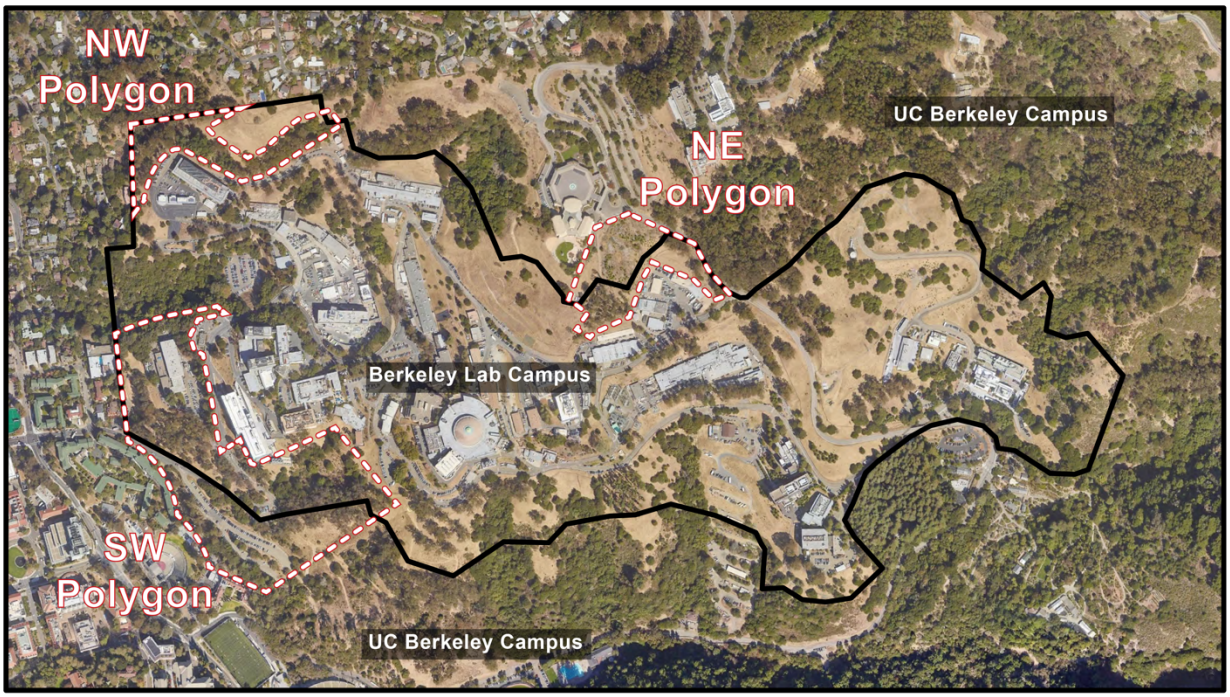

Figure 2: Project Polygons

The portion of the Southwest Polygon within Berkeley Lab is designated Research & Academic in the UC LBNL 2006 LRDP and is designated Hill Campus West in the UC Berkeley 2021 LRDP.

The proposed activities in this treatment area are described below.

As Cyclotron Road is the primary egress point for UC LBNL, the main treatment objective of the project for the Southwest Polygon is to support evacuation safety by removing hazardous trees and vegetation along Cyclotron Road up to 100 feet from the road, including the area between Cyclotron Road and the UC Berkeley Foothill Parking Lot.

- The project would involve removing all trees deemed likely to fall or burn with such intensity as to block access and egress. The lower branches of retained trees would be removed to a minimum height of 8 feet, or a third of the tree height if the tree is shorter than 24 feet. Branches that droop below 8 feet but are attached higher up the stem would be pruned on the main trunk. Dead surface fuels (e.g., leaf litter, fallen branches) smaller than 6 inches in diameter would be removed. Leaf litter and chips of less than 6-inch depth would remain.

- All vines growing on trees that are not removed would be severed. All large downed logs already present and extending beyond the treatment area would be removed. When not in conflict with biological constraints, cut material that is not intended to be left in place would be moved to the roadside and chipped. Chips may be blown back or hauled off as directed.

- Wood and shrubby vegetation chips are expected to be between 1 and 4 inches long. Branches and other debris would be chipped and left on-site, or hauled to another on-campus location, depending on the need for surface cover to prevent erosion. The volume of cut material left on site would be kept at average depths less than 6 inches to prevent excessive fuel buildup. Chips would not be deposited on slopes greater than 30 percent.

- To remediate ladder fuels, shrubs beneath remaining trees would be removed. Open vegetation and shrubs (i.e., shrubs not beneath tree canopies) would be thinned to a minimum spacing of 6 feet.

The other treatment objectives for the Southwest Polygon are to create defensible space consistent with approved standards and create a fuel break on the southern ridgeline. Defensible space standards include modifying fuels so that they could produce two-foot-long or shorter flame lengths in areas adjacent to UC LBNL Building 88 and the Building 70 complex, or around UC Berkeley campus' Foothill Student housing and recreational facilities around Memorial Stadium.

Defensible space standards that would be applied in treating the Southwest Polygon as well as the other two polygons are set forth below.

- Remove all dead plants and dry vegetation.

    a. Cut grass and weeds annually to less than 4 inches in height within 15 to 100 feet of the pavement edge and within 30 feet of a structure.

b. Remove leaves, bark, and humus under trees and shrubs (including vines and semi-woody species) so that the buildup of leaves and humus would not exceed 1 inch in depth anywhere in a defensible space at any time. However, do not expose bare earth in more than 50 percent of the site.

c. Remove dead material that drapes over ground cover (including leaves, bark, and branches).

d. From mature trees, remove all vines, loose papery bark, dead branches, and live branches smaller than 3 inches in diameter to a height of 8 feet above the ground.

e. Remove all dead branches from within live ground covers, vines, shrubs (including semi-woody species), and immature trees.

- Prune trees and large tree-form shrubs (e.g., elderberry or toyon) that are being retained.

  a. All lower tree branches under 3 inches in diameter shall be removed up to 8 feet above the ground, or on the lower third of trees, whichever is less.

  b. All lower tree branches under 3 inches in diameter shall be removed to provide vertical clearance of 3 times the height of the understory plants, or eight feet above understory plants, whichever is greater.

  c. In young trees and/or trees less than 24 feet in height, remove the branches on the lower one-third of the height of the tree. Example: if a tree is 10 feet tall, prune the lower 3–4 feet and keep the understory plant material to less than 1 foot in height. If and when a tree reaches 24 feet in height, the 8-foot-above-the-ground clearance standard would then apply, and the understory plant material could reach approximately 2.5 feet in height.

  d. All dead branches smaller than 3 inches in diameter shall be removed. All dead limbs greater than 3 inches in diameter should be retained.

  e. The tree canopy shall not be thinned or pruned, as this would promote more growth in shrubs below the trees and would result in increased risk that fire would spread to the tree canopy.

  f. Small trees may need to be cut to the ground in order to achieve the separation of ladder fuels from under the taller tree canopy, or because mowing equipment cannot avoid the small trees.

- Manage individual plants or shrub masses to maintain adequate horizontal spacing. Design distinct groupings of shrubs (including vines, semi-woody species, all types of brush) to dampen the spread of fire. Ensure the plant groupings are small enough to provide adequate horizontal separation between groupings and to allow proper maintenance; groupings should measure no wider than two times the grouping height, or 120 square feet. The space between islands should be greater than three times the height of the shrubs.

- Remove all French broom through either pulling from the roots or cutting and applying herbicide on its cut surface.

- Remove all eucalyptus trees smaller than 8 inches in diameter; they form vertical continuity between surface vegetation and the tree canopy, leading to dangerous canopy fires.

- Remove all unhealthy trees or those with structural defects.

- Remove and safely dispose all cut vegetation and hazardous refuse. Material can be placed in a dense pile at a distance more than 100 feet from any structure, in a depression, remote from a tree canopy.

- Chipped materials may remain on the site, provided the mulch layer is no greater than 2 inches in depth.

Phase Two: Northwest Polygon

The Northwest Polygon is located in the northwestern portion of the Berkeley Lab campus. It encompasses a total area of about 5 acres. There are no developed facilities within this polygon. The area contains a mix of vegetation types and habitats. Eucalyptus stands occur in the polygon's western portion, down slope of Building 90, and in a ravine north of Building 90. Conifers dominate the northern portion. A stand of eucalyptus is located in the eastern portion. Patches of annual grassland are interspersed with the forested areas.

The polygon is designated Perimeter Open Space in the UC LBNL 2006 LRDP. The project objectives and proposed activities in this polygon are described below.

The treatment objective for the Northwest Polygon is to reduce the density of the tree cover and accumulation of leaf litter so as to reduce the fire intensity and risk to Building 90 and neighbors, by diminishing the fire fuel load and the ability of fire to spread.

Treatment would involve thinning trees to a spacing of 25 feet, removing all pine and eucalyptus trees smaller than 8 inches in diameter, limbing the remaining trees to 8 feet height, and removing leaf litter so that it does not exceed 4 inches in depth. The following three prescriptions would be applied.

Eastern Eucalyptus Stand

- Remove eucalyptus trees up to 12 inches in trunk diameter, using the same specifications as described above for Cyclotron Road evacuation route support.

Conifer Stand North of Building 90

- Remove the duff and leaf litter build-up by raking it to the road and hauling it away. A maximum of two inches of leaf litter can remain.

- Remove trees that are dead, dying, or structurally unsound.

- Remove all trees deemed likely to fall or burn with such intensity as to block access and egress.
- Thin remaining trees to a 10-foot spacing between tree crowns, preferentially keeping Douglas fir over the pines.
- Limb lower branches of remaining trees to a 10-foot height.

Eucalyptus in the Ravine and on NW Border

- Remove the eucalyptus trees in the ravine along the northern Berkeley Lab campus border.
- Prioritize removal of any multi-trunked eucalyptus with thin canopies or those with an abundance of dead material.
- Create an average 25-foot spacing between tree canopies of the remaining eucalyptus trees.

Phase Three: Northeast Polygon

The Northeast Polygon is in the northeastern portion of the Berkeley Lab campus and the adjacent northern portion of the UC Berkeley Hill Campus East zone. It encompasses a total area of about 6 acres. It includes undeveloped land that lies between the Lawrence Hall of Science and Berkeley Lab Building 77 complex. Centennial Drive runs along the eastern boundary of this area. The polygon contains a mix of vegetation types, including eucalyptus stands, non-native/annual grassland, and coast live oaks adjacent to McMillan Road. To the northeast of the UC LBNL Building 69 are small, recently-planted redwoods and ornamental shrubs among a scattering of immature oaks and sparse coyote bush.

The Northeast Polygon area within the Berkeley Lab campus is designated Perimeter Open Space in the UC LBNL 2006 LRDP; the portion on UC Berkeley land is designated Hill Campus East in the UC Berkeley 2021 LRDP. The project objectives and proposed activities in this polygon are described below.

The main treatment objectives for the Northeast Polygon are to create defensible space around UC LBNL facilities (Building 69-78 complex) and the UC Berkeley Lawrence Hall of Science; reduce the density of the tree cover so as to reduce fire fuel load and the ability of fire to spread; improve conditions for the growth of redwood trees; and thin or remove all trees deemed likely to fall or burn with such intensity such that they could affect Centennial Drive.

The activities in this treatment area would be to chip the piles of dead branches and logs, prune trees, and remove about 1/3rd of the shrubs to create better growing space for the redwoods. Shrubs (generally coyote brush and Pride of Madeira) would be removed for a distance of 6 feet from the canopy edge of redwood trees. Prune the lower branches of redwood trees to 6 feet. Highly flammable trees would be thinned to 25-foot spacing and removed if they would threaten safe passage on Centennial Drive.

Additional treatments in this polygon would be to:

- Remove highly flammable trees (eucalyptus and pine) trees up to 12-inches in diameter on the southwest portion of the treatment area, using the same specifications as described above for Cyclotron Road evacuation route support.

- The lower branches of retained trees would be removed to a minimum height of 8 feet, or a third of the tree height if the tree is shorter than 24 feet. Branches that droop below 8 feet but are attached higher up the stem would be pruned on the main trunk. Dead surface fuels (e.g., leaf litter, fallen branches) smaller than 6 inches in diameter would be removed. Leaf litter and chips of less than 6-inch depth would remain.

- Apply the specifications for evacuation route support set forth above for Cyclotron Road, also considering the strike potential of trees onto buildings.

3.4 PROJECT IMPLEMENTATION

3.4.1 Schedule

The project would be implemented in three phases, with Phase 1 (Southwest Polygon) activities anticipated to be completed in about six weeks, Phase 2 (Northwest Polygon) activities to be completed in about six weeks, and Phase 3 (Northeast Polygon) activities to be completed in about four weeks. Project work would commence in approximately late 2023 following anticipated project approval and would be completed within three years. The project activities are expected to be conducted outside the bird nesting season which extends from February 1 through August 31 of each year, and bat breeding season which extends from April 1 through August 31. All work is expected to be performed during normal business hours and on weekdays, although occasional schedule variances could result from extraordinary circumstances.

3.4.2 Treatment Approach and Methods

Prior to the commencement of treatment within a polygon, a registered professional forester would conduct a field evaluation and complete an initial marking of trees to be retained in the treatment area based upon applicable professional standards. A licensed arborist on the contractor's team would make the final determination in the field as to the trees to be removed before they are removed.

The project would involve small crews of 6 to 15 people at one time in the field. Vegetation treatment methods would include both manual and mechanical methods. Controlled burning and grazing are not included in the proposed project. Manual vegetation treatment would involve the use of hand tools and hand-operated power tools to cut, remove, or prune herbaceous and woody species. Activities could include thinning trees and shrubs; cutting undesired competing brush species; manually pulling, grubbing, or digging out root systems of undesired plants to prevent sprouting and regrowth; and placing mulch, such as wood chips from pruning operations, around desired vegetation to limit competitive growth and minimize erosion. Hand tools used would include shovels, Pulaski hoes, McLeod fire tools, weed whips and weed wrenches, chain saws, hand saws, mechanized brush cutters, machetes, pruning shears, and loppers. Mechanical vegetation treatment would involve the use of heavy motorized equipment, such as cranes, feller-bunchers, mowers and

masticators, specially designed to cut, tear, uproot, crush, compact, or chop target vegetation. Mechanical treatment methods that may be used include tree cutting, mowing, masticating (mulching), grubbing, and chipping. Directly-applied herbicides, applied by a licensed professional, would be used to control resprouting of eucalyptus or other stubborn species.

3.4.3 Biomass Disposal

Project-generated biomass would be chipped and used as needed onsite as mulch. Excess biomass from the Southwest and Northwest Polygons would be used as mulch elsewhere on the Berkeley Lab or UC Berkeley campuses, or it would be hauled to the nearest recycling, co-generation, or air-curtain burner facility. Excess biomass from the Northeast Polygon would be tested for above-background tritium[1] levels before being considered for off-haul disposal.

3.4.4 Restoration

All areas treated would be restored by installing at least 3 to 6 inches of mulch to cover all areas where soils are exposed, hydroseeding with native grasses, and planting hardwood trees such as oaks.

3.4.5 Environmental Protection Measures

The project has been planned with utmost sensitivity to the local environment. Several environmental protection measures (EPMs) have been incorporated into the project on UC LBNL-managed lands to help minimize the project's environmental footprint, to avoid potentially negative effects, and to enhance environmental benefits. These features include the following:

EPM-1. The Southwest Polygon includes Cafeteria Creek, an intermittent stream that supports a riparian corridor. The proposed project has been designed to include a 25-foot riparian buffer from the banks of the creek. To ensure that the riparian corridor is not affected, no project work would be performed within the buffer zone and trees that are located outside the buffer zone but have canopies that extend into the buffer zone would also not be removed although selective trimming may be performed (ESA 2023). The buffer zone would be clearly marked by qualified biologists with environmentally sensitive area (ESA) fencing before commencement of work by the Berkeley Lab in the eastern portion of the Southwest Polygon.

EPM-2. Some of the proposed project work areas are relatively undisturbed. A full-time biological monitor would be present at the work sites for the duration of project activities. The qualified biological monitor would conduct pre-construction surveys, train work crews, identify sensitive biological resources, and establish avoidance zones, fencing, and other measures to avoid impacts to

[1] The Northeast Polygon overlies an area associated with tritium deposition in past decades. While tritium has been measured above background levels in some plant and tree materials in this area, it has been detected at below health and safety thresholds. Nevertheless, UC LBNL's policy has been to leave in place vegetative material harvested from this area, or to sample and analyze any such materials before considering off-haul. UC LBNL will be re-surveying the Northeast Polygon area in fall 2023 and expects to find that any remaining tritium has decayed to background levels. If this is the finding, then off-haul restrictions of excess biomass from the Northeast Polygon area may be removed.

special-status wildlife and plant species, including Alameda whipsnake and western leatherwood tree.

EPM-3. The Southwest Polygon provides marginally suitable habitat for San Francisco dusky-footed woodrat. To ensure that impacts to the species are avoided, within seven days before initiation of treatment activities in the Southwest Polygon, a qualified biologist would conduct a focused survey for San Francisco dusky-footed woodrat nests within the treatment area on the Berkeley Lab. In the event that a nest is observed, the biologist would check to determine whether it is active or not. If the nest is active, a no-disturbance buffer would be established around the nest and mechanical and manual treatments would not occur within the buffer zone. Once the nest is no longer active and treatment in the avoided area is required, the nest may be dismantled and moved to another appropriate location.

EPM-4. Although the proposed project would be implemented outside the bat breeding period, bat roosts could still be present within the treatment areas in all three polygons. To avoid impacts on roosting bats, pre-activity bat roost surveys would be completed by a qualified biologist for bat roosts in suitable habitat within relevant portions of the project work area polygons. If a roost were to be observed, a no-disturbance buffer of 250 feet would be established around the active roost, and mechanical and manual treatments would not occur within this buffer. If treatment in the avoided area is required, it may be resumed once the qualified biologist determines that all bats have left the roost.

EPM-5. In the event that treatment work needs to be completed with two crews working concurrently, UC LBNL will require that at least one of the two crews uses electric powered equipment to avoid resulting in excessive daily emissions of air pollutants.

3.4.6 LBNL 2006 LRDP and UCB WVFMP Mitigation Measures

The proposed project is a part of the continuing wildland vegetation management programs at the Berkeley Lab and at the UC Berkeley campus. Mitigation measures to address significant impacts of the vegetation management activities were identified in the LBNL 2006 LRDP EIR and the UCB WVFMP EIR and were adopted when those plans were approved. Previously adopted mitigation measures that are applicable to the project have been incorporated into and made part of the project. All applicable mitigation measures in the LBNL 2006 LRDP EIR and applicable mitigation measures and EPMs in the UCB WVFMP EIR are presented in **Appendix A**.

4.0 CONSISTENCY WITH THE UC LBNL 2006 LRDP EIR AND UCB WVFMP EIR

This consistency review was conducted in accordance with Sections 15153(a), 15162, 15163, and 15168 of the State CEQA Guidelines. As explained in Section 1, the project is located on lands owned by the University but managed by UC LBNL and UC Berkeley. Both campuses previously certified program EIRs that analyzed and disclosed environmental impacts from the implementation of ongoing vegetation management programs for fire hazard reduction. To ensure that the whole of the project is addressed, the University has prepared a single addendum to the two prior EIRs. The addendum examines the proposed project relative to the analyses in the prior program EIRs to determine whether the project's environmental impacts are adequately analyzed by the prior analyses, and that no new or more severe significant impacts could result than previously disclosed and that no new or substantially modified mitigation measures would be required.

4.1 APPROACH TO CHECKLIST-BASED ANALYSIS

On the basis of subsequent review concepts identified in the *State CEQA Guidelines*, the University has defined the following column headings in the environmental checklist used in this addendum. Both headings rely on the relevant analyses in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR:

Impacts Adequately Examined in the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR: This column is checked where the potential project impacts, including cumulative impacts, were adequately examined in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR.

Impacts Not Examined in the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR: If a column is checked under this heading, this indicates that the potential project effect was not addressed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR. However, as explained in the supporting text, the potential project effect would be (a) no impact, (b) a less-than-significant impact, or (c) a new potentially significant impact. In the instances that (a) or (b) is checked, no additional CEQA documentation would be necessary. In the instance that (c) is checked, additional CEQA documentation would be necessary to further address the impact.

On the basis of the evaluation that follows, the University finds that the project would not have new significant effects on the environment that have not already been addressed in the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR, no new mitigation measures or alternative are required beyond those identified and analyzed in the prior EIRs, no substantial changes have occurred with respect to the circumstances under which the project would be undertaken, and no new information of substantial importance to the project has been identified.

4.2 APPROACH TO CUMULATIVE IMPACT ANALYSIS

As the proposed project is within the analytical scope of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, its cumulative impacts are substantially addressed by those EIRs' cumulative impact analyses.

The proposed project is a short-term temporary activity spread out in three phases, with each phase lasting between four and six weeks. Following its approval, the project would be implemented

within three years. As described herein, the project is limited to three areas of the Berkeley Lab and the UC Berkeley campus. The potential for significant, short-term, cumulative impacts was analyzed by identifying other projects that would occur in similar time and spatial reference frames: projects with overlapping schedules and in areas nearby enough so as to reasonably affect the same sensitive receptors as the proposed project. **Table A** below presents a list of near-term cumulative projects, all of which are at the Berkeley Lab and UC Berkeley. Projects near one of the three polygons and that have overlapping construction schedules with that of the project are indicated in bold text in **Table A**. These projects are part of the updated cumulative context and are analyzed in the following sections for potential short-term impacts, mainly in the areas of air quality and noise. The other listed projects would be too distant or would not be constructed concurrently to result in any cumulative short-term air quality or noise impacts.

Table A: Near-Term Cumulative Projects

Campus	Project Name	Location	Period	Proximity to Project Treatment Areas	Construction Schedule Overlap
UC LBNL	Site-wide Mechanical System Upgrade	In the interior of the Lab site	Feb. 2023 – Feb. 2024	Not in close proximity of any treatment area	Yes
UC LBNL	BioEPIC Project (new lab building)	Alvarez Road; interior of the Lab site	Now through Mar. 2024	Not in close proximity of any treatment area	Yes
UC LBNL	Seismic Safety & Modernization (SSM) Project (replacement cafeteria building)	In the interior of the Lab site	Now through Fall 2026	Near Southwest Treatment Area	Yes
UC LBNL	Linear Assets Modernization Project (upgrade site wide utility systems)	Site-wide within roadbeds and paved areas	Now through mid-2029	Not in close proximity of any treatment area	Yes
UC LBNL	ALS-U Project (interior modifications in the ALS building)	In the interior of the Lab site	Now through 2029	Not in close proximity of any treatment area	Yes
UC LBNL	NERSC-10/NFU2 (modernization of the electrical & cooling systems; installation of a next generation high-performance computing system in existing facility)	Chu Road near Blackberry Canyon Entrance	Mid-2024 through 26	Near Southwest Treatment Area	No
UC Berkeley	Heathcock Hall Project (New Chemistry Building)	Gayley/University Drive	Late 2023-Early 2026	Near Southwest Treatment Area	Yes
UC Berkeley	Greek Theatre Accessibility Improvements	East of Gayley Road	Oct. 2023-Jan. 2024	Near Southwest Treatment Area	Yes

Table A: Near-Term Cumulative Projects

Campus	Project Name	Location	Period	Proximity to Project Treatment Areas	Construction Schedule Overlap
UC Berkeley	Centennial Drive Replacement Bridge Project	Centennial Drive between the UC Botanical Garden and the Lawrence Hall of Science	Nov. 2022-late 2024	Near Northwest Treatment Area	Yes
UC Berkeley	International House Accessibility Improvements	Gayley Road	Almost complete	Near Southwest Treatment Area	No
UC Berkeley	Cal Softball Field Renovation Project (construct new softball field)	Centennial Drive - Strawberry Field Recreation Area	EIR is in process	Near Southwest Treatment Area	No

While based on proximity, as **Table A** shows, there are six cumulative projects near the Southwest Polygon. However, because treatment in the Southwest Polygon would occur first, following project approval in late 2023 through early 2024, its schedule would overlap with the construction of three of the nearby projects (namely SSM project, Heathcock Hall, and Greek Theatre Accessibility improvements). The remaining three cumulative projects near the Southwest Polygon would be constructed later.

Based on proximity to the Northeast Polygon, there is only one project (Centennial Drive Replacement Bridge) that would be under construction when the treatment in the Northeast Polygon may be implemented.

There are no cumulative projects that are in close proximity to the Northwest Polygon.

4.3 AESTHETICS

Would the Project…	Impact Examined in UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☒	☐	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

4.3.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

The UC LBNL 2006 LRDP EIR (pages IV.A-11 through IV.A-31) evaluated visual impacts of Lab growth and development under the 2006 LRDP, including the continued implementation of the Lab's vegetation management program. The 2006 LRDP EIR analysis determined that new development on the Berkeley Lab campus pursuant to the 2006 LRDP could result in significant and unavoidable impacts on scenic vistas (LRDP Impact VIS-2), scenic resources and site character (LRDP Impact VIS-3), but would result in a less than significant impact (with mitigation) related to light and glare (LRDP Impact VIS-4), a less than significant impact due to construction activities (LRDP Impact VIS-1), and a less than significant cumulative impact.

UCB WVFMP EIR

The UCB WVFMP EIR (pages 3.2-17 through 3.2-28) evaluated visual impacts from the implementation of various treatments to reduce wildfire risk on the Hill Campus and concluded that there could be significant and unavoidable impacts on scenic vistas and visual character of parts of the Hill Campus as a result of some of the treatments that would be used because the changes could be visible from some trails and could be considered an adverse impact by some trail users.

4.3.2 Project Impact Analysis

a. Would the project have a substantial effect on a scenic vista?

A scenic vista is generally defined as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. The three project areas are located in the southwestern, northeastern, and northwestern portion of the UC LBNL site, and partially in the central part of the UCB Hill Campus. As all three project areas are on the periphery of the Lab site, they are visible from off-site areas, including portions of UCB and the City of Berkeley neighborhoods to the northwest, south and east of the Lab and also from Centennial Drive to the north.

In analyzing the impacts of the 2006 LRDP development on scenic vistas, UC LBNL identified key vantage points from which changes in scenic vistas from development on the Berkeley Lab were modeled. These vantage points included locations in downtown Berkeley on University Avenue and Shattuck Avenue, and in Strawberry Canyon, and north of the Lab as viewed from the Lawrence Hall of Science. Implementation of the proposed project would involve the removal or thinning of trees along Cyclotron Road and the Foothill Parking Lot in the Southwest Polygon; removal of trees and thinning of trees in the Northwest Polygon; and some limited thinning and tree removal in the Northeast Polygon. Due to the distance between the vantage points in downtown Berkeley and Strawberry Canyon as well as intervening topography, development and vegetation, the proposed project would not make a discernible change to the scenic vistas analyzed in the UC LBNL 2006 LRDP EIR and would therefore not increase the severity of the previously disclosed significant impacts.

The UCB WVFMP EIR analyzed the impacts to scenic vistas and visual character from the implementation of vegetation removal in evacuation support areas, including roads such as Centennial Drive, that would be used to evacuate the Hill Campus and areas that would be used to stage evacuation and concluded that the impact on scenic vistas and visual character would be less than significant because of existing disturbance (such as a roadway or a parking lot) in the area. The EIR also analyzed the impacts on scenic vistas and visual character from fire hazard reduction treatments and concluded that while drivers with short term views of the change would not consider it an adverse impact, for some trail users in the area, the visual change could be an adverse impact. The proposed project would implement vegetation removal around the Foothill Parking Lot (Southwest Polygon), and on UC Berkeley lands to the south of Lawrence Hall of Science and near Centennial Drive (Northeast Polygon). In both areas the proposed treatments are in generally disturbed areas and intended to provide evacuation support and create defensible space. Furthermore, there are no public trails in the proximity of either area. Therefore, the impacts of the proposed project would be less than significant, consistent with the UCB WVFMP EIR.

In summary, there would be no new or substantially more severe significant impacts on scenic vistas than previously disclosed, and no new mitigation would be required.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As noted in the 2006 LRDP EIR and the UCB WVFMP EIR, the Berkeley Lab and the Hill Campus are not adjacent to a state scenic highway. Therefore, the project would not result in any impacts on scenic resources within a state scenic highway. Furthermore, there are no unique trees, rocky

outcrops or historic buildings on the three treatment areas that could qualify as scenic resources. There would be no new or substantially more severe significant impacts on scenic resources than previously disclosed, and no new mitigation would be required.

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Although the three treatment areas are located within an urban area and in proximity to many buildings on the UC LBNL campus, UC Berkeley campus, and nearby neighborhoods in Berkeley, they are forested areas located on steep hillsides and are generally undeveloped.

Impacts on visual character and quality of the UC LBNL campus were evaluated in the UC LBNL 2006 LRDP EIR which concluded that there would be a significant and unavoidable impact on visual character of the Lab as stated in Table II-1 on page II-19. While the proposed project would not involve the construction of new buildings, it would result in some tree removal and tree thinning that could locally change the visual character of portions of the Berkeley Lab, especially along Cyclotron Road and Blackberry Canyon Gate in the Southwest Polygon. This change in character—a shift in the existing visual balance between development and vegetation visible from offsite viewpoints—is anticipated and addressed in the LBNL 2006 LRDP EIR, particularly under LRDP Impact VIS-3, and is identified in the EIR as a significant and unavoidable impact. Any shift in visual character would be noticeable mainly from narrow view corridors and from short- and medium-range distances, as provided by viewpoint illustrations in the LBNL 2006 LRDP EIR Figures IV.A-1 through IV.A-9. No vantage point on or off the Lab site affords views of all three polygons at once. Project changes would be localized and not likely apparent from distant viewpoints. There would be no new or substantially more severe significant impacts related to visual character and quality than previously disclosed.

With regard to the impact on visual character and quality from project implementation on UC Berkeley lands, as discussed above in Item a, the impact would be less than significant.

In summary, there would be no new or substantially more severe significant impacts on scenic quality than previously disclosed, and no new mitigation would be required.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would not include any night-time work or the installation of any new lighting in the three treatment areas. It is possible that some nighttime street and building lighting would be more exposed to offsite viewpoints with the reduction in screening trees. This, however, would be minor as the Lab produces relatively little night lighting compared to municipal commercial areas, and many of its larger buildings near the Southwest Polygon—Buildings 88 and 59—have few windows. The project would, therefore, not create a new source of substantial light and glare which could adversely affect daytime or nighttime views on the UC LBNL campus, UC Berkeley Hill Campus, and surrounding areas. There would be no new or substantially more severe significant impacts related to light and glare than previously disclosed, and no new mitigation would be required.

4.3.3 Cumulative Impacts

The cumulative impacts on visual resources from the continued implementation of the Lab's vegetation management program combined with the impacts from the growth and development under the UC LBNL 2006 LRDP are fully analyzed and disclosed in the UC LBNL 2006 LRDP EIR. A more updated analysis of cumulative impacts related to vegetation removal activities is provided in the UCB WVFMP EIR, which takes into account both development projects as well as vegetation removal activities of UC Berkeley, UC LBNL, East Bay Regional Park District, Pacific Gas & Electric, and the Cities of Oakland and Berkeley. That analysis also concludes that the implementation of the WVFMP along with past, present and reasonably foreseeable projects, would result in cumulative impacts on visual resources that would be less than significant. As stated above, the proposed project is an element of the vegetation management plans of both campuses. Therefore, the cumulative impacts of the proposed project are fully addressed by the prior cumulative impact analyses.

4.3.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances or new information that would alter the conclusions of either EIR with respect to aesthetic impacts.

4.3.5 Conclusion

The project would involve localized fire fuel reduction treatments to improve the safety of evacuation routes, create defensible space, and reduce the risk from wildfires. There would be no new or substantially more severe visual impacts as compared to those set forth in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. No new mitigation is required.

4.4 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the Project…	Impact Examined in UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☒	☐	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☒	☐	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☒	☐	☐
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☒	☐	☐

4.4.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

The Initial Study prepared for the 2006 LRDP EIR concluded that there were no active agriculturally-used lands on the Berkeley Lab and no additional analysis was required. The 2006 LRDP EIR did not address impacts to forest land or timber land as that was not identified as an environmental issue under CEQA at the time that the UC LBNL 2006 LRDP EIR was prepared.

UCB WVFMP EIR

The Initial Study for the WVFMP EIR noted (page 3-8) that pursuant to Forest Inventory and Analysis prepared by United States Department of Agriculture, the land within Alameda County and Contra Costa County is classified as Nonforest. In addition, the Hill Campus is zoned for residential use by the City of Berkeley and the City of Oakland. The small portion of the Hill Campus located within Contra Costa County is zoned for Forestry Recreational and General Agriculture (UCB 2021).

Public Resources Code Section 12220 defines forest land as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (UCB 2021).

The Initial Study prepared for the WVFMP EIR concluded that the WVFMP would have no impact on agricultural resources and a less than significant impact on forest land.

4.4.2 Project Impact Analysis

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

The project would not result in the conversion of farmland to a non-agricultural use on-site and off-site because there is no farmland within the Berkeley Lab or on the UC Berkeley Hill Campus. There would be no impact on important farmland.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The UC LBNL 2006 LRDP designates two of the polygons as Perimeter Open Space, and one area as Research & Academic land use zone. The UC Berkeley LRDP designates the polygons as Hill Campus East and Hill Campus West. The project areas are not under a Williamson Act contract, nor are they zoned for agricultural use. Therefore, there would be no impact related to agricultural use zoning or Williamson Act contracts.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The project areas are not zoned for forest land, timberland, or timberland zoned Timberland Production. Thus, there would be no impact related to forest land or timberland zoning conflicts.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The impact of vegetation treatments on forest land were analyzed in the Initial Study prepared for the WVFMP and included in the WVFMP EIR. As noted therein, pursuant to PRC Section 12220(g), forest land is defined as land that can support 10 percent native tree cover of any species under natural conditions. The analysis noted that while treatment activities that could occur under the Plan would alter forest land through vegetation removal, the area would generally continue to

support 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Therefore, implementation of the WVFMP would not directly result in the loss of forest land or convert forest land to a non-forest use, and the impact would be less than significant (UCB 2021).

The proposed project would also involve the removal of trees within the three polygons and would thereby alter forest land, but the areas would still maintain 10 percent of native tree cover and would continue to meet the definition of forest land. Besides, the project would not convert forest land to non-forest use as no new use would be established in the three treatment areas. The impact would be less than significant. There would be no new or substantially more severe significant impacts on forest land than previously disclosed, and no new mitigation would be required.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

There are no farmlands or forest lands surrounding the treatment areas that could be affected by the proposed project such that conversion of those lands to other uses could occur. There would be no impact.

4.4.3 Cumulative Impacts

As there would be no project impacts to agricultural resources and a less than significant impact on forest resources, the project would not contribute substantially to a cumulative impact on agricultural or forest resources. No new mitigation is required.

4.4.4 Change in Circumstances and/or New Information

Since the certification of the UC LBNL 2006 LRDP EIR, CEQA now requires analysis of a project's impacts to forest resources. As noted above, the project would not result in significant project level or cumulative impacts on forest resources.

4.4.5 Conclusion

There would be no significant impacts from implementation of the project related to agricultural and forest resources. No new mitigation is required.

4.5 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

4.5.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

The UC LBNL 2006 LRDP EIR (pages IV.B-31 through IV.B-50) evaluated air quality impacts of Lab growth and development under the 2006 LRDP, including the impacts from the implementation of ongoing programs such as vegetation management at the Berkeley Lab. The 2006 LRDP EIR analysis determined that LRDP development could result in significant construction-phase impacts from emissions of criteria air pollutants and toxic air contaminants (TACs), but that mitigation measures included in the LRDP EIR would reduce such impacts to a less than significant level. The 2006 LRDP EIR analysis concluded that there would not be a significant impact related to operational criteria air pollutant emissions or odors, increases in CO concentrations, or cumulative increase in criteria air pollutants. However, there would be a significant and unavoidable impact from cumulative emissions of TACs.

UCB WVFMP EIR

The UCB WVFMP EIR (pages 3.3-15 through 3.3-26) analyzed air quality impacts from implementation of the WVFMP and estimated that annual emissions of criteria pollutants from mechanical and manual removal of vegetation on approximately 180 acres of land per year would be less than 2 tons of ROG and NOX and less than 0.5 tons of PM10 and PM2.5 if only one crew was working within the Plan Area. Similarly, the daily air emissions would be less than 30 lbs. of ROG and NOX, and less than 1.2 lbs. of PM10 and PM2.5. Thus, with one crew working the impact would be less than significant. However, if multiple crews were to work on mechanical or manual vegetation

removal simultaneously, then the emissions would exceed BAAQMD thresholds, and the impact would be significant. The EIR identified Mitigation Measure AQ-1 which requires UC Berkeley to limit work to one crew or require the crews to use electric chain saws to eliminate emissions. With regard to toxic air contaminants and odor impacts, the EIR concluded that manual and mechanical vegetation removal would not expose receptors to TACs or odors because the work would occur in areas that are generally distant from sensitive receptors.

4.5.2 Project Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plan is the BAAQMD *2017 Clean Air Plan* (Clean Air Plan), which defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate.

For reasons set forth in Item b below, the proposed project would not result in emissions that would exceed the BAAQMD thresholds, and therefore the project would not conflict with the Clean Air Plan. There would be no impact.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The proposed project would not result in substantial annual or daily emissions of criteria pollutants for which the San Francisco Bay Area is in non-attainment. As shown by the analysis in the UCB WVFMP EIR, if one crew were to conduct mechanical and manual vegetation removal over the course of one year on 180 acres, the total annual and daily emissions that would result would be well below the BAAQMD thresholds. In the case of the proposed project, manual and mechanical vegetation removal would take place on a much smaller area each year that the project is implemented. Vegetation treatment in the Southwest Polygon would occur over a period of six weeks and would involve less than 24 acres. Similarly, work in the other two polygons would occur over a period of four to six weeks each and involve less than 6 acres. Therefore, the annual and daily emissions from project activities would not exceed the BAAQMD thresholds. Furthermore, UC LBNL and UC Berkeley would coordinate to ensure that no more than one crew is working at the same time. However, if two crews need to work simultaneously, electric equipment would be used consistent with UCB WVFMP Mitigation Measure AQ-1 and UC LBNL EPM-5. The impact of the project would be less than significant. There would be no new or substantially more severe significant impact related to criteria pollutants than previously disclosed, and no new mitigation would be required.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

The three polygons are generally located at substantial distances from the nearest sensitive receptors. With the exception of a few residential receptors that are within 20 feet of the boundary and Nyingma Center which is within 80 feet of the edge of the Southwest Polygon, and one residential receptor that is within 20 feet of the Northwest Polygon, there are no other sensitive

receptors near the treatment areas. Furthermore, treatment activities would progress across treatment areas such that diesel emissions (which are considered toxic air contaminants or TACs) generated by these activities would not take place near any single sensitive receptor for an extended period. In fact, diesel emissions associated with treatment activities would not take place in the same area for more than one day. This means the period during which a single person could be exposed to diesel emissions from a treatment activity would be short. Further, the number of diesel-fired equipment that would be in use in one area would not be large. Therefore, the project activities would not expose receptors to substantial pollutant concentrations that would exceed the BAAQMD threshold for a significant TAC impact. Furthermore, vegetation removal work on the UC LBNL lands would be subject to UC LBNL EMP-5 (described above) and LRDP Mitigation Measure AQ-1b which requires that construction equipment is properly tuned and maintained in accordance with manufacturers' specifications; best management construction practices are used to avoid unnecessary emissions (e.g., trucks and vehicles in loading and unloading queues would turn their engines off when not in use); any stationary motor sources such as generators and compressors located within 100 feet of a sensitive receptor are equipped with a supplementary exhaust pollution control system as required by the BAAQMD and the California Air Resources Board; use of low-NOx emitting, low-particulate emitting, or alternatively fueled construction equipment is incorporated into the construction equipment fleet where feasible, especially when operating near sensitive receptors; and construction-worker trips are reduced through ride-sharing or alternative modes of transportation. Project activities on UC Berkeley lands would be required to implement UCB WVFMP Mitigation Measure AQ-1 and EPM AQ-2, which requires UC Berkeley to implement BAAQMD measures to minimize exhaust emissions from off-road equipment by shutting down equipment when not in use and reducing maximum idling time to five minutes, as well as ensuring all off-road equipment is maintained and properly tuned in accordance with the manufacturer specifications. Therefore, the project's TAC impact would be less than significant. There would be no new or substantially more severe significant impact from TAC emissions than previously disclosed, and no new mitigation would be required.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Although some odors may result from the operation of mechanical equipment, due to the distance between most of the treatment areas and the nearest receptors and the implementation of the mitigation measures listed under item c above, the odors would not adversely affect a substantial number of persons. The impact would be less than significant.

4.5.3 Cumulative Impacts

A project's air quality impact analysis is inherently a cumulative impact analysis as it involves an assessment of whether the project's emissions would be large enough to make a substantial contribution to the existing air quality problems in the air basin. As noted above, the project's criteria pollutant emissions would not be substantial after mitigation. Therefore, the project would not make a cumulatively considerable contribution to a cumulative impact on Bay Area air quality. This is consistent with and would not alter the conclusions in the UC LBNL 2006 LRDP EIR regarding the cumulative impact of temporary, construction-type projects and activities, or the conclusion in

the WVFMP EIR about the cumulative impact of criteria pollutant emissions from manual and mechanical treatments of vegetation under the WVFMP.[2]

With regard to a cumulative impact from concurrent TAC emissions associated with the project activities in the Southwest Polygon and the TAC emissions associated with the construction of Heathcock Hall, Greek Theatre accessibility improvements, and the SSM project, all three cumulative projects are more than 1,000 feet from where the Nyingma Center and single-family homes are located. Therefore, the TAC emissions of the project would not cumulate with the TAC emissions from these construction projects to adversely affect these receptors. Similarly, although there is one cumulative project (Centennial Drive replacement bridge) that would be under construction the same time that treatment is implemented in the Northeast Polygon, there are no sensitive receptors within 1,000 feet of either project that would be exposed to the combined TAC emissions of both projects. There would be no cumulative impact.

4.5.4 Change in Circumstances and/or New Information

There is no new information related to air quality or any changes in circumstances at or around the project area that could affect the conclusions of the prior impact analyses. On April 20, 2022, the Bay Area Air Quality Management District (BAAQMD) Board of Directors adopted *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans,* which replaced the previously adopted *2017 BAAQMD CEQA Air Quality Guidelines*. The thresholds of significance and analytical methods for the analysis of criteria pollutants and TAC impacts in the new guidelines are unchanged from before. Therefore, the new guidelines do not represent significant new information.

4.5.5 Conclusion

For reasons set forth above, the air quality impacts of the proposed project would be less than significant. No new or substantially more severe significant project-level or cumulative impacts would result as compared to those discussed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR and no new mitigation is required.

[2] Although the WVFMP EIR did find the cumulative impact from prescribed burns conducted under the WVFMP to be cumulatively considerable, no prescribed burns are planned for the UC Berkeley Hill Campus during the implementation of the proposed project.

4.6 BIOLOGICAL RESOURCES

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐	☐

4.6.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts on biological resources from Berkeley Lab growth under the 2006 LRDP were evaluated in Section IV.C of the UC LBNL 2006 LRDP EIR (pages IV.C-39 through 58), including the effects of ongoing vegetation management. The 2006 LRDP EIR analysis concluded that all impacts on biological resources would either be less than significant or would be reduced to a less than significant level with mitigation.

UCB WVFMP EIR

The WVFMP EIR (pages 3.5-30 through 3.5-81) analyzed the impacts of the WVFMP on biological resources, including special-status plants and wildlife species, wetlands and other sensitive habitats, and wildlife movement, and concluded that all impacts on biological resources would be less than significant with the implementation of EPMs and mitigation measures.

4.6.2 Project Impact Analysis

As described in **Section 3.0, Project Description**, the three polygons are located along the perimeter of Berkeley Lab and involve land within Berkeley Lab and adjoining areas of UC Berkeley. In order to characterize existing biological resources in the three polygons, a reconnaissance-level survey of the three areas was conducted by qualified biologists on June 6, 2023. Prior to conducting the field survey, the biologists reviewed the UC LBNL 2006 LRDP EIR for biological resources information, including with respect to special-status species and habitats known or likely to occur on UC LBNL lands. The biologists also reviewed the UCB WVFMP EIR related to biological resources on the UC Berkeley Hill Campus. The results of the research and survey are presented below.

Field Survey Results

Based on the information in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, 23 special-status plant species were determined to have potential to occur within the Berkeley Lab campus site or the UC Berkeley Plan Area or both based on the presence of suitable habitat and occurrence records. However, none of the special-status plants that were identified as having potential to occur were observed during the survey. Suitable habitat for special-status plants is largely absent from the project polygons; however, marginally suitable habitat for one special-status species, western leatherwood, was observed during the field visit conducted for the project. Accordingly, the biologists determined that the species may be encountered during project activities (ESA 2023).

With respect to special-status wildlife species, based on the information in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, 16 special-status wildlife species were determined to have potential to occur within Berkeley Lab campus site or the UC Berkeley Plan Area or both based on the presence of suitable habitat and occurrence records. **Table B** presents the 16 special-status wildlife species and their potential to occur within the project polygons based on the habitat present in the polygons.

Table B: Study Area Special-Status Wildlife Species

Special Status Wildlife Species	Observed during Survey	Habitat
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	No	Absent or of low-to-marginal quality
California red-legged frog (*Rana draytonii*)	No	Not present
Western pond turtle (*Actinemys marmorata*)	No	Not present
American badger (*Taxidea taxus*)	No	Not present
Mountain lion (*Puma concolor*)	No	Not present
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	No	Marginal habitat present
American peregrine falcon (*Falco peregrinus*)	No	Nesting habitat is not present; species may forage in the area.
Burrowing owl (*Athene cunicularia*)	No	Not present
Golden eagle (*Aquila chrysaetos*)	No	Potentially suitable nesting habitat present is within groves of large trees.
Northern harrier (*Circus hudsonius*)	No	Potentially suitable grassland and scrub habitat used for nesting and foraging by this species present in the area.
White-tailed kite (*Elanus leucurus*)	No	Potentially suitable nesting habitat is present within large trees.
Yellow warbler (*Setophaga petechia*)	No	Potentially suitable riparian woodland habitat is present within the area.
Monarch butterfly (*Danaus plexippus*)	No	Not present
Pallid bat (*Antrozous pallidus*)	No	Potentially suitable roosting habitat within large trees with exfoliating bark, crevices, or cavities is present in the area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	No	Habitat not present
Western red bat (Lasiurus blossevillii)	No	Potentially suitable roosting habitat for this species within dense foliage clusters is present in the area.

None of the 16 special-status wildlife that were identified as having potential to occur were observed during the survey. The polygons do not provide suitable habitat for the California red-legged frog, western pond turtle, western burrowing owl, monarch butterfly (wintering habitat), American badger, mountain lion, Townsend's big-eared bat (roosting), and American peregrine falcon (nesting). However, suitable habitat for the four special-status bird species and two bat species listed above, as well as nesting habitat for migratory birds, is present across all three polygons. Moderately suitable habitat for the San Francisco dusky-footed woodrat is present in the vicinity of Cafeteria Creek; the habitat in the rest of the Southwest Polygon and the other two polygons is marginally suitable for the species. Therefore, this species may be present and could be encountered during project activities. Alameda whipsnake habitat is absent or of low-to-marginal quality within all three polygons (ESA 2023).

Eight sensitive natural communities were observed and mapped for the WVFMP EIR: bigleaf maple forest, bush monkeyflower scrub, California bay forest, California buckeye grove, hazelnut scrub,

madrone forest, ocean spray brush, and redwood forest. None of these sensitive natural communities are present within the three project polygons (ESA 2023).

Habitats in the Study Polygons

Southwest Polygon. The Southwest Polygon is the largest of the three project areas and this polygon is largely composed of non-native vegetation. It contains a variety of vegetation and habitat types, including eucalyptus stands, conifer stands and coast live oaks with understory, coyote brush scrubland, annual grasslands, and a riparian area. Suitable habitat for Alameda whipsnake is not present within the polygon. Suitable habitat for western leatherwood, nesting birds, San Francisco dusky-footed woodrat, and roosting bats occurs throughout the polygon. As noted above, moderately suitable habitat for the San Francisco dusky-footed woodrat is present in the vicinity of Cafeteria Creek (ESA 2023).

Northwest Polygon. This polygon is oriented on a steep south-facing slope that includes a mix of native and non-native vegetation. Eucalyptus stands with an understory of wild oats and Italian thistle occur in the western portion, down slope of Building 90. Eucalyptus and conifers (pines) dominate the northern portion, while eucalyptus, California bay laurel, and coast live oak trees occur in the eastern portion of the polygon. Eucalyptus stands also occur between Building 90 and Building 71. Suitable habitat for Alameda whipsnake is not present within the polygon. Suitable habitat for western leatherwood, nesting birds, and roosting bats occurs throughout the polygon, although few understory trees occur in eucalyptus stands, making the likelihood of encountering western leatherwood low (ESA 2023).

Northeast Polygon. This polygon is largely composed of non-native vegetation. Eucalyptus and non-native/annual grassland occur on the hillside north of Buildings 76, the Building 75 complex, and Building 69. Eucalyptus stands occur between Building 69 and Centennial Drive, and coast live oaks occur adjacent to McMillan Road. Upslope, to the northeast of Building 69, are small, recently-planted redwoods and ornamental shrubs with a scattering of immature oaks, sparse coyote bush, and poison hemlock. Although this polygon is in the vicinity of suitable Alameda whipsnake habitat, the Northeast Polygon is primarily a landscaped vegetation community and does not contain the primary habitat elements required to support the species. As such, the habitat suitability for Alameda whipsnake within the Northeast Polygon is low to marginal. Suitable habitat for western leatherwood, nesting birds, and roosting bats occurs throughout this polygon (ESA 2023).

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As discussed above, research and field surveys of the three polygons were conducted to determine the potential for special-status plant and wildlife species to occur within the polygons and be disturbed or otherwise affected by project activities. The potential of the proposed project to affect special-status species is analyzed below.

Impact on Special-Status Plant Species. According to the 2006 LRDP EIR, five special-status plant species have a potential to occur on the Berkeley Lab campus; the UCB WVFMP EIR reports that

23 special-status plant species have a potential to occur on the UC Berkeley Hill Campus. Based on the biological reconnaissance survey of the three polygons, and with the exception of one species, none of the identified special-status plants or their habitats were found to be present within the polygons (ESA 2023). Marginally suitable habitat for western leatherwood was observed; the biologists thereby determined that the species may be encountered during project activities. The biologists noted that additional floristic or protocol-level botanical surveys are not needed; however, they recommend that the project on-site biological monitor identify and flag western leatherwood for avoidance if found in work areas. As noted in **Section 3.4.5, Environmental Protection Measures**, pursuant to UC LBNL EPM-2, a full-time biological monitor would be on the project sites when the treatment activities are conducted and would identify and flag western leatherwood if observed in the work area on the Berkeley Lab campus site. Similarly, for work conducted on UC Berkeley portions of the project sites, WVFMP Mitigation Measure BIO-1b would be implemented. Therefore, with the inclusion of the above-stated environmental protection measure and WVFMP mitigation measure, the proposed project would not adversely affect any special-status plant species or habitat. There would be no new or substantially more severe significant impacts on special-status plants than previously disclosed, and no new mitigation would be required.

Impact on Special-Status Birds. Golden eagle, white-tailed kite, northern harrier, other nesting raptors, yellow warbler, and other native nesting birds are protected under state and federal laws and regulations, including the Migratory Bird Treaty Act. Suitable nesting habitat for these species is present in the treatment areas. Nesting season for these species extends from February 1 through August 31 of each year. The proposed project would be implemented in three phases, with the first phase treating the Southwest Polygon over a 6-week period, second phase treating the Northwest Polygon over a 6-week period, and the last phase treating the Northeast Polygon over a 4-week period. The three phases would be completed within three years of project approval. Due to the short durations of each phase and the time period available to implement the project, the project is anticipated to occur outside the bird nesting season and the proposed project would have a less than significant impact on all nesting birds, including special-status birds. However, should some project activities need to be implemented during the bird nesting season, UC LBNL would implement LRDP Mitigation Measure BIO-3 and UC Berkeley would implement WVFMP Mitigation Measure BIO-2f; both mitigation measures require pre-activity nesting bird surveys, establishment of buffers to avoid impacts on active nests, and monitoring until the young have fledged. With the implementation of these previously adopted mitigation measures, the project's impact on nesting birds would be less than significant. There would be no new or substantially more severe significant impact on special-status birds than previously disclosed, and no new mitigation would be required.

Impacts on Special-Status Bats. Two special-status bat species, pallid bat and western red bat, could potentially occur within the treatment areas. Both species are CDFW species of special concern. These species use a variety of habitats to roost, including crevices and cavities in trees, tree hollows, sluffing bark, and leaf clusters, all of which are present in the three treatment areas. Breeding season for these species extends from April 1 through August 31 of each year. As noted above, the proposed project would be implemented in three phases, with each phase occurring for a period of four to six weeks between September and February of the following year. As the project has been designed to occur outside the bat breeding season, the proposed project would have a less than

significant impact on breeding bats, including special-status bats. However, roosting bats, including maternity and over-wintering roosts, have potential to be present year-round and could be affected by the vegetation removal activities. As discussed in **Section 3.4.5**, UC LBNL EMP-4 has been incorporated into the Berkeley Lab project activities to avoid impacts on roosting bats by implementing pre-activity surveys by a qualified biologist and the establishment of buffers around active roosts to avoid bat mortality or other indirect impacts. Similarly, project activities on the UC Berkeley portions of the polygons would implement WVFMP Mitigation Measure BIO-2k and conduct focused bat surveys and implement avoidance measures if necessary. Therefore, with the implementation of these standard project features and previously adopted mitigation measures, the project would have a less than significant impact on special-status bat species. There would be no new or substantially more severe significant impact on special-status bats than previously disclosed, and no new mitigation would be required.

***Impact on Alameda whipsnake*.** Alameda whipsnake is listed as threatened under ESA and CESA. The range of Alameda whipsnake includes Contra Costa County, most of Alameda County, and small portions of northern Santa Clara and western San Joaquin Counties. Suitable habitat for Alameda whipsnake includes the mosaic of scrub communities, grassland, and open woodland habitat in the East Bay. Core type habitat for the species includes scrub and adjacent grassland on northeast, southeast, south, and southwest facing slopes. Foraging and dispersal habitat includes woodland and grassland that is contiguous with scrub habitat. Closed canopy tree stands dominated by nonnative trees such as eucalyptus and Monterey pine are considered degraded or unsuitable habitat (UCB 2021). The potential for the species to occur in the three polygons is low because habitat for the species is absent or of low to marginal quality within the polygons. However, there is suitable habitat for the Alameda whipsnake in the vicinity of the project polygons and the species could disperse or travel through the treatment areas. The UC LBNL 2006 LRDP EIR sets forth LRDP Mitigation Measures BIO-5c through -5e to avoid take or harassment of Alameda whipsnakes; further, the project includes UC LBNL EMP-2 which requires that a full-time biological monitor be present at the Berkeley Lab campus site treatment areas for the duration of project activities (see **Section 3.4.5, Environmental Protection Measures**). Similarly, the WVFMP EIR sets forth Mitigation Measure BIO-2b that UC Berkeley would implement to avoid take or harassment of the species and EPMs BIO-1, BIO-3 through 6 which would provide other protections to the species. With implementation of these environmental protection measures and previously adopted mitigation measures, the proposed project would have a less than significant impact on Alameda whipsnake. There would be no new or substantially more severe significant impact on Alameda whipsnake than previously disclosed, and no new mitigation would be required.

Impact on San Francisco dusky-footed woodrat. As noted above, marginally suitable habitat is present for San Francisco dusky-footed woodrat in the Southwest Polygon, with moderately suitable habitat for the species present in the vicinity of Cafeteria Creek. Suitable habitat for the species is not present in the other two polygons. Although no woodrat nests were observed during the reconnaissance survey, they could be established in the area prior to project activities commenced. As noted in **Section 3.4.5, Environmental Protection Measures**, pursuant to UC LBNL EPM-1, the project would establish a 25-foot buffer on either side of Cafeteria Creek to protect the riparian area. This would avoid disturbing the moderately suitable habitat area where woodrat nest building is more likely. Furthermore, pursuant to UC LBNL EPM-3, within seven days before initiation of

treatment activities within the Southwest Polygon on the Berkeley Lab campus site, a qualified biologist would conduct a focused survey for San Francisco dusky-footed woodrat nests within the treatment area. If a nest were observed, the biologist would check to determine whether it is active or not. If the nest were found to be active, a no-disturbance buffer would be established around the nest. Once the nest was no longer active, and in case project vegetation removal were needed, the nest would be dismantled under the guidance of a qualified biologist and moved to another suitable location. Similarly, UC Berkeley would conduct a focused survey of the area in the Southwest Polygon pursuant to WVFMP Mitigation Measure BIO-2j to confirm the absence of the woodrat. Due to the environmental protection measures and previously adopted mitigation measures included in the project, the impact on this species would be less than significant. There would be no new or substantially more severe significant impact on dusky-footed woodrat than previously disclosed, and no new mitigation would be required.

In summary, no new disturbances to biological resources would occur that were not already analyzed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR. Thus, there would be no new or substantially more severe significant effects, either directly or through habitat modifications, on any special-status species, and no new mitigation would be required.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

With the exception of the Southwest Polygon riparian area, there are no sensitive natural communities located within the boundaries of the three polygons (for impact on Alameda whipsnake or its habitat, see Item a above). The riparian area is in the eastern portion of the Southwestern Polygon and is associated with an intermittent drainage ("Cafeteria Creek") that runs west from the old cafeteria building before crossing under Cyclotron Road. As discussed in **Section 3.4.5, Environmental Protection Measures**, UC LBNL EPM-1 would establish a 25-foot setback buffer from the bank of Cafeteria Creek to avoid impacts on the riparian area. No work would be performed in this buffer area. Surrounding trees with canopies that extend over the creek would also not be removed, but selective trimming could be performed. As a result, the proposed project would not have any adverse effect on a sensitive natural community. There would be no new or substantially more severe significant impact on sensitive natural communities than previously disclosed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR, and no new mitigation would be required.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As noted above under Item b, there is one intermittent drainage within the Southwest Polygon. Although the creek has not been evaluated to determine whether it would be considered jurisdictional waters of the U.S. under the Clean Water Act, no project activities would occur in or near the creek that would result in an adverse impact on the creek through direct removal, filling, hydrological modification, or any other means. There would be no impact on federally protected wetlands. There would be no new or substantially more severe significant impact on wetlands than

previously disclosed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR, and no new mitigation would be required.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed project would not involve any new construction of structures or fencing that could interfere with the movement of wildlife species. There would be no new or substantially more severe significant impacts on wildlife movement than previously disclosed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR, and no new mitigation would be required.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would be located on lands owned by the University of California and would therefore not be subject to local policies or ordinances adopted for the protection of biological resources by the Cities of Berkeley or Oakland or by Alameda County. Therefore, there would be no conflict with any plans and policies for the protection of biological resources. Furthermore, for reasons set forth above, with the implementation of environmental protection measures and previously adopted mitigation measures, the proposed project would not result in significant impacts on biological resources. There would be no new or substantially more severe significant impacts related to conflicts with policies and ordinances than previously disclosed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR, and no new mitigation would be required.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no habitat conservation plans, natural community conservation plans, or other habitat conservation plans that are applicable to the Berkeley Lab or UC Berkeley Hill Campus, including the three treatment areas. There would be no impact related to conflicts with conservation plans from the proposed project.

4.6.3 Cumulative Impacts

The UC LBNL 2006 LRDP EIR concluded that cumulative impacts to biological resources resulting from UC LBNL development under the 2006 LRDP, including the continuing vegetation management program, would be less than significant. Similarly, the UCB WVFMP EIR also concluded that with the implementation of EPMs and mitigation measures set forth in the EIR, the cumulative impacts of the WVFMP would not be cumulatively considerable. As the project impacts are within the scope of the previous analyses and because the project's impacts would be less than significant, the proposed project would not result in new or greater cumulative impacts.

4.6.4 Change in Circumstances and/or New Information

The UC LBNL 2006 LRDP EIR was certified in 2007 and addressed all special-status plant and wildlife species that were considered special status at that time. Since then, additional plant and wildlife

species have been listed or determined to be special status under federal and state laws. The UCB WVFMP EIR has been recently certified (2021) and includes a comprehensive list of all special-status plant and wildlife species that have the potential to occur in the area. The updated list from the UCB WVFMP EIR was used to analyze the potential impacts of the proposed project in the preceding analysis. As the analysis above shows, most of the subsequently identified special-status species are not likely to occur in the polygons because of a lack of suitable habitat. Furthermore, with the implementation of applicable EPMs and previously adopted mitigation measures, the project would not result in significant impacts on special-status species identified for the project area.

4.6.5 Conclusion

For reasons set forth above, there would be no new or substantially more severe significant impacts as compared to those identified and disclosed in the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR, and no new mitigation is required.

4.7 CULTURAL RESOURCES

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☒	☐	☐	☐

4.7.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts on cultural resources from UC LBNL growth and development under the 2006 LRDP are evaluated in 2006 LRDP EIR Section IV.D (pages IV.D-13 through 21). The EIR concluded that a less than significant impact would occur to buildings and structures that have been found to be ineligible for listing in the National Register. The EIR also concluded that with mitigation, impacts to archaeological resources and human remains would be reduced to a less than significant level. The EIR found that implementation of the 2006 LRDP could cause a substantial adverse change in the significance of historical resources on the Berkeley Lab not related to the vegetation management program and there was no feasible mitigation to reduce this impact to a less than significant level. Therefore, although the impact on historical resources was found to be significant and unavoidable, it was not due to the vegetation management program.

UCB WVFMP EIR

The WVFMP EIR (pages 3.4-12 through 3.4-17) analyzed the impacts of the WVFMP on cultural resources and found that ground disturbing activities associated with vegetation management could inadvertently affect previously unknown archaeological resources and human remains. However, with the implementation of the mitigation measures set forth in the EIR, all impacts would be less than significant.

4.7.2 Project Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?

There are no known historic structures or resources within the three polygons. Therefore, the proposed project would not adversely affect a historical resource. The project would not result in new or substantially more severe significant impacts related to historical resources than previously disclosed, and no new mitigation is required.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Some ground disturbing activities could occur during the implementation of the proposed project, especially during tree removal. However, with the implementation of LRDP Mitigation Measure CUL-3 set forth in the UC LBNL 2006 LRDP EIR and Mitigation Measure CUL-1a, 1b, and 1c in the UCB WVFMP EIR, the impacts of the project on previously unknown archaeological resources would be reduced to a less than significant level. Therefore, the proposed project would not result in new or substantially more severe significant impacts related to archaeological resources than previously disclosed, and no new mitigation is required.

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

As noted above, ground disturbing activities could occur during the implementation of the proposed project, especially during tree removal. However, with the implementation of LRDP Mitigation Measure CUL-4 set forth in the UC LBNL 2006 LRDP EIR and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 as set forth in the UCB WVFMP EIR, the impacts of the project on human remains would be reduced to a less than significant level. Therefore, the project would not result in new or substantially more severe significant impacts related to human remains than previously disclosed, and no new mitigation is required.

4.7.3 Cumulative Impacts

The UC LBNL 2006 LRDP EIR concluded that implementation of the proposed 2006 LRDP would not combine with other cumulative projects to result in an adverse change to the significance of historical resources that share historic significance with resources that could be lost at Berkeley Lab, nor would it result in a significant cumulative impact on archaeological resources or human remains. Similarly, the UCB WVFMP EIR also concluded that with the implementation of EPMs and mitigation measures set forth in the EIR and compliance with the state law related to human remains, the cumulative impacts of the WVFMP would not be cumulatively considerable. As the project impacts are within the scope of the previous analyses and because the project's impacts would be mitigated to a less than significant level, the proposed project would not result in new or greater cumulative impacts.

4.7.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on cultural resources.

4.7.5 Conclusion

The project would not affect historical resources and impacts on archaeological resources and human remains would be reduced to a less than significant level with mitigation. Therefore, there would be no new or substantially more severe significant cultural resources impacts, and no new mitigation is required.

4.8 ENERGY

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR (supplemented) & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR (supplemented) and UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☒	☐	☐	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☒	☐	☐

4.8.1 Findings of the UC LBNL 2006 LRDP EIR, including Supplementation of the UC LBNL 2006 LRDP EIR in the NERSC-9 EIR; Findings of the UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts of 2006 LRDP growth on utilities and service systems are evaluated in Section IV.M of the 2006 LRDP EIR (pages IV.M-16 through 28). The EIR analysis noted that ongoing conservation efforts at Berkeley Lab would continue and that the increased demand of electricity and natural gas would be served using the existing infrastructure and no improvements would be required. The EIR analysis concluded that LRDP implementation would result in impacts related to electricity and natural gas that would be less than significant.

Supplementation of the UC LBNL 2006 LRDP EIR in the NERSC-9 EIR

In keeping with a later requirement to focus on energy-related impacts in CEQA analyses, in 2017 UC LBNL supplemented the 2006 LRDP EIR with an energy impacts analysis in the EIR prepared for *Building 59 Upgrade & Installation and Operation of NERSC-9* (SCH#2016062007). The supplemental program-level analysis concluded that projected sitewide energy use at UC LBNL, including ongoing energy consumption and the future consumption under the 2006 LRDP, would not result in significant environmental impacts. UC LBNL's energy consumption was not expected to be substantially wasteful, inefficient, or unnecessary, nor was it expected to conflict with renewable energy or energy-efficiency plans.

UCB WVFMP EIR

The WVFMP EIR (page 3-5) discussed the short-term energy use during vegetation management activities and concluded that the use would not be inefficient, wasteful or unnecessary and would not conflict with any energy efficiency plan.

4.8.2 Project Impact Analysis

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

The vegetation removal activities under the proposed project would involve the use of petroleum and diesel to operate vehicles and equipment. The use of energy resources would occur for a period of four to six weeks per polygon during three years of project implementation. This use was anticipated in the UC LBNL 2006 LRDP EIR and the 2017 supplement, as well as in the UCB WVFMP EIR. The use would not be inefficient or wasteful. There would be no new or substantially more severe significant impacts involving inefficient or wasteful use of energy than previously disclosed, and no new mitigation is required.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The short-term use of energy resources for limited periods of four to six weeks over the course of three years would not conflict with any UC LBNL, UC Berkeley, or University of California plan for renewable energy or energy efficiency. There would be no impact.

4.8.3 Cumulative Impacts

The short-term use of energy resources, mainly petroleum and diesel, would not result in a significant cumulative impact on energy resources.

4.8.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on energy resources.

4.8.5 Conclusion

The potential impacts of the project on energy resources would be similar to or less than those analyzed in the 2017 Supplement to the 2006 LRDP EIR and the UCB WVFMP EIR due to improved energy efficiency in equipment and vehicles. There would be no new or substantially more severe significant energy impacts, and no new mitigation is required.

4.9 GEOLOGY AND SOILS

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☒	☐	☐
ii. Strong seismic ground shaking?	☐	☒	☐	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv. Landslides?	☐	☒	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☒	☐	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☒	☐	☐
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

4.9.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts related to geology and soils from UC LBNL growth under the 2006 LRDP were evaluated in Section IV.E of the UC LBNL 2006 LRDP EIR (pages IV.E-21 through E-28). The EIR evaluation included analysis of the potential for seismic-related impacts to life and property from the growth and development under the 2006 LRDP. Also considered were slope stability, expansive soils, soil

erosion, liquefaction, settlement, septic tank/alternative waste suitability, tsunami, and seiche. The UC LBNL 2006 LRDP EIR concluded that all impacts related to geology and soils would either be less than significant or reduced to less than significant levels with mitigation.

UCB WVFMP EIR

The WVFMP EIR (pages 3.6-18 through 3.6-23) analyzed the potential for vegetation management activities to result in ground disturbance that could increase the potential for soil erosion and landslide risk. However, with the implementation of EPMs, both impacts would be less than significant. All other geology, soils, and paleontological impacts of the WVFMP would be less than significant.

4.9.2 Project Impact Analysis

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

The proposed project would not involve construction of a new building that could be exposed to fault rupture, seismic shaking, or ground failure impacts. There would be no impact and no new mitigation is required.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Ground disturbance, especially in areas of tree removal and on steep slopes, has the potential to result in soil erosion and/or loss of topsoil. In addition, removal of trees, understory, and leaf litter could lead to greater exposure to wind and stormwater erosion in some areas. However, with the implementation of LRDP Mitigation Measure GEO-3 in the case of project work on UC LBNL lands, and implementation of EPMs GEO-1 through 5 in the case of project work on UC Berkeley lands, the impact would be reduced to a less than significant level. EPM GEO-1 requires suspension of mechanical soil disturbance during and after precipitation, EPM GEO-2 requires stabilization of disturbed soil areas, EPM GEO-3 prohibits use of heavy equipment on slopes steeper than 30 percent, EPM GEO-4 requires stormwater to be drained via water breaks which would decrease the potential for channelized erosion down the fuel break, and EPM GEO-5 requires evaluation of treatment areas with slopes greater than 50 percent for unstable areas. Following vegetation treatment in all three areas, the project includes restoration activities such as spreading mulch, installing other erosion control measures, hydroseeding, and promoting native growth. Root systems of removed trees would remain intact for many years, which would further combat erosion as new ground cover establishes. The proposed project would not result in new or substantially more severe significant impacts related to soil erosion than previously disclosed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and no new mitigation is required.

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

There are no landslides in the three project areas and therefore, ground disturbance and tree removal would not have the potential to destabilize existing landslides. Based on the slope stability map in the UC LBNL 2006 LRDP EIR, there are two slopes in the Southwest Polygon that have a moderate risk of slope instability and one small area that has been previously repaired. In the Northwest Polygon, there are three small areas that have a low risk of slope instability, and in the Northeast Polygon, there is a large area that has been previously repaired and stabilized. Because herbicides would only be applied by hand to stumps, resprouts, and target foliage, these methods of herbicide application would not affect large areas of vegetation and associated root systems such that substantial slope destabilization would occur. Following vegetation treatment in all three areas, the project includes restoration activities such as by spreading mulch, installing other erosion control measures, hydroseeding, and promoting native growth. Root systems of removed trees would remain intact for many years, which would further promote soil stability as new ground cover establishes. Therefore, the proposed project would result in a less than significant impact related to unstable soils. The proposed project would not result in new or substantially more severe significant impacts related to unstable soils than previously disclosed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and no new mitigation is required.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

The proposed project does not involve the construction of a new structure that could be affected by expansive soils. There would be no impact, and no new mitigation is required.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project does not involve wastewater disposal systems. There would be no impact.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed project could result in the removal of existing subsurface materials during grading and vegetation removal. However, generally, the project would not include deep excavations and ground disturbance would be limited to the top few inches of soil. Furthermore, the UC LBNL 2006 LRDP EIR determined that unique paleontological resources do not exist on the Lab site, and the UCB WVFMP EIR also determined that the potential to affect such resources is low. There would be no impact, and no mitigation is required.

4.9.3 Cumulative Impacts

As discussed above, there would be no significant geology, soils or paleontological impacts of the proposed project. The project would not alter the conclusions of the cumulative impacts analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR.

4.9.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts related to geology and soils.

4.9.5 Conclusion

The project would involve no new construction or substantial grading and excavation. Therefore, there would be no new or substantially more severe significant geology and soils impacts, and no new mitigation is required.

4.10 GREENHOUSE GAS EMISSIONS

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR (supplemented) & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR (supplemented) & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

4.10.1 Findings of the 2006 LRDP EIR, including Supplementation of the UC LBNL 2006 LRDP EIR in the NERSC-9 EIR; Findings of the UCB WVFMP EIR

Greenhouse gases or GHGs (so called because of their role in trapping heat near the surface of the earth), including those emitted by human activity, are implicated in global climate change. The principal GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), black carbon, ozone, and water vapor. Of GHGs generated by human activities, CO2 and CH4 are generated in the largest quantities. Emissions of CO2 are largely by-products of fossil fuel combustion, whereas CH4 results from off-gassing associated with agricultural practices and landfills. Black carbon (fine particulate matter from incomplete combustion) has emerged as a major contributor to global climate change, possibly second only to CO2. Other GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6), and are generated in certain industrial processes.

UC LBNL 2006 LRDP EIR

The 2006 LRDP Final EIR (pages IV-5 to IV-9) evaluated the increase in GHG emissions associated with the 2006 LRDP in response to a comment raised on the Draft EIR. The Final EIR indicated that while Lab development under the 2006 LRDP would result in "incremental increases" in GHGs, they would be neither substantial nor significant due to the LRDP's numerous features that would reduce overall emissions. As a result, the 2006 LRDP's contribution to climate change "would not be cumulatively considerable, and the cumulative impact of the project would therefore be less than significant."

Supplementation of the UC LBNL 2006 LRDP EIR in the NERSC-9 EIR

AB 32, the California Global Warming Solutions Act of 2006, was signed into law in September 2006. At the time of the 2006 LRDP EIR analysis, although AB 32 had been enacted, there was limited state guidance for estimating and evaluating a project's GHG emissions. Neither the BAAQMD nor any other agency had, as of 2007, put forth any guidance on the evaluation of impacts from a project's GHG emissions, including significance criteria or methodologies for estimating a project's GHG emissions. However, since the certification of the 2006 LRDP EIR, a substantial amount of guidance related to GHG impact analysis has been put forth by state and local agencies.

In view of this information, in 2017, a supplement to the 2006 LRDP EIR was prepared as part of the NERSC-9 Project EIR (SCH# 20160620007) that included an updated analysis of the GHG impacts that could result from Lab growth under the 2006 LRDP. The analysis was prepared consistent with the thresholds and methodologies set forth by the BAAQMD in its *CEQA Air Quality Guidelines*. The analysis (pages S-12 through S-18) concluded that GHG emissions from UC LBNL growth under the 2006 LRDP would exceed the applicable thresholds. However, with the implementation of LRDP Mitigation Measure GHG-1 set forth in the 2017 Supplement to the 2006 LRDP EIR in the NERSC-9 EIR which requires the Berkeley Lab to monitor in the increase in Lab-wide GHG emissions and reduce and/or offset any increases above the threshold level, the impact would be reduced to a less than significant level. The 2017 Supplement to the 2006 LRDP EIR also analyzed (pages S-18 through S-20) the potential for Lab growth under the 2006 LRDP to conflict with plans, policies, and regulations adopted for the purpose of reducing GHG emissions and concluded that Lab development would not conflict with plans, policies and regulations concerning GHG emissions.

UCB WVFMP EIR

The WVFMP EIR (pages 3.7-10 through 3.7-15) analyzed the GHG impacts of the vegetative fuel management plan by evaluating whether it would result in a substantial increase in GHG emissions such that it would conflict with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. In addition, the analysis also qualitatively recognized the carbon benefits associated with implementation of the WVFMP over the long term, including a reduction in the occurrence and severity of future GHG-emitting wildfires and carbon sequestration provided by the growth of native vegetation on treated acres. The analysis concluded that the project would not conflict with regulations and plans for GHG reduction and the small amount of annual GHG emissions from vegetation removal activities would not be significant.

4.10.2 Project Impact Analysis

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project would occur over a limited period of three years. During this time, GHG emissions would be produced by the manual and mechanical treatments used to remove vegetation. Based on an average rate of about 4.0 MTCO2e of GHG per acre of manual and mechanical treatment,[3] vegetation treatment in the Southwest Polygon (24-acre area) would result in approximately 96 MTCO2e; the emissions from treatment in the other two polygons would be lower (about 24 MTCO2e each). The BAAQMD has not set forth a numeric significance threshold that a lead agency may use to evaluate short-term emissions. However, these emissions are considered very low when compared to the GHG emissions emitted in the air basin. Further, the project is proposed to reduce the severity and potential occurrence of future GHG-emitting wildfires on the treated acres. As a result, the project would not cause a substantial increase in UC LBNL's operational GHG emissions analyzed in the 2017 Supplement to the 2006 LRDP EIR in the NERSC-9 EIR. Nor would the project increase the emissions above those reported in the UCB WVFMP EIR.

[3] According to the WVFMP EIR, there would be about 4.3 MTCO2e of GHG per acre from manual treatment and about 3.8 MTCO2e of GHG per acre from mechanical treatment. An average of 4.0 MTCO2e is used in this Addendum to address both types of treatments.

There would be no new or substantially more severe significant impacts related to GHG emissions than previously reported, and no new mitigation is required.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

For reasons presented above, the proposed project would not result in a substantial increase in GHG emissions above previously analyzed levels. Furthermore, the Berkeley Lab and UC Berkeley would continue to implement GHG reduction measures to meet the goals established in their sustainability plans and comply with the *UC Sustainable Practices Policy.*

Other plans applicable to the proposed project include the 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.* As discussed in the WVFMP EIR, 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 (WVFMP EIR 2021). The proposed project would be consistent with the types of treatments called for in the *2017 Scoping Plan*. The proposed project would implement vegetation treatment on up to 35 acres, which would contribute to the treatment targets set forth in the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan.* Similarly, the proposed project would help meet the acreage targets for forest restoration and treatment activity levels for non-federal forest lands set forth in the *California Forest Carbon Plan*. There would be no new or substantially more severe significant impacts related to a conflict with a plan for reducing GHG emissions, and no new mitigation is required.

4.10.3 Cumulative Impacts

As the impact from a project's GHG emissions is essentially a cumulative impact, based on the analysis presented above, the proposed project would not result in a significant cumulative impact.

4.10.4 Change in Circumstances and/or New Information

As detailed above, a Supplement to the 2006 LRDP EIR in the NERSC-9 EIR, certified in February 2017, included an updated GHG impact consistent with current emissions thresholds and analyses through the year 2025 on a project-specific and cumulative basis. Since the certification of the NERSC-9 EIR, on April 20, 2022, the BAAQMD issued updated GHG emissions thresholds that may be used by a lead agency in the Bay Area to evaluate the GHG impacts of a proposed project or plan. The new thresholds are designed to control GHG emissions from new development and achieve the reductions needed to bring the Bay Area into compliance with the latest State laws. The BAAQMD guidance notes that the new thresholds should be used for projects for which an NOP is issued after April 20, 2022. The analysis in this addendum shows that an EIR is not required. Furthermore, the project does not involve a permanent increase in GHG emissions, and in fact may reduce GHG emissions in the long run by reducing wildfire risk and improving carbon sequestration. Therefore, the new thresholds are not applicable to the proposed project.

In July 2023, the UC Office of the President made changes to the Climate Action section of the Sustainable Practices Policy with the intent of aligning the UC climate policy with the State's climate goals, and to direct campuses to: (1) establish updated emissions reduction targets, (2) focus on direct emissions reductions, and (3) avoid the use of carbon offsets in meeting reduction targets. The revised UC policy, which was adopted on July 13, 2023, also sets forth a timeline for each campus/medical center to set their GHG reduction targets within a framework of achieving decarbonization by 2045. The revised UC policy requires each campus to update its Climate Action Plan by 2026 to reflect these changes and begin implementing the plan immediately after that. The updated UC policy does not affect the GHG impact analysis, impact significance conclusions or the mitigation measures set forth in the Supplementation of the 2006 LRDP EIR for GHG and Energy impacts in the NERSC-9 EIR or the UCB WVFMP EIR as they relate to the proposed project. This is because the policy is focused on campus-wide climate action plans (and not individual projects) and provides campuses time to update and implement them. The new targets and related requirements will not become effective until after 2026. The project will be completed before the new requirements come into effect. Furthermore, the proposed project involves short-term activities that would not substantially increase the operational emissions of either UC LBNL or UC Berkeley and so would not interfere with the achievement of existing and new GHG targets of both campuses. The updated UC Sustainability Policy therefore does not represent significant new information.

4.10.5 Conclusion

Implementation of the project would not result in new or substantially more severe significant GHG impacts than previously disclosed, and no new mitigation is required.

4.11 HAZARDS AND HAZARDOUS MATERIALS

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☒	☐	☐
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☒	☐	☐
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

4.11.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts related to hazards and hazardous materials from UC LBNL growth under the 2006 LRDP were evaluated in Section IV.F (pages IV.F-23 through F-42) of the 2006 LRDP EIR. The 2006 LRDP EIR

analysis concluded that all hazards and hazardous materials-related impacts would either be less than significant or would be rendered less than significant with mitigation.

UCB WVFMP EIR

The UCB WVFMP EIR (pages 3.8-12 through 3.8-17) analyzed impacts related to hazards and hazardous materials and concluded that while the implementation of the WVFMP would increase the number of treatment activities occurring within the Plan Area and thus increase the use of common hazardous materials, such as fuel, oils, and lubricants used in equipment, in the Plan Area, with the implementation of EPMs and adherence to relevant regulations, significant hazards would not be created from the use or accidental release of hazardous materials under the WVFMP, and the impact would be less than significant. Similarly, implementation of EPMs and compliance with regulatory requirements would minimize health hazards from herbicide application and the potential for accidental release of herbicides and the impact associated with use or accidental release of herbicides on human health under the WVFMP would be less than significant.

4.11.2 Project Impact Analysis

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed project would involve the use of common hazardous materials such as fuel, oils, and lubricants in vehicles and equipment used for vegetation removal. However, due to compliance with laws and regulations related to the use of these products as well as NPDES requirements which require that hazardous materials use on project sites be controlled under a storm water pollution prevention plan, the impact would be less than significant.

Under the project, only manual and mechanical treatments would be used to reduce vegetation. Small amounts of herbicides would be applied directly to the exposed stumps to control resprouting of some of the tree species, such as eucalyptus. The herbicide disrupts the tree's uptake of nutrients and water. No aerial spraying would be used. Herbicide application would comply with UC requirements, all U.S. Environmental Protection Agency (EPA) label directions, as well as California Environmental Protection Agency and Department of Pesticide Regulation (DPR) label standards. Herbicide applicators would wear personal protective equipment during applications and either possess a valid license or certificate from the California DPR or receive appropriate training and/or direct supervision by a Pesticide Control Advisor. The project would also comply with UC Berkeley EPM HAZ-1, HAZ-2, HAZ-4 and HAZ-6. Therefore, the impact from the limited herbicide use included in the project would be less than significant.

The Northeast Polygon overlies an area that experienced release of tritium in the past. On account of the tritium in the soils, vegetation within the tritium restricted area is chipped and left in the area. But if it has to be off-hauled, the current UC LBNL practice is to sample and analyze the materials before off-haul (ESG Procedure 270, Assessing Tritium in Trees Slated for Removal on LBNL Property). UC LBNL is planning to conduct extensive vegetation sampling in that zone this fall and expects to find that tritium has most likely decayed to at or below background concentrations, and that this restriction on off-haul might be removed following that study. The proposed project would chip the biomass on-site in this area and use it there to the maximum extent possible. If there is

excess biomass that must be off hauled, it would be sampled and tested before off haul. Therefore, the project would not result in an impact related to a release of a hazardous material.

The proposed project would not result in a new or substantially more severe significant impact related to the routine use, transport or disposal of hazardous materials than previously disclosed, and no new mitigation would be required.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As with the routine use of common hazardous materials discussed under (a), due to compliance with laws and regulations, the impact from an accidental release would also be less than significant. The proposed project would not result in a new or substantially more severe significant impact related to the accidental release of hazardous materials than previously disclosed, and no new mitigation would be required.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The treatment areas are not within 0.25 mile of any schools or childcare centers. Thus, there would be no impact.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Based on a search of Envirostor and GeoTracker databases of listed sites, the treatment areas are not listed on the California Environmental Protection Agency Hazardous Waste and Substances Sites List compiled pursuant to Government Code Section 65962.5, also known as the Cortese list. There would be no impact.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The project is not located within an airport land use plan area or near a public airport. No safety impacts associated with proximity to public airports would occur.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The project is not located within an airport land use plan area or near a private airstrip. No safety impacts associated with proximity to private airstrips would occur.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No construction would occur as a result of the project, nor would there be any other actions that could impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In fact, the project is proposed to improve the safety of UC LBNL's primary evacuation route via Cyclotron Road as well as on-site roads and Centennial Drive. Therefore, the proposed project would not result in new or substantially more severe significant impacts related to adopted emergency response and/or evacuation plans than previously disclosed, and no new mitigation is required.

h. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project would not result in new construction or increased population on the Berkeley Lab and UC Berkeley campus; nor would it create conditions that would increase the risk of wildland fires. In fact, the specific purpose of the proposed project is to create defensible space to reduce wildland fire risk to existing buildings and populations as well as improve the safety of evacuation routes. Therefore, the proposed project would not result in new or substantially more severe significant impacts related to wildland fires than previously disclosed, and no new mitigation is required.

4.11.3 Cumulative Impacts

The cumulative impacts from hazardous waste generation, handling, treatment, and disposal by UC LBNL were evaluated in the LRDP 2006 LRDP EIR and were found to be less than significant with mitigation. Similarly, due to compliance with applicable laws, cumulative impacts related to hazardous materials use and handling were found to be less than significant in the UCB WVFMP EIR. As the proposed project is within the scope of the previous analyses, the project would not result in a significant cumulative impact to hazards and hazardous materials, and no new mitigation measures are required.

4.11.4 Change in Circumstances and/or New Information

Since certification of the LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of both EIRs with respect to hazards and hazardous materials impacts.

4.11.5 Conclusion

The potential impacts of the project related to hazards and hazardous materials are similar to those analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and the cumulative impacts are likewise similar to those analyzed in both EIRs. No new or substantially more severe significant hazardous materials impacts would result from the project, and no new mitigation is required.

4.12 HYDROLOGY AND WATER QUALITY

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i. result in substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☒	☐	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☒	☐	☐
iv. impede or redirect flood flows?	☐	☒	☐	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☒	☐	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

4.12.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts on hydrology and water quality from UC LBNL growth under the 2006 LRDP are evaluated in 2006 LRDP EIR Section IV.G (pages IV.G-21 through G-28). The LRDP EIR analysis concluded that all hydrology and water quality impacts of UC LBNL growth under the 2006 LRDP would be less than significant. No mitigation measures related to hydrology and water quality impacts are identified in the 2006 LRDP EIR.

UCB WVFMP EIR

Impacts on hydrology and water quality from the implementation of the WVFMP are evaluated in the WVFMP EIR (pages 3.9-11 through 3.9-16) and were found to be less than significant with the implementation of EPMs. As noted in the WVFMP EIR, UC Berkeley would implement EPM HYD-2 and Mitigation Measure HYD-1 that would protect watercourses, limit equipment use on wet soils or steep slopes, stabilize highly disturbed areas, prevent concentration of runoff in non-shaded fuel breaks, and prevent spill or leaks from equipment. Therefore, the risk of substantial degradation of surface or groundwater quality from manual and mechanical treatments and maintenance activities implemented under the WVFMP would be minimized and the impacts would be less than significant.

4.12.2 Project Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project would not generate any polluted flows or wastewater that could degrade surface or groundwater quality. There would be no impact. Therefore, the project would not result in new or substantially more severe significant impacts to groundwater resources than previously disclosed, and no new mitigation would be required.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

The proposed project would not construct any paved areas or structures and hence would not increase impervious surfaces at the Berkeley Lab or the UC Berkeley campus. Groundwater recharge would not be affected. The project would require small quantities of water to suppress dust generated during vegetation removal activities. Water would be trucked to the work areas and would be obtained from municipal sources and the project would not decrease groundwater supplies. Therefore, the project would not result in new or substantially more severe significant impacts to groundwater resources than previously disclosed, and no new mitigation would be required.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on- or off-site;

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows?

The proposed project would not alter or disturb any structure, topography, or storm drain feature on or surrounding the project site. Nor would the project permanently increase stormwater runoff or redirect flows. The project would involve clearing and removal of vegetation, including trees, and

post treatment the exposed ground surfaces within the project areas could experience increased erosion and siltation. However, the project is required to comply with NPDES regulations which require the implementation of storm water pollution prevention plan that includes erosion and siltation control measures that apply both during treatment and post treatment. Furthermore, pursuant to UC LBNL EMP-1, a 25-foot no disturbance buffer is included in the proposed project along Cafeteria Creek to avoid discharge of sediment into that creek. Additionally, vegetation removal occurring on UC Berkeley lands would also be subject to EPMs to control erosion and siltation. Therefore, the proposed project would not result in new or substantially more severe significant impacts related to erosion and siltation than previously disclosed, and no new mitigation would be required.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The treatment areas are approximately 900 feet above mean sea level. Therefore, there is no risk of flooding from tsunami or seiches. There would be no impact.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project would not require any large amounts of surface or groundwater. Therefore, there would be no impact due to a conflict with applicable surface and groundwater management plans.

4.12.3 Cumulative Impacts

The 2006 LRDP EIR included an analysis of the cumulative impacts of UC LBNL development on Strawberry Creek. The analysis indicated that hydrology and water quality impacts from full LRDP development would be less than significant. The WVFMP EIR also analyzed the cumulative impacts of the WVFMP and found the impacts to be less than significant. The proposed project is within the scope of the previous analyses. Furthermore, it would not increase impervious surfaces or result in any change in the amount of runoff that was analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. The cumulative impacts would continue to be less than significant.

4.12.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on hydrology and water quality.

4.12.5 Conclusion

The potential impacts of the project on hydrology and water quality would be similar to or less than those analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. Therefore, there would be no new or substantially more severe significant hydrology and water quality impacts, and no new mitigation is required.

4.13 LAND USE AND PLANNING

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Physically divide an established community?	☐	☒	☐	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

4.13.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

In 2007, the UC LBNL 2006 LRDP became the applicable land use plan for the Berkeley Lab. The plan identifies projections in population, building space, and land uses. The Southwest Treatment Area is designated Academic & Research on the 2006 LRDP land use diagram while the Northwest and Northeast Treatment Areas are designated Perimeter Open Space.

Impacts of UC LBNL growth under the 2006 LRDP on land use and planning are evaluated in Section IV.H of the 2006 LRDP EIR (pages IV.H-10 through H-14). The 2006 LRDP EIR concluded that all land use and planning impacts of UC LBNL growth under the 2006 LRDP would be less than significant, and that no mitigation was required.

UCB WVFMP EIR

The 800-acre WVFMP Area is located within the UC Berkeley Hill Campus subarea designated in the UC Berkeley 2021 LRDP in the hills adjoining and east of the UC Berkeley Campus Park and California Memorial Stadium. Although the Plan Area includes several campus public and research facilities such as the Lawrence Hall of Science, Botanical Garden, Space Sciences Laboratory, and the Mathematical Sciences Research Institute, the primary use of the Hill Campus is natural open space.

The WVFMP EIR (page 3-5) concluded that implementation of the WVFMP would not divide an established community or conflict with the UC Berkeley 2021 LRDP. There would be no impact.

4.13.2 Project Impact Analysis

a. Would the project physically divide an established community?

The proposed project would not build any structures that could divide a community. Therefore, there would be no impact related to the physical division of surrounding land uses, including communities.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would not conflict with the UC LBNL 2006 LRDP or the UC Berkeley 2021 LRDP. There would be no impact.

4.13.3 Cumulative Impacts

As there would be no impacts related to land use, the proposed project would not contribute to any cumulative land use impacts.

4.13.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on land use and planning.

4.13.5 Conclusion

There would be no land use impacts from project implementation. Therefore, there would be no new or substantially more severe significant land use and planning impacts than previously disclosed, and no new mitigation is required.

4.14 MINERAL RESOURCES

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☒	☐	☐
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☒	☐	☐

4.14.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

The Initial Study prepared for the 2006 LRDP EIR (page 14) concluded the Berkeley Lab does not include known mineral resources of regional value or any locally-important mineral resource recovery sites, and that there would be no impact on mineral resources.

UCB WVFMP EIR

The WVFMP EIR (page 3-5) also concluded that there are no mineral resources in the Plan Area, and that implementation of the WVFMP would not affect any mineral resources.

4.14.2 Project Impact Analysis

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The three treatment areas are located within the Berkeley Lab and the UC Berkeley campus, which are located in an MRZ-1 area on the State of California Department of Mines and Geology, Mineral Resource Zones, and Resource Sectors map. According to the California Department of Conservation, MRZ-1 are areas where geologic information indicates no significant mineral deposits are present. Therefore, there would be no impact on mineral resources of value to the region and residents of the state from the proposed project.

b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

There is no locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan on the Berkeley Lab or the UC Berkeley campus. There would be no impact.

4.14.3 Cumulative Impacts

Because the proposed project would not result in any impact on mineral resources, it would not contribute to a cumulative impact on mineral resources.

4.14.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of both EIRs with respect to impacts to mineral resources.

4.14.5 Conclusion

There are no potential impacts of the project related to mineral resources. Therefore, no new or substantially more severe significant impacts would result from the project, and no new mitigation is required.

4.15 NOISE

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b. Generate excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	☐	☒	☐	☐

4.15.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts of UC LBNL growth under the 2006 LRDP related to noise are evaluated in Section IV.I of the 2006 LRDP EIR (pages IV.I-13 through I-24). The 2006 LRDP EIR concluded that all noise impacts except two would be either less than significant or less than significant following implementation of mitigation measures. The 2006 LRDP EIR concluded that LRDP Impact NOISE-1 related to construction noise would be significant and unavoidable even after mitigation, and LRDP Impact NOISE-5 related to cumulative construction noise would also be significant and unavoidable after mitigation.

UCB WVFMP EIR

The WVFMP EIR (pages 3.10-11 through 3.10-16) analyzed the noise impacts of the WVFMP and found that implementation of the WVFMP would not result in any permanent increase in noise levels nor produce vibration levels that would be considered significant. However, manual and mechanical treatment activities and associated chipping/mastication to dispose of biomass could expose residential receptors to noise levels that exceed local standards when such activity occurs within certain distances. Noise levels generated by these activities would fluctuate depending on the distance from the activity to an individual receptor and the equipment used on a given day. The EPMs included in the project and WVFMP Mitigation Measure NOI-1 would help to minimize these noise levels. However, at some locations the noise levels would not be reduced adequately and there could be a residual significant and unavoidable impact even after mitigation.

4.15.2 Project Impact Analysis

The primary existing noise sources in the vicinity of the Southwest Polygon are vehicular traffic on Cyclotron Road and from the Foothill Parking Lot, and stationary sources associated with nearby buildings. Secondary, intermittent sources of noise include distant aircraft noise. Most of the Southwest Polygon is surrounded by open space, UC Berkeley stadium and student housing to the southeast and southwest, with Berkeley Lab facilities to the north. However, the northwestern boundary of this treatment area adjoins single-family residential use and other uses (such as the Nyingma Institute which is a Buddhist center of learning), which are considered noise-sensitive receptors. Foothill Student Housing located near the western boundary of this polygon is also considered a noise sensitive receptor. Treatment activities within this polygon could occur as close as 20 feet of some of these receptors.

The primary existing noise sources in the vicinity of the Northwest Polygon are vehicular traffic accessing and parking at the Building 90 complex, and intermittent noise from aircraft overflights. The Northwest Polygon is immediately flanked by open space to the north and west; however, residential neighborhoods, which are noise-sensitive receptors are located approximately 140 feet to the north, and a single-family home is located about 20 feet to the west of this polygon. To the south and east of this area, there is open space and Berkeley Lab facilities.

The primary existing noise sources in the Northeast Polygon are vehicular traffic on Centennial Drive and stationary source noise from buildings adjoining the treatment area. The Northeast Polygon is located between the Lawrence Hall of Science and Berkeley Lab facilities and there is open space to the east and west of this area. No noise-sensitive receptors, such as residences, are present near this area.

a. Would the project cause generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed project would involve manual and mechanical treatment of existing vegetation in the three polygons. Manual treatment would involve the use of equipment that would generally not produce high noise levels. However, chain saws would be used which would temporarily elevate noise levels in the vicinity of the work. According to the WVFMP EIR, chain saws, which are assumed to generate similar noise levels as concrete saws, generate reference noise levels of 90 dB Lmax and 86 dB Leq at 50 feet (UCB 2021). Because multiple hand-operated power tools could be used concurrently during treatment, if it is conservatively assumed that three chainsaws would operate simultaneously in close proximity to each other, they would generate a combined noise level of 91 dB Leq at 50 feet. This combined noise level would attenuate to the City of Berkeley's noise standard of 75 dB Leq for single-family residences at a distance of 215 feet. Thus, when manual vegetation treatment would take place within 215 feet of residential land uses in the City of Berkeley, the local noise standards could be exceeded. Similarly, the analysis in the WVFMP EIR noted that mechanical treatment of vegetation would temporarily elevate noise levels to approximately 81 dB Leq at 50 feet. This noise level would attenuate to the City of Berkeley's noise standard of 75 dB Leq for single-family residences at a distance of 87 feet.

Residential receptors to the north and east of the Northeast Polygon, and the residential receptors, the Nyingma Institute, and Foothill Student Housing adjacent to the Southwest Polygon would be close to the treatment areas and would be exposed to noise levels in excess of the City's noise standards. However, noise exposure would be during normal working hours. Furthermore, project activities in one area would occur over a few weeks, and then the location would change. Furthermore, UC LBNL LRDP Mitigation Measures NOISE-1a and -1b would be implemented for treatment work performed on the Berkeley Lab campus site lands, and UC Berkeley EPM NOI-1 through NOI-4 and WVFMP Mitigation Measure NOI-1 would be implemented for treatment work performed on UC Berkeley lands. However, the noise levels would not be reduced to levels below the City's noise standards, and the project's noise impact would remain significant and unavoidable. Therefore, the proposed project would result in the same significant and unavoidable impact as previously analyzed and disclosed in the two EIRs. No additional mitigation is available to mitigate this impact because use of noise barriers is infeasible for the proposed project.

b. Would the project cause substantial generation of excessive groundborne vibration or groundborne noise levels?

The proposed project would not generate vibrations that could affect nearby sensitive receptors. No vibration or ground-borne noise impacts would occur.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project is not within two miles of a public or private airstrip or airport, nor is it within the vicinity of an airport land use plan. There would be no project exposure of people residing or working within such an area to excessive noise levels. Therefore, there would be no noise impacts related to airport land uses.

4.15.3 Cumulative Impacts

Because the project would not involve a source of permanent noise increase and would not add traffic or people to the Berkeley Lab or UC Berkeley campus, the project would not contribute to a cumulative operational noise impact. The proposed project would not affect the conclusions of both the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR regarding operational noise impacts.

With respect to cumulative temporary, short-term noise from implementation of the proposed project in the Southwest Polygon and the concurrent construction of Heathcock Hall, Greek Theatre accessibility improvements, and the SSM project, all three cumulative projects are more than 1,000 feet from where the noise-sensitive receptors (Nyingma Center and single-family homes) are located and there are intervening structures between the receptors and these construction projects. Therefore, should the project activities in the Southwest Polygon overlap with the construction of these projects, the noise generated by the proposed project would not cumulate with the construction noise from these projects. However, receptors in the UC Berkeley Foothill Student Housing would be exposed to construction noise from all three cumulative projects as well as the proposed project, resulting in a significant cumulative noise impact. This is consistent with the conclusions of both the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR which concluded that

there could be a significant cumulative noise impact from construction activities under the 2006 LRDP and treatment activities under the WVFMP respectively, and while mitigation would be implemented, the impact may not be reduced to a less than significant level.

There is one cumulative project (Centennial Drive replacement bridge) that would be under construction at the same time that treatment is implemented in the Northeast Polygon for a short period of six weeks. However, there are no noise sensitive receptors in close proximity of either project and noise levels from the two projects would attenuate to low levels for receptors located at greater distances. The cumulative impact would be less than significant.

With regard to the Northwest Polygon, there are no other cumulative projects that are in proximity of that treatment area that could result in cumulative construction noise impacts when combined with the project noise.

4.15.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on noise or vibration.

4.15.5 Conclusion

The potential impacts of the project on noise would be similar to or less than those analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. Therefore, there would be no new or substantially more severe significant noise and vibration impacts, and no new mitigation is required.

4.16 POPULATION AND HOUSING

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☒	☐	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☒	☐	☐
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☒	☐	☐

4.16.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts related to population and housing from UC LBNL growth under the 2006 LRDP are evaluated in Section IV.J of the 2006 LRDP EIR (pages IV.J-13 through J-21). The 2006 LRDP EIR concluded that all impacts of UC LBNL growth under the 2006 LRDP related to population and housing impacts would be less than significant.

UCB WVFMP EIR

As stated in the WVFMP EIR (page 3-5), plan implementation would not include construction of new housing or commercial development. Therefore, no direct population growth would result from Plan implementation. In addition, the Plan does not propose extending roads or other permanent infrastructure to new areas that would induce growth in new locations. No persons or homes would be displaced as a result of Plan implementation. Therefore, the Plan would have no impact related to displacement and the associated construction of replacement housing.

4.16.2 Project Impact Analysis

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would not add new housing or commercial development, nor extend infrastructure that could support development. Therefore, the project would not induce population growth either directly or indirectly. There would be no impact.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The project would not displace existing housing or necessitate the construction of housing elsewhere. Therefore, there would be no impact on existing housing.

c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As noted above, the proposed project would not involve any changes that would displace people or necessitate the construction of replacement housing elsewhere. There would be no impact related to displacement of people.

4.16.3 Cumulative Impacts

Because the project would not add any people or housing to the area, the project would not contribute to any cumulative population and housing impacts.

4.16.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of both EIRs with respect to impacts to population and housing.

4.16.5 Conclusion

There would be no population and housing impacts of the proposed project. No new or substantially more severe significant impacts related to population and housing would result from the project than previously disclosed, and no new mitigation is required.

4.17 PUBLIC SERVICES and RECREATION

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, and/or other public facilities?	☐	☒	☐	☐
b. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐
c. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☒	☐	☐

4.17.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts of UC LBNL growth and development under the 2006 LRDP on public services are evaluated in Section IV.K of the 2006 LRDP EIR (pages IV.K-17 through K-26). Because 2006 LRDP implementation would not result in any significant impacts to public services and recreation, the 2006 LRDP EIR did not identify any mitigation measures for impacts to public services and recreation.

UCB WVFMP EIR

Impacts on public services and recreational facilities are addressed in the Initial Study (pages 3-37 through 3-39) for the WVFMP EIR, and the analysis determined that because the Plan activities would not involve the development of housing or other buildings, there would be no increase in the demand for police, fire, schools or park facilities, and there would be no impact. With respect to impacts on recreational facilities, the WVFMP EIR (pages 3.11-6 through 3.11-7) concluded that the impact would be less than significant.

4.17.2 Project Impact Analysis

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, and/or other public facilities?

The proposed project would not add population or new structures to the Berkeley Lab or UC Berkeley campus and would therefore not result in an increased demand for fire protection, police protection, school, park, and other public facilities. Therefore, the proposed project would not result in new or substantially more severe significant impacts on public services than previously disclosed in both EIRs, and no mitigation would be required.

b. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project would not result in a population increase and thus would not increase the use of existing neighborhood and regional parks or other recreational facilities. There would be no impact on recreational facilities.

c. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The project would not include recreational facilities or require the construction or expansion of recreational facilities. Thus, there would be no impact on recreational facilities.

4.17.3 Cumulative Impacts

Since there would be no increase in employees or visitors associated with the project, the proposed project would not contribute to any cumulative impacts on public services, including police, fire, schools, and recreation.

4.17.4 Change in Circumstances and/or New Information

There are no changes in circumstances and no new public services information has become available since the certification of the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR that would alter the previous analyses and change the conclusions.

4.17.5 Conclusion

There would be no project impacts on public services and recreational facilities. No new or substantially more severe significant impacts would result from the project, and no new mitigation is required.

4.18 TRANSPORTATION

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR (supplemented) & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR (supplemented) & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☒	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d. Result in inadequate emergency access?	☐	☒	☐	☐

4.18.1 Findings of the UC LBNL 2006 LRDP EIR, including Supplementation of the UC LBNL 2006 LRDP EIR in the Seismic Phase 2 EIR; Findings of the UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts on traffic, circulation, and parking from UC LBNL growth under the 2006 LRDP were evaluated in Section IV.L of the 2006 LRDP EIR (pages IV.L-28 through L-45). The 2006 LRDP EIR analysis concluded under LRDP Impact TRANS-1 that the addition of LRDP-related traffic would significantly affect the levels of service at three study intersections. The 2006 LRDP EIR concluded that fair share funding of traffic improvements pursuant to LRDP Mitigation Measures TRANS-1a through TRANS-1e would reduce LRDP Impact TRANS-1 at the three affected intersections to a less than significant level. However, because initiation of mitigation at the affected intersections was within the jurisdiction of the City of Berkeley and not the University, the University could not mitigate the impact to a less than significant level. An analysis of 2006 LRDP cumulative traffic impacts was also included in the 2006 LRDP EIR (LRDP Impact TRANS-8) and that analysis also found significant and unavoidable impacts at three intersections. All other traffic impacts were determined to be less than significant.

Supplementation of the UC LBNL 2006 LRDP EIR in the Seismic Phase 2 EIR

In light of revised level of service thresholds adopted by the City of Berkeley after the 2006 LRDP EIR was certified, UC LBNL prepared a supplemental transportation analysis in July 2010 and updated 2006 LRDP EIR Impacts TRANS-1 and TRANS-8. This supplemental analysis, which was completed in conjunction with the Seismic Phase 2 project EIR (pages S-1 through S-35), concluded that due to traffic growth associated with LRDP projections, in combination with traffic generated by other reasonably foreseeable development in the area, significant LRDP and cumulative impacts would occur at four intersections. Updated LRDP Mitigation Measures TRANS-1 and TRANS-8 would be

implemented for these impacts, but for the same reasons identified above, the impacts would be significant and unavoidable.

UCB WVFMP EIR

The Initial Study prepared for the WVFMP EIR (pages 3-40 and 3-41) stated that due to the temporary nature of treatment activities and the small crew size associated with treatment application, Plan implementation would not generate substantial pedestrian, bicycle, and transit demand. While implementation of roadside treatments or equipment access could result in temporary road closures along Centennial Drive which could temporarily disrupt traffic operations, any lane closures would be accompanied by traffic control signage and flaggers. Therefore, Plan implementation would not adversely affect the performance of the circulation system and would not conflict with any applicable transportation plans, ordinances, or policies. Also, as a result of the small crew size, the project would result in a small number of worker-related trips to and from the Plan Area. Even if two treatment projects occurred simultaneously and each required the maximum of 15 personnel, the projects would generate a daily maximum of 60 vehicle trips (30 vehicles x 2 trips), which is substantially less than 110 trips per day threshold that is in the State Advisory related to the analysis of a project's vehicle miles traveled (VMT) impact. Therefore, Plan implementation would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) and the impact would be less than significant. Finally, implementation of the Plan would not locate any new development or land uses within the Plan Area that would require installation of emergency access routes or permanently alter any existing roadways/emergency access routes. In fact, plan implementation would improve emergency access along major emergency access routes by clearing vegetation prone to torching including trees that could potentially block access were they to fall. Therefore, implementation of the Plan would not result in any reduction in the adequacy of emergency access. All transportation impacts would be less than significant.

4.18.2 Project Impact Analysis

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project would not permanently increase traffic on area roadways. For a period of four to six weeks during each of the three phases, a small number of daily vehicle trips (12 to 30 daily trips) would be added to the area roadways due to crews of 6 to 15 persons traveling to and from the work sites. However, this amount of traffic would not result in a conflict with programs, plans and policies addressing the circulation system, including roadway facilities. The impact would be less than significant.

b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Consistent with industry standards and the City of Berkeley traffic impact analysis guidance at the time, both the 2006 LRDP EIR and the 2010 Supplement to the 2006 LRDP EIR used automobile delay or LOS as the primary metric to evaluate the transportation impacts of Lab growth under the 2006 LRDP. Since then, as directed by SB 743, changes to the *State CEQA Guidelines* were adopted in December 2018. According to the updated guidelines, as of July 1, 2020, CEQA documents must evaluate transportation impacts based on VMT. Automobile delay, as measured by "level of service"

and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA (Public Resources Code, Section 21099, subd. (b)(2)).

According to *State CEQA Guidelines* Section 15007, "amendments to the guidelines apply prospectively only," and "new requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply with the amendments." The Guidelines section also states that CEQA documents must meet the "content requirements in effect when the document was set out for public review," and "shall not need to be revised to conform to any new content requirements in guideline amendments taking effect before the document is finally approved." As the UC LBNL 2006 LRDP EIR was prepared consistent with the content requirements in 2007 and the EIR was certified before the new requirement became effective, the UC LBNL 2006 LRDP EIR does not need to be revised to address the new VMT requirements, and the proposed wildland fire hazard reduction project, an element of operational vegetation management activities included in the 2006 LRDP, is within the scope of the prior impact analysis and does not need to be evaluated for its VMT impacts. Furthermore, the proposed project would not cause the Berkeley Lab or UC Berkeley campus population to increase, nor would it involve any other changes that would substantially permanently increase the number of daily vehicle trips to and from the Berkeley Lab or the UC Berkeley campus. As a result, the project would not result in a permanent increase in VMT compared to existing conditions. Additionally, due to the small project size, as shown above, the project would add between 12 and 30 (short term) daily trips; according to the Technical Advisory issued by the State for the evaluation of VMT impacts, a project that generates less than 110 daily vehicle trips would not result in a significant VMT impact and quantification of its VMT impact is not required.[4] Therefore, the project's short term/temporary impact on VMT would be less than significant. There would be no new or substantially more severe significant impact related to VMT than previously disclosed, and no new mitigation would be required.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No changes to the roadways serving the two campuses would occur as a result of the proposed project. There would be no impact.

d. Would the project result in inadequate emergency access?

No roadways would be altered as part of the project. Although temporary road closures would be required along Cyclotron Road when vegetation treatment is performed along that roadway, detours directing traffic to the other two UC LBNL gates would be clearly marked, and the duration of closure would be kept to the minimum needed to complete the work adjacent to the roadway. Similarly, in the event that road closure on Centennial Drive is needed, the closure would be kept to a minimum and detours would be provided. As a result, the project would not result in inadequate emergency access. In fact, vegetation removal along Cyclotron Road and a portion of Centennial Drive would have a beneficial effect of making the roadways safer to use in the event of an emergency.

---

[4] Office of Planning and Research. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018.

4.18.3 Cumulative Impacts

The project would not generate any operational traffic that could permanently increase traffic volumes in the project area, and therefore would not result in a cumulative operational VMT impact. Based on the Technical Advisory provided by the State, a VMT analysis of a project's construction traffic is not required. Furthermore, the project would generate a small number of daily construction vehicle trips (less than 110 trips per day) and therefore would add a low number of VMT to area road network, and its cumulative effect would not be significant.

4.18.4 Change in Circumstances and/or New Information

Traffic impacts of lab growth were analyzed in the 2006 LRDP EIR and in the 2010 Supplement to the 2006 LRDP EIR. Since then, as directed by SB 743, changes to the *State CEQA Guidelines* were adopted in December 2018. According to the updated guidelines, as of July 1, 2020, CEQA documents must evaluate transportation impacts based on VMT. For reasons set forth above, because the proposed project would not result in a permanent increase in traffic and would involve only a small number of daily construction vehicle trips, the project does not need to be evaluated for its VMT impacts.

4.18.5 Conclusion

The proposed project would not result in new or substantially more severe transportation impacts than previously disclosed, and no new mitigation is required.

4.19 TRIBAL CULTURAL RESOURCES

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☒	☐	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

4.19.1 Findings of the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

Impacts of UC LBNL growth and development under the 2006 LRDP on archaeological resources are evaluated in Section IV.D of the 2006 LRDP EIR. LRDP EIR Impact CUL-3 (page IV.D-16) discusses impacts related to cultural resources, including Native American sites. The 2006 LRDP EIR notes that the potential for Native American sites to exist on the UC LBNL hill site is considered low to moderate, based on field surveys and archival research. In the unlikely event that archaeological artifacts are discovered during construction, LRDP Mitigation Measure CUL-3 would be implemented. With the aforementioned mitigation, the 2006 LRDP EIR concludes that LRDP implementation would not result in any significant impacts to cultural or Native American resources.

LRDP EIR Impact CUL-4 (page IV.D-18) analyzes the potential for disturbing human remains, including Native American human remains. The analysis found that there is no known evidence of prehistoric habitation at UC LBNL, nor any indication that the site has been used for burial purposes in the recent or distant past. Thus, encountering human remains at the UC LBNL hill site was concluded to be unlikely. However, if human remains should be encountered during excavation and construction, work would be halted and LRDP Mitigation Measure CUL-4 would be implemented, which would reduce the impact to a less than significant level.

UCB WVFMP EIR

UC Berkeley conducted consultation pursuant to AB 52 with interested tribes during the preparation of the UCB WVFMP EIR (page 3.4-15). No tribal cultural resources were identified within the Plan Area during consultation, but the EIR noted that such resources may be inadvertently discovered during ground disturbing activities. Implementation of WVFMP Mitigation Measures CUL-1b and CUL-1c and UC Berkeley EPM CUL-1 would avoid any substantial adverse change to any tribal cultural resource encountered during ground disturbing activities, and the impact would be less than significant.

4.19.2 Project Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In compliance with AB 52, the environmental topic of tribal cultural resources was added to State CEQA Guidelines Appendix G CEQA checklist in 2016, after the certification of the 2006 LRDP EIR. According to State CEQA Guidelines Section 15007, "amendments to the guidelines apply prospectively only," and "new requirements in amendments will apply to steps in the CEQA process not yet undertaken by the date when agencies must comply with the amendments." The Guidelines section also states that CEQA documents must meet the "content requirements in effect when the document was set out for public review," and "shall not need to be revised to conform to any new content requirements in guideline amendments taking effect before the document is finally approved." As the LRDP EIR was prepared consistent with the content requirements at that time and the EIR was certified before these changes were made to the checklist, the proposed project, which is within the scope of the UC LBNL 2006 LRDP EIR, does not need to address the new requirements related to tribal cultural resources. Furthermore, AB 52 stipulates that tribal consultation must be conducted by the lead agency if an EIR or a Mitigated Negative Declaration is being prepared. The analysis in this addendum shows that the project is adequately addressed by the previous EIRs and that no new EIR or a Mitigated Negative Declaration is required. For these reasons, AB 52 consultation and an analysis of project impacts on tribal cultural resources is not required for the proposed activities on UC LBNL land. Furthermore, no tribal cultural resources are known to occur in the project polygons and only limited ground disturbing activities would occur during the implementation of the proposed project. Any inadvertent impacts on tribal cultural resources encountered during project activities would be avoided and mitigated with the implementation of LRDP Mitigation Measures CUL-3 and CUL-4 for archaeological resources and human remains.

With respect to project activities to be conducted on UC Berkeley lands, those are adequately addressed by the tribal consultation conducted by UC Berkeley during the preparation of the WVFMP EIR. Furthermore, as noted above, only limited ground disturbing activities are anticipated to occur under the proposed project and any inadvertent impacts to tribal cultural resources encountered during ground disturbing activities on UC Berkeley lands would be addressed by the mitigation measures and EPM adopted for the WVFMP. There would be no new or substantially more severe significant impact on tribal cultural resources than previously disclosed, and no new mitigation would be required.

4.19.3 Cumulative Impacts

Based on the absence of any known tribal cultural resources in the project areas, as well as mitigation measures and EPM that would be implemented to avoid and minimize impacts, the proposed project would not make a considerable contribution to a cumulative impact on tribal cultural resources.

4.19.4 Change in Circumstances and/or New Information

As noted above, tribal cultural resources were added to the *State CEQA Guidelines* in 2016. The change in the *State CEQA Guidelines* does not represent significant new information. For reasons presented above, the project would not result in a significant impact on tribal cultural resources.

4.19.5 Conclusion

The project would not significantly affect tribal cultural resources.

4.20 UTILITIES AND SERVICE SYSTEMS

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☒	☐	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

4.20.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

2006 LRDP growth impacts on utilities and service systems are evaluated in 2006 LRDP EIR Section IV.M (pages IV.M-16 through M-28) and include an analysis of impacts on water supply and distribution, wastewater, electrical power, and natural gas; collection and management of stormwater; and generation and disposal of non-hazardous solid waste. The EIR analysis concluded that LRDP implementation would result in impacts on utilities that would either be less than significant or reduced to a less than significant level with mitigation measures.

UCB WVFMP EIR

The WVMP EIR (pages 3-6 and 3-7) determined that the WVFMP would not affect any utilities as there would be no new housing or buildings added by the project that could generate utility demand. A minimal amount of water would be used for dust suppression during vegetation removal and hence the plan would not substantially affect water supplies.

4.20.2 Project Impact Analysis

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed project would have no effect on any utilities as there would be no new housing or buildings added by the project that could generate utility demand. A small amount of water would be used for dust suppression during vegetation removal and hence the project would not substantially affect water supplies. Therefore, the proposed project would not result in new or substantially more severe significant impacts on utilities than previously disclosed, and no new mitigation would be required.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

See response to item a. above.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

See response to item a. above.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The proposed project would generate biomass. However, some of the biomass would be chipped on site and used as mulch to cover disturbed surfaces, and the rest would be hauled to another location on the UC LBNL campus or the UC Berkeley campus for use in other locations. None of the biomass would be hauled off site for disposal. Therefore, the project would not result in a new or substantially more severe significant impact related to solid waste than previously disclosed, and no new mitigation would be required.

c. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would comply with federal, state and University of California solid waste reduction regulations and guidelines. There would be no impact.

4.20.3 Cumulative Impacts

As the proposed project would not increase any utility demand, it would not contribute to any cumulative impacts on utilities and service systems.

4.20.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on utilities and service systems.

4.20.5 Conclusion

The potential impacts of the project on utilities and service systems would be less than those analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR. Therefore, there would be no new or substantially more severe significant utility impacts, and no new mitigation is required.

4.21 WILDFIRE

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

4.21.1 Findings of the UC LBNL 2006 LRDP EIR and UCB WVFMP EIR

UC LBNL 2006 LRDP EIR

LRDP growth-related impacts on wildfire risks are evaluated in Section IV.F of the 2006 LRDP Final EIR; impacts on fire protection services are evaluated in 2006 LRDP Final EIR Section IV.K. The EIR analysis concluded that implementation of the 2006 LRDP would result in a less than significant impact related to wildfire hazards and fire protection services and no mitigation would be required.

UCB WVFMP EIR

Impacts related to wildfire are analyzed on pages 3.12-15 through 3.12-17 in the UCB WVFMP EIR. As stated in the WVFMP EIR, implementation of the Plan would not locate any new development or land uses within the Plan Area that would require installation of emergency access routes or alter any existing roadways/emergency access routes. Additionally, Plan implementation would improve emergency access along major emergency access routes by clearing vegetation prone to torching including trees that could potentially block access were they to fall. Plan implementation would require the temporary and periodic use of off-road vehicles and mechanical equipment within vegetated areas. Heat or sparks from vehicles or equipment activity (e.g., chainsaws and chippers) could ignite dry vegetation and cause a fire, exposing people or structures in the vicinity to the risk of wildland fires. However, UC Berkeley would integrate EPMs WIL-1 through WIL-3 into treatment design to reduce the risk of uncontrolled spread of wildfire from treatment activities and comply

with applicable regulations, including restricting vegetation treatment activities during extreme fire conditions, equipping all machine-powered tools with federal-or state-approved spark arrestors, requiring crews to carry one fire extinguisher per chainsaw, and restricting smoking areas (to minimize the risk of accidental wildfire ignition). Therefore, the use of vehicles and equipment needed to implement treatment activities, biomass disposal, and maintenance treatments would not result in the uncontrolled spread of wildfire or otherwise substantially exacerbate fire risk.

4.21.2 Project Impact Analysis

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project would not make any physical changes to the roadways used to access the Berkeley Lab or the UC Berkeley campus. It would instead improve the safety of the access routes, especially Cyclotron Road. Therefore, there would be no change to, or impairment of applicable emergency response plans or emergency evacuation plans due to the project. There would be no new or substantially more severe significant impact related to impairment of an adopted emergency response plan than previously disclosed in the UC LBNL 2006 LRDP EIR or the UCB WVFMP EIR, and no new mitigation would be required.

b. Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The proposed project is specifically designed to reduce wildland fire risk in the project area. During project implementation, mechanical and manual vegetation removal methods would be used; these have the potential to create fire-causing heat or sparks from vehicles or equipment. However, most such activities are expected during the winter months/rainy season when incidental wildland fire risks are lowest. In addition, the project would comply with applicable regulations, including PRC §4427 (Tools required for welding/cutting/grinding), PRC §4428 (Fire tools required on industrial operation), PRC §4429 (Fireboxes required at camp or local headquarters for industrial operations), and PRC §4431 (Gasoline power saw and power tool requirements), which would reduce the potential for such events. Project activities on UC Berkeley lands would also comply with EPMs WIL-1 through WIL-3. Therefore, the project would not exacerbate wildfire risks. There would be no new or substantially more severe significant impact related to exacerbation of wildfire risk than previously disclosed, and no new mitigation would be required.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project would not involve installation of any utilities. Therefore, there would be no new or increased need for installation or maintenance of infrastructure that could exacerbate fire risk or cause environmental impacts. There would be no impact.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would not involve the construction of a facility that would introduce additional people or structures to the Berkeley Lab or UC Berkeley campus. There would be no increase in runoff due to the project. No drainage courses would be changed. Therefore, there would be no potential for downstream flooding. Slope stability and landslides are analyzed in **Section 4.9, Geology and Soils**, in this addendum. Runoff and flooding issues are analyzed in **Section 4.12, Hydrology and Water Quality**. There would be no impact.

4.21.3 Cumulative Impacts

The 2006 LRDP EIR, as supplemented, analyzed cumulative impacts related to catastrophic events, such as wildland fire. It concluded that UC LBNL's contribution to any region-wide impacts would not be cumulatively considerable. Similarly, the UCB WVFMP EIR also concluded that the cumulative impact related to wildland fire would not be significant. As noted above, the project is intended to reduce wildland fire risk in the project area and does not include the development of new facilities which could potentially contribute to a cumulative impact related to increased wildland fire risk. Therefore, the proposed project would not result in new or substantially more severe wildfire impacts, and the cumulative impacts analyzed in the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR would remain unchanged and less than significant.

4.21.4 Change in Circumstances and/or New Information

Since certification of the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, there have been no changes in circumstances that would alter the conclusions of the two EIRs with respect to impacts on wildfire.

4.21.5 Conclusion

The potential impacts of the project related to wildfire would be similar to or less than those analyzed in the UC LBNL 2006 LRDP EIR, as supplemented, and the UCB WVFMP EIR. Therefore, there would be no new or substantially more severe significant wildfire impacts, and no new mitigation is required.

4.22 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project…	Impact Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR	Impact not Examined in the UC LBNL 2006 LRDP EIR & UCB WVFMP EIR		
		No Impact	Less than Significant Impact	Potentially Significant Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Discussion

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As the analysis in the preceding sections shows, the proposed project would not degrade the quality of the environment, substantially reduce any habitat, or adversely affect wildlife species, plant community, or examples of California history or prehistory. The proposed project would not result in new significant impacts or substantially increase the severity of previously identified impacts on biological resources and cultural resources as compared with the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and no new mitigation would be required.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed project would not result in new significant cumulative impacts or substantially increase the severity of previously identified cumulative impacts as compared with the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and no new mitigation would be required.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed project would result in no new significant environmental impacts to humans, either directly or indirectly, as compared with the UC LBNL 2006 LRDP EIR and the UCB WVFMP EIR, and no new mitigation would be required.

5.0 LIST OF PREPARERS

Lawrence Berkeley National Laboratory

Jeff Philliber: Sr. Site & Environmental Planner
Patricia Jung: Site & Environmental Planner
Nancy Ware: Sr. Principal Lab Counsel

UC Berkeley

Raphael Breines: Sr. Planner, Physical & Environmental Planning
Carol Rice: Wildland Res Mgt, Consultant to UCB Fire Mitigation Program

Barati Consulting, LLC

Shabnam Barati, Ph.D.: Principal

6.0 REFERENCES

ESA 2023. Vegetation Management Planning Support and Analysis Biological Resources Review. Memorandum dated July 19, 2023.

UC LBNL 2007. Long Range Development Plan Final Environmental Impact Report, SCH No. 200102046. July.

UC LBNL 2010. Seismic Life Safety, Modernization, and Replacement of General Purpose Buildings, Phase 2 Project Final Environmental Impact Report, SCH No. 2008122030. June.

UC LBNL 2016. Building 59 Upgrade & Installation and Operation of NERSC-9 Focused Environmental Impact Report, SCH No. 2016062007. October.

UC LBNL 2021. Lawrence Berkeley National Laboratory Vegetation Management Guide. February.

UC LBNL 2023. Lawrence Berkeley National Laboratory Wildland Fire Management Plan. SES.FPE.PMA.PLAN.003.

UCB 2021. UC Berkeley Hill Campus Wildland Vegetative Fuel Management Plan Final Environmental Impact Report, SCH No. 2019110389. January.