Executive Summary

ES.1 INTRODUCTION

The City of Oakland (City) has developed a Draft Vegetation Management Plan (VMP) that describes the actions that the Oakland Fire Department (OFD) would continue to take over the plan's 10-year timeframe to reduce fire hazard on 1,924 acres of City-owned land and along 308 miles of roadways in the City's designated Very High Fire Hazard Severity Zone (VHFHSZ). The VMP has been developed to meet the City's stated goals of reducing wildfire hazard on City-owned land and along critical access/egress routes, reducing the likelihood of ignitions and extreme fire behavior to enhance public and firefighter safety, avoiding or minimizing impacts to natural resources, and contributing to regional efforts to reduce wildfire hazard in the Oakland Hills.

The California Environmental Quality Act (CEQA) requires all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority before approving or carrying out those projects. As the lead agency for the VMP project under CEQA, the City has prepared this Draft Environmental Impact Report (DEIR) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of implementing the Draft VMP. This DEIR was prepared in compliance with the requirements of CEQA (as amended) and the CEQA Guidelines (California Code of Regulations [Cal. Code Regs.], tit. 14, Section 15000 et seq.).

This DEIR describes and summarizes the proposed actions of the VMP in Chapter 2, *Project Description*, and the environmental resource sections of Chapter 3. More detail is provided in the Draft VMP, which is provided in its entirety in **Appendix A** of this DEIR.

ES.2 VMP OVERVIEW

The Oakland Hills is the location of one of the state's most destructive historic wildfires, the 1991 Tunnel Fire, which destroyed 2,900 structures, injured more than 150 people, and killed 25 people. The Oakland Hills represents a complex wildfire environment that presents a significant risk to public and firefighter safety and to the built and natural environment due to local extreme wind and weather conditions (including Diablo wind events), steep and varied terrain, and a wide range of different vegetation types. Of the variables that comprise the wildland fire environment (weather, terrain, and fuels or vegetation), vegetation is the only variable that can be managed. Lessons learned from the 1991 Tunnel Fire and other more recent, devasting wildfires in Northern California highlight the importance of managing vegetation to reduce wildfire hazard.

The City, in close coordination with the Oakland Fire Department (OFD), developed the VMP to reduce fire hazards on City-owned land and critical access/egress routes in City-designated Very High Fire Hazard Severity Zone (VHFHSZ) areas, reduce the likelihood of ignitions and extreme

fire behavior to enhance public and firefighter safety, avoid or minimize impacts to natural resources, and contribute to regional efforts to reduce wildfire hazard in the Oakland Hills. The Draft VMP includes descriptions of City-owned parcels and roadsides located within the City's VHFHSZ, natural resources at these locations, vegetation management techniques to reduce fire hazards, maintenance standards for the different types of treatment areas, and practices to avoid and minimize potential environmental impacts when conducting vegetation management work. The City of Oakland Vegetation Management Plan is the project for this CEQA analysis.

ES.2.1 VMP Background

OFD has been actively managing vegetation on City-owned property since 2003 to minimize wildfire hazard in the VMP area, utilizing various techniques, including grazing, hand crews, and limited mechanical treatments. Goats have been used in large treatment areas, on City park land and open space where manual labor is cost prohibitive or areas are inaccessible to mowing equipment or too steep for hand crews. OFD has historically used hand labor to manage vegetation on urban and residential parcels, roadsides, and small treatment areas within larger parks or open space areas. Mechanical equipment has also been used, typically to grade or disk fire trails, reduce ladder fuels (e.g., removing small trees), control highly flammable/rapidly spreading species, reduce surface fuels (e.g., mowing grasses), chip and spread trimmings and down material, thin vegetation, and maintain reduced or target fuel loads.

Between 2004 and 2017, OFD conducted vegetation management activities throughout the Wildfire Prevention Assessment District (WPAD), a City-funded special assessment district that coincides with the City's VHFHSZ. This district financed the costs and expenses related to vegetation management, yard waste disposal, wildfire prevention education, and fire patrols in the Oakland Hills. The WPAD was disbanded in June 2017. Although OFD has continued to conduct vegetation management activities on City-owned properties and along roads since 2017, due to funding constraints, these have been conducted to a lesser degree than when the WPAD was in place.

ES.2.2 VMP Development Process

Development of the VMP included a detailed field assessment of wildfire hazard, which was used to identify and classify existing vegetation community and land cover types into fuel models, and map areas with high ignition potential or where extreme wildfire behavior would be expected given current terrain and fuel conditions. VMP development also included assessment and processing of geographic information system (GIS) datasets for variables influencing wildfire hazard in the VMP area, coordination with OFD personnel, fire behavior modeling, and significant public and stakeholder outreach to better understand current vegetation management activities in the VMP area.

Public and Stakeholder Input on Draft VMP

Several public and stakeholder engagement meetings were conducted to support development of the VMP. Six workshops/meetings were conducted during development of the Draft VMP. A status update was provided to the Oakland City Council, Public Safety Committee on July 17, 2018. As an outcome of that meeting and at the direction of the Public Safety Committee, two additional public meetings were held in November 2018.

Volunteers and stakeholder groups that provided input during the VMP development process are identified in Appendix K of the VMP. In addition to the identified stewardship groups in Appendix K, the Oakland Wildland Stewards (OWLS) is a coalition of stewardship groups operating in the VMP area, and individual members provided input during the stakeholder meetings.

Development of Vegetation Treatment Projects

Based on coordination with OFD personnel, fire behavior modeling, and public input received throughout the VMP development process, vegetation treatment projects were identified and prioritized based on proximity to structures, roads, ridgelines, and park access gates within the VMP area where fire behavior is anticipated to be extreme (high flame lengths and/or crown fires), and where continuation of the City's goat grazing program would effectively maintain lower fuel loads. Identified priority projects comprise 1,366 acres within the VMP area's 1,924 total acres. The VMP also prioritizes vegetation management along 30 miles of primary access/ egress routes in the VMP area. The vegetation treatment projects are provided in Section 9.2 of the VMP.

ES.3 PROPOSED PROJECT

ES.3.1 Project Goals and Objectives

The CEQA Guidelines call for the identification of objectives sought by a proposed project (CEQA Guidelines Section 15124[b]). A statement of objectives helps convey the reasons for considering approval of the VMP, including its intended benefits, and guides the development of a reasonable range of alternatives to evaluate in the EIR. The City has identified the following primary goals for the VMP:

- Reduce wildfire hazard on City-owned land and along critical access/egress routes within the City's VHFHSZ;
- Reduce the likelihood of ignitions and extreme fire behavior to enhance public and firefighter safety;
- Implement practices to avoid or minimize impacts to natural resources;
- Maintain an active role in regional efforts to reduce wildfire hazard in the Oakland hills.

The objectives of the VMP are as follows:

- Reduce the likelihood of catastrophic wildfires by limiting ignition potential, reducing fuel loads, and modifying fuel arrangements on City-owned lands.
- Reduce the likelihood of extreme fire behavior within the VMP area.
- Identify and define vegetation management actions that consider site-specific vegetation type, fuel hazard, treatment effectiveness, and ongoing maintenance requirements.

- Identify and prioritize fuel treatment areas based on fuel loads and arrangements, terrain, topographic exposure, and proximity to roads and structures.
- Retain vegetation where feasible to reduce wind exposure, retain soil and surface fuel moisture, and reduce the potential for soil erosion.
- Develop management recommendations that enable OFD to make informed, adaptive decisions on an annual basis (or more often as necessary) regarding vegetation management within the VMP area, considering the benefits of treatment, potential environmental effects, and treatment costs.
- Avoid, minimize, and/or reduce potential adverse effects of vegetation management on sensitive biological resources, water resources, aesthetics, soils, and slope stability.
- Increase the ability of OFD and other responding agencies to suppress wildfire in the VMP area in order to minimize wildfire impacts to VMP area resources.
- Routinely evaluate the effectiveness and implementation frequency of vegetation management actions within the VMP area.

ES.3.2 VMP Area

The VMP area encompasses City-owned parcels and areas within 30 feet of the edge of roadsides located within the City's VHFHSZ, as designated by the California Department of Forestry and Fire Protection (CAL FIRE) and defined in Section 4904.3 of the Oakland Fire Code (Oakland Municipal Code Chapter 15.12). Specifically, as shown in **Figure ES-1**, the VMP area includes 419 City-owned parcels, ranging in size from <0.1 acre to 235 acres and totaling 1,924 acres. For VMP planning purposes, parcels have been divided into the following categories: urban and residential, canyon areas, ridgetop areas, City park lands and open space, other areas, and road medians. The VMP also includes roadside areas along 308 miles of road within the City's VHFHSZ, including surface and arterial streets, State Routes (SRs) 13 and 24, and Interstate 580 (I-580). **Table ES-1** summarizes the categories, sizes, and quantities of City-owned parcels in the VMP area.

Table ES-1. City-owned Parcels within the VMP Area

Parcel Category	Quantity	Total Acreage
Urban and Residential	152	51.2
Canyon Areas	89	188.7
Ridgetop Areas	11	130.2
City Park Lands and Open Space	91	1,552.9
Other Areas*	43	24.5
Medians	33	6.1
Total:	419	1,923.6

* Other areas are developed City-owned properties in the VMP area that include fire stations (nos. 6, 7, 21, 25, and 28), City facilities (parking lots, police stations), paved areas, and parks and playgrounds.

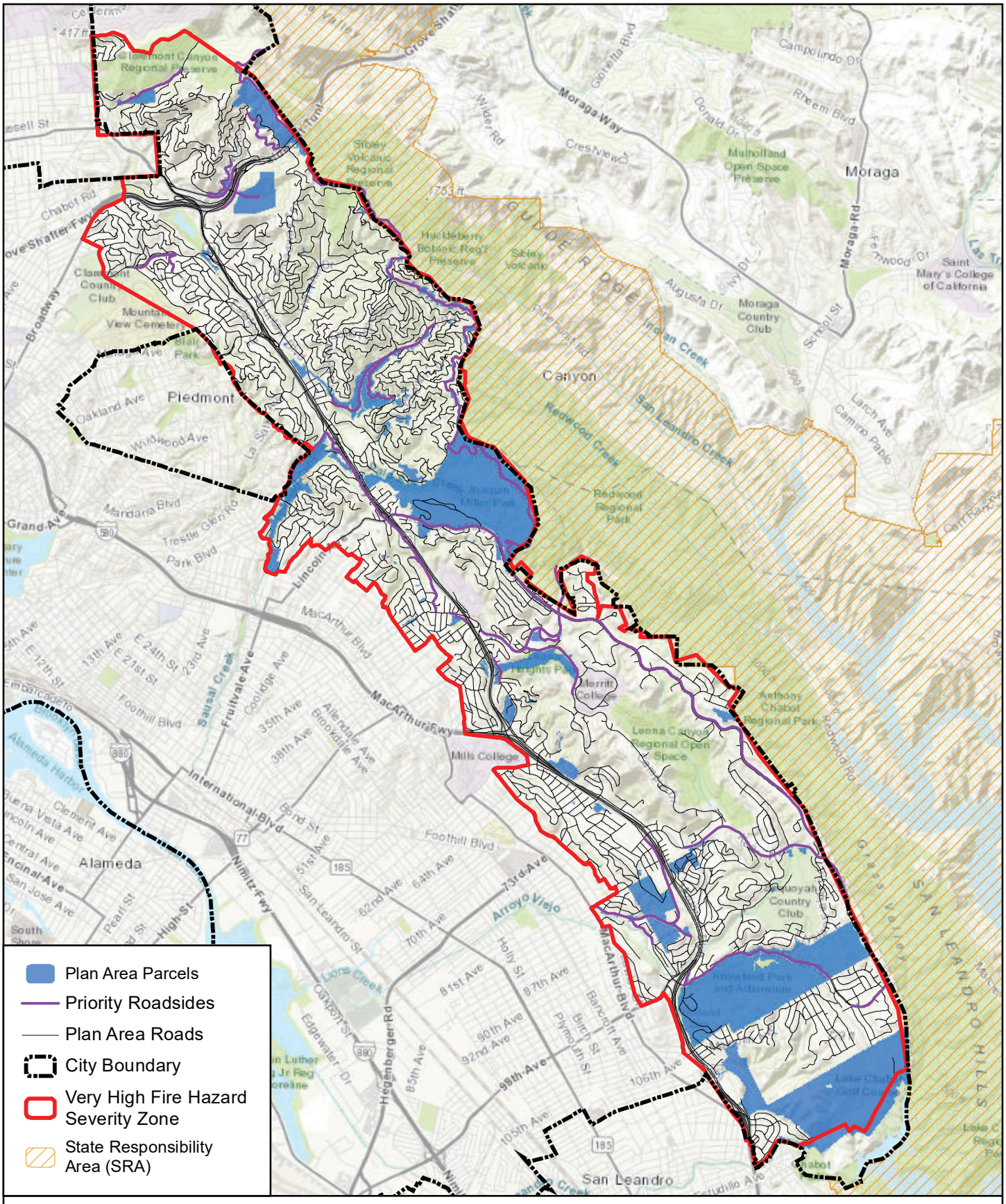

Figure ES-1.
Vegetation Management Plan Area

Vegetation Management Plan
Draft Environmental Impact Report

This page intentionally left blank

ES.3.3 Vegetation Management Standards and Treatment Areas

Vegetation management for fire hazard reduction would vary by location and conditions and would change over time to reflect changing conditions on the ground. Thus, management and maintenance standards described in the VMP are targeted toward fire hazard reduction and are characterized by dominant vegetation community/land cover type: grassland/herbaceous, brush/scrub, tree/woodland/forest, and other combustible material. Specific standards for tree-dominated vegetation types, including eucalyptus, closed-cone pine-cypress, urban (acacia) and urban (mixed tree stands), oak woodland, redwood, and riparian vegetation communities, are described in Section 9.1 of the VMP.

ES.3.4 Priority Ranking of VMP Treatment Areas

In general, treatment areas are organized by urban/residential parcels, canyon areas, City parks and open space areas, roadside treatment areas and medians, and other areas (e.g., parking lots, playground, urban parks). The City would select and prioritize the ultimate treatment projects that will be included in the annual work plan. Section 9.2 of the VMP provides more detail about current management practices and proposed treatments for each treatment area.

The VMP prioritizes vegetation treatment areas and projects into three different categories (Priority 1, 2, and 3) based on proximity to structures, ridgelines, and park access gates; areas along critical access/egress routes; areas subject to increased ignition potential; and areas that exhibit the potential for extreme fire behavior. Priority 1 areas are intended to be accomplished first. Once all Priority 1 areas have been completed or scheduled and budget allows, Priority 2 areas will be completed. Once all Priority 1 and 2 areas have been completed or scheduled and budget allows, Priority 3 areas will be completed.

ES.4 PLAN DESCRIPTION

ES.4.1 Vegetation Management Techniques

Different vegetation management techniques may be more effective at reducing, removing, or altering vegetation, depending on vegetation type, location, condition, and configuration. Given the dynamic nature of vegetation, a single treatment technique or management approach may not be appropriate for one site over time; therefore, an adaptive approach that provides more flexibility to adjust and select management techniques based on conditions on the ground is the preferred long-term approach. The goal remains to maintain vegetation conditions in accordance with the desired vegetation management standards, but the specific methods may evolve over time.

Four categories of vegetation management techniques are proposed for use under the VMP:

- **Biological Techniques (Grazing)** – Grazing is the primary biological vegetation management technique that uses livestock (e.g., goats, cattle, sheep) to reduce the fuel loading of live herbaceous growth, shrubs, and new growth of trees and prevent the expansion of brush/scrub into grasslands. Grazing is an effective method in large treatment areas where manual labor would be cost-prohibitive as well as in areas that

are inaccessible to mowing equipment or in areas too steep for hand crews. Typically, grazing is conducted from late spring through the end of summer to reduce fine fuels prior to the onset of peak fire season. Grazing management plans consider site-specific conditions, specify management objectives and standards, and identify animal stocking rates and use levels (typically measured in pounds per acre of residual dry matter), grazing season, and monitoring requirements and performance criteria.

- **Hand Labor Techniques** – Hand labor techniques involve pruning, cutting, or removing trees, shrubs, and grasses by hand or using handheld equipment. Other hand labor treatments involve bark pulling, removing dead wood and litter, and mulching. Hand labor allows for selective management, pruning, thinning, or removal of targeted vegetation and is most effective for spot application on small areas or areas with difficult access or areas with sensitive species. The use of hand labor is focused on reducing ladder fuels, controlling highly flammable/rapidly spreading species (e.g., French broom), reducing surface fuels (e.g., grasses, weeds, down material), thinning vegetation, maintaining fuel loads, and pruning tree canopies. Compared to other vegetation management techniques, hand labor techniques typically have a lower potential for adverse environmental effects because the work is specifically targeted and implemented, although heavy foot traffic associated with hand labor can result in surface soil compaction and increase erosion potential.

- **Mechanical Techniques** – Mechanical techniques include fuel reduction methods that use motorized heavy equipment to remove or alter grass/herbaceous material (e.g., mowers, diskers) or woody material (e.g., masticators, feller-bunches). Mechanical treatment techniques rearrange vegetation structures, compact or chip/shred material, reduce ladder fuels, control highly flammable/rapidly spreading species, reduce surface fuels (e.g., mowing), and move material to staging areas for either reuse, off-site disposal, or composting; or burn piles. Constraints to mechanical equipment use include steep slopes, dense tree cover that prohibits access, saturated soils, and dry, high-fire hazard weather conditions where equipment use could result in ignition. Mechanical equipment is also typically not used for selective plant removal due to the large size of equipment. Typical mechanical equipment techniques to reduce fuel loads include grading, mowing, disking, mechanical cutting/crushing, chipping, tree removal, yarding, and creating fire and fuel breaks.

- **Chemical Techniques (Herbicide)** – Chemical techniques involve the use of herbicides to kill vegetation or prevent growth and are typically used in combination with other types of fuel reduction treatments, such as mowing, trimming, pruning, and grazing. Herbicides have a high kill rate and prevent treated plants from setting seed. They can be applied selectively, minimizing impacts to seeds of other species residing in the soil. Application of herbicides and other chemicals is typically performed by hand and can include sponging, spraying, or dusting chemicals onto unwanted vegetation. The cut-and-daub treatment is another method that is effective to control regrowth and kill the portion of the plant remaining belowground. This treatment method involves cutting the plant stalks or trunks and then directly applying the herbicide with a brush, sponge, or hand sprayer with a cloth tied around the nozzle to the cambium layer of the freshly cut stump or stem. Herbicides must be applied by a licensed and trained professional to ensure proper and safe use, handling, and storage of chemicals to treat vegetation. Only

specific types of herbicides are proposed for use in the VMP. While use of glyphosate is proposed, the Roundup formulation of glyphosate would not be used within the VMP.

ES.4.2 VMP Implementation

Vegetation management activities would occur year-round, as needed, subject to the limitations set forth in the mitigation monitoring and reporting program; however, given the variable nature of vegetation through changes in weather and season, the timing for certain treatments would be confined to specific months to achieve optimal effectiveness, reduce the fire danger, and avoid or minimize impacts to special-status species (e.g., nesting birds). For example, treatments in grasslands should occur when grass cures or dries out. Mechanical removal of vegetation should also be conducted when the weather is not too dry or windy as some mechanical equipment has potential to ignite fires.

Maximum Annual Vegetation Management Activities

For the purposes of this EIR, **Table ES-2** summarizes the estimated maximum annual amount of vegetation treatment activities that would occur in a given year (by acreage and technique type). These estimated values are based on vegetation management activities conducted by the City over the last 15 years. This EIR assumes the City may conduct goat grazing on up to 1,100 acres per year and that a combination of hand labor and mechanical treatment methods would be employed at roadside treatment areas for up to 500 acres. Roadside treatment acreages, such as manual removal of grasses, are included within the individual categories below.

Table ES-2. Estimated Maximum Areas for Vegetation Treatment Activities

Vegetation Treatment Activities	Maximum Estimated Annual Area (acres)
Manual removal of trees (using chainsaws, chippers)	20
Manual removal of shrubs (using chainsaws, rotary mower, chipper)	145
Manual grass removal (rotary mower)	375
Mechanical tree removal (e.g., using feller/buncher, chainsaw, masticator, loader, skidder, chipper)	5
Mechanical shrub removal (e.g., using tractor, excavator, rotary mower)	5
Mechanical grass removal (e.g., rotary mower, tractor)	5
Goat grazing	1,100
Herbicide treatment for trees	20
Herbicide treatment for shrubs	15
Herbicide treatment for grasses*	0

* Herbicide treatment for grasses is proposed only for spot treatment of pampas/jubata grass; this treatment is captured in the "Herbicide treatment for shrubs" category.

Annual Work Plan Development Process

As described in Section 12 of the VMP, OFD would assess vegetation conditions in the VMP area in the winter or early spring months. Under the VMP, the timing of field assessments would vary each year and would be dependent upon weather conditions such as annual rainfall, number of hot and dry days, and other factors that may affect site condition. Typically, treatments would begin in the spring and early summer months, but timing may be adjusted according to weather conditions (e.g., temperature, precipitation) or other site-specific factors. Vegetation treatments may also be conducted more than once annually, depending on the site conditions and results of the field assessment. Treatment method would be dependent upon the dominant vegetation type being treated and the condition of vegetation observed during field assessments.

After conducting field assessments, OFD would develop an annual work plan that identifies priority treatment areas, vegetation treatment techniques, implementation timing, resource needs and availability, funding sources, and monitoring and tracking needs. In addition to the priority ranking criteria described above, the order in which areas or properties are ranked would be dependent upon the level of hazardous conditions and availability of resources (e.g., areas exhibiting more hazardous conditions would be treated first).

The annual work plan is an internal, working document that may be modified throughout the year due to various factors including field conditions, weather, vegetation growth, contractor or crew completion rates, staff and resource availability, treatment techniques, permit acquisition needs and emergency conditions, among others. As part of the annual work plan development process, OFD would coordinate with local volunteer/park stewardship groups, other City departments, and other agencies or landowners, as appropriate.

Monitoring, Adaptive Management, and Stakeholder Coordination

The value of monitoring and adaptive management is the gathering of empirical information from treatment sites (before, during, and after treatment) that can help refine the approaches to vegetation treatment that better meet site-specific project objectives, provide effective wildfire risk reduction, and protect the environment. OFD would monitor and inspect vegetation conditions and treatment activities in the VMP area throughout the year and develop an Annual VMP Report summarizing the results of monitoring efforts and any pertinent issues identified and addressed during vegetation management activities. The Annual VMP Report would assess factors such as which vegetation management activities or techniques are effective or ineffective; whether treatment techniques should be changed or modified; and whether the timing, duration, or priority of treatments on a specific property or within the VMP area should be adjusted.

The VMP recommends continued and ongoing coordination between OFD and local volunteer and stewardship groups that are active in parklands or other portions of the VMP area. The VMP recognizes that effective communication and coordination is the responsibility of both OFD and local stewardship groups, with each making an effort to keep the other party informed and updated. Ongoing communication protocols are recommended in the VMP to maintain coordination between OFD and local stewardship efforts.

ES.5 PUBLIC INVOLVEMENT IN THE CEQA PROCESS

ES.5.1 Scoping Period

A Notice of Preparation of an EIR (NOP) for the VMP was prepared in accordance with the State CEQA Guidelines (CEQA Guidelines Section 15082) and was circulated to the Office of Planning and Research's State Clearinghouse on November 1, 2019. The original scoping period, which ended on December 2, 2019, was extended to December 12, 2019, for a total of 41 days. The NOP presented general background information on the VMP, the scoping process, and the environmental issues to be addressed in the DEIR. Copies of the NOP were distributed by mail and email to a broad range of stakeholders, including state, federal, and local regulatory agencies and jurisdictions, utilities, and interested individuals in the area. In addition, the NOP was published on the City's website. The NOP is included as an appendix to the DEIR.

To provide the public, as well as responsible and trustee agencies, an opportunity to ask questions and submit comments on the VMP and the scope of the DEIR, the City held a meeting on Wednesday, November 20, 2019. Notices of the meeting were mailed to interested parties; in addition, scoping meeting information was published on the City's VMP web page (oaklandca.gov/projects/oakland-vegetation-management-plan). The City accepted verbal and written comments at the meeting.

ES.5.2 DEIR Public Comment Period

The City has prepared this DEIR, as informed by public and agency input received during the VMP development period and public scoping period, to disclose environmental impacts associated with the VMP. Where any such impacts are significant, feasible mitigation measures and potentially feasible alternatives that would substantially lessen or avoid such effects are identified and discussed. The public review period allows the public an opportunity to provide input to the lead agency on the DEIR.

The DEIR is currently undergoing public review for 45 days. During this period, the City will hold one public meeting on December 16, 2020 at 3:00 p.m. The meeting will occur during the City of Oakland Planning Commission meeting and will be hosted on Zoom. For links to the meeting, please visit: www.oaklandca.gov/boards-commissions/planning-commission/meetings. The meeting(s) will include a brief overview of the proposed project and the analysis and conclusions set forth in the DEIR, followed by the opportunity for interested members of the public to provide comments regarding the VMP and the DEIR. Commenters may provide oral comments at the meeting or written/emailed comments to DEIR-comments@oaklandvegmanagement.org at any time during the comment period.

ES.5.3 Preparation of FEIR and Certification

Once the public review period is closed, the City will prepare a Final EIR (FEIR). The FEIR will incorporate this DEIR by reference. It will contain all comments submitted on this DEIR (including those made at public meetings), responses to those comments, and any revisions to the text of this DEIR. The FEIR will be reviewed by the City of Oakland Planning Commission and considered for approval by the City Council.

Written/emailed and oral comments received in response to the DEIR will be addressed in the "Responses to Comments" section of the FEIR. Together with the DEIR and any related changes to the substantive discussion in the DEIR, these responses will constitute the FEIR. The FEIR, in turn, will inform the City's exercise of its discretion as a lead agency under CEQA in deciding whether to approve the VMP.

ES.6 AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b) requires that an Executive Summary identify "areas of controversy known to a lead agency including issues raised by agencies and the public." To date, while not considered controversial, the following questions or concerns have been raised regarding the Draft VMP during the scoping period:

- Potential use of herbicides
- Removal of trees
- Removal of non-native vegetation
- Minimization of impacts on sensitive species

ES.7 ALTERNATIVES CONSIDERED

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project while reducing or eliminating one or more of the proposed project's significant effects. The range of alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors.

A "No Project Alternative" also must be considered. The No Project Alternative is "the existing conditions at the time the notice of preparation is published" as well as "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans" (14 Cal. Code Regs. §15126.6[e][2]). "When the project involves revision of an existing plan, policy, or ongoing operation, the no-project alternative should reflect continuation of the existing plan, policy, or operation." (Kostka & Zischke, *Practice Under the California Environmental Quality Act* (CEB 2020) §15.19, citing CEQA Guidelines Section 15126.6(e)(3)(A).) "In such a situation, the no-project alternative should be described as a continuation of the existing operation." (Kostka & Zischke, *Practice Under the California Environmental Quality Act* (CEB 2020) §15.20, citing *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 234 Cal.App.4th 214, 254.) The no-project analysis reflects whether failure to approve the project would preserve existing environmental conditions or instead would lead to other changes to the environment." (Kostka & Zischke, *Practice Under the California Environmental Quality Act* (CEB 2020) Section 15.19, citing CEQA Guidelines Section 15126.6(e)(2).) The intent of the No Project Alternative is to allow decision makers to compare the impacts of approving the project against the impacts of not approving the project (CEQA Guidelines Section 15126[e][1]).

The alternatives described below have been evaluated for their feasibility and their ability to achieve most of the VMP's objectives while avoiding, reducing, or minimizing significant impacts identified for the VMP. The full analysis of alternatives is provided in Chapter 5 of the DEIR.

ES.7.1 Alternative 1 – No Project Alternative

Under the No Project Alternative, the City would not implement a VMP to guide and direct targeted vegetation management activities to minimize the potential for ignitions, crown fire, and extreme fire behavior on City-owned land and along access/egress routes. Instead, the City would continue to conduct vegetation management activities consistent with existing (2017 and 2018) operations. Under the No Project Alternative, the City would conduct approximately 1,100 acres of goat grazing and approximately 152 acres of roadside treatment and other activities each year, using a combination of hand labor and mechanical techniques. Similar to existing conditions, no chemical techniques (i.e., herbicides) would be used.

It is important to note that the underlying need for increased targeted vegetation management activities proposed under the VMP—to reduce wildfire risk in the City portions of the VHFHSZ—would remain unaddressed with implementation of the No Project Alternative. Without implementation of the VMP, the City would only be able to address a limited number of vegetation management activities annually based on the Public Works/OFD annual budget.

By reducing the acreage of treatment that occurs in a given year compared to annual treatment acreages under the VMP, the No Project Alternative would fail to meet VMP goals and objectives, particularly reducing wildfire hazard on City-owned land and along critical access/egress routes within the City's VHFHSZ. It would also fail to address the need for wildfire risk reduction identified by the City, OFD, stakeholders, and members of the public throughout the years-long VMP development process.

ES.7.2 Alternative 2 – Reduced Vegetation Management Activities Alternative

Alternative 2 is a modified version of the VMP with reduced annual treatment acreage. Under Alternative 2, the City would conduct approximately 1,100 acres of goat grazing and approximately 300 acres of roadside treatment and other activities using a combination of hand labor, mechanical treatments, and herbicide treatments. Additionally, no vegetation management activities would occur on urban and residential treatment areas, which total 47.5 acres. While vegetation treatment activities would still occur in close proximity to sensitive uses, the use of equipment generating noise of 85 dBA at 50 feet (such as chainsaws) would be prohibited within 90 feet of sensitive receptors, and the use of equipment generating noise of 88 dBA at 50 feet (such as a chipper or excavator) would be prohibited within 130 feet of sensitive receptors.

Alternative 2 was selected as an alternative to the VMP based on public input and because the restriction on equipment use near sensitive receptors would reduce significant and unavoidable noise impacts associated with mechanical treatment activities and the use of chainsaws during hand labor treatments.

Alternative 2, the Reduced Vegetation Management Activities Alternative, would meet some of the goals or objectives of the VMP; however, the reduced annual acreage of treatment would slow OFD's progress in addressing wildfire risk concerns. It would fail to fully address the need for wildfire risk reduction to the level identified by the City, OFD, stakeholders, and members of the public.

ES.7.3 Alternative 3 – No Herbicide Use Alternative

Alternative 3 is a modified version of the VMP that excludes the use of herbicides for vegetation management. Other vegetation management methods described in the VMP (i.e., grazing, hand labor techniques, and mechanical techniques) would be used in lieu of herbicides. Under Alternative 3, the City would conduct approximately 1,100 acres of goat grazing and approximately 555 acres of roadside treatment and other activities using a combination of hand labor and mechanical techniques. Under this alternative, no herbicides would be used (compared to an annual maximum of 35 acres of proposed herbicide treatment under the VMP). All other maintenance activities would be conducted as described in the VMP.

As background, in 2005, the City adopted Resolution 79133, which directed staff to evaluate the selective use of glyphosate and triclopyr for managing vegetation to reduce wildfire hazard in the City's Wildfire Prevention Assessment District. To date, herbicides have not been used for vegetation management on City-owned property or along roadsides in the VMP area. This VMP EIR process evaluates the potential environmental effects of herbicide use. However, the City also received feedback from the public during the VMP development and scoping process to consider a "no herbicide" alternative to address concerns about the potential impacts of herbicide use in the City. As such, Alternative 3 reflects public input on early drafts of the VMP.

Alternative 3, the No Herbicide Use Alternative, would meet some of the goals or objectives of the VMP; however, the elimination of herbicide use as an available vegetation management treatment would slow progress toward reducing fuel loads in the VMP area. This alternative would result in additional costs and staffing needs to conduct follow-up treatments in areas where mechanical and hand removal treatments are less effective than herbicide treatments.

ES.7.4 Alternative 4 – Reduced Herbicide Use Alternative

Alternative 4 is a modification of the VMP that would reduce, but not eliminate, herbicide application in the VMP area compared to the proposed VMP. Under Alternative 4, annual herbicide use would be reduced to a maximum of 10 acres of treatment for trees and 7.5 acres of treatment for shrubs (compared to the annual maximum of 20 acres of treatment for trees and 15 acres of treatment for shrubs under the VMP). Additionally, no herbicide application would occur within 100 feet of any creeks. Further, under this alternative, the City would use only non-Roundup™ formulations of glyphosate. In contrast, the VMP allows non-Roundup™ formulations of glyphosate as well as triclopyr and imazapyr. Alternative 4 would only allow application of herbicides using the cut-and-daub application method with a hand brush or sponge; no hand spraying would be conducted under this alternative. The City would conduct approximately 1,100 acres of goat grazing, as with the VMP, along with approximately 572.5 acres of roadside treatment and other activities (a reduction from 590 acres with the VMP) using a combination of hand labor, mechanical, and herbicide techniques.

As described above for Alternative 3, Alternative 4 reflects public input on early drafts of the VMP to consider a "reduced herbicide" alternative.

Alternative 4, the Reduced Herbicide Use Alternative, would meet some of the goals or objectives of the VMP; however, restrictions on the types and amounts of herbicide use as an available vegetation management treatment would slow progress toward improvement of fuel loads in the VMP area compared to the proposed VMP. This alternative would result in additional costs and staffing needs to conduct follow-up treatments in areas where mechanical and hand removal treatments are less effective than herbicide treatments.

ES.8 SUMMARY OF THE ENVIRONMENTAL IMPACT ANALYSIS

The environmental impacts of implementing the VMP are discussed in detail in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures.* The chapter also identifies significance conclusions for each impact (described in detail below) and describes mitigation measures that would reduce significant impacts to a less-than-significant level. **Table ES-3** (located at the end of this Executive Summary) provides an overview of the environmental impacts, mitigation measures, and levels of significance identified in this document. For the full impact analysis, refer to the resource sections of Chapter 3.

ES.8.1 Significance Thresholds and Impact Terminology

The CEQA statutes and guidelines require that, for each environmental resource topic, significance criteria are identified to determine whether implementation of the proposed project would result in a significant environmental impact when evaluated against the baseline condition, as described in the environmental setting. The significance criteria vary depending on the environmental resource topic. In general, effects can be either significant or potentially significant (exceed the threshold) or less than significant (do not exceed the threshold). In some cases, a significant impact will be identified as significant and unavoidable if no feasible mitigation measures are available that would reduce the impact to a less-than-significant level. If a project is subsequently adopted despite identified significant impacts that would result from the project, CEQA requires the lead agency to prepare and adopt a statement of overriding considerations describing the social, economic, and other reasons for moving forward with the project despite its significant impacts.

This DEIR uses the following terminology to describe environmental effects of the VMP:

- A finding of *no impact* is made when the analysis concludes that the VMP would not affect the particular environmental resource or issue.
- An impact is considered *less than significant* if the analysis concludes that there would be no substantial adverse change in the environment and that no mitigation is needed.
- An impact is considered *significant* or *potentially significant* if the analysis concludes that there would be, or could be, a substantial adverse effect on the environment.

- An impact is considered *less than significant with mitigation* if the analysis concludes that there would be no substantial adverse change in the environment with the inclusion of the mitigation measures described.

- An impact is considered *significant and unavoidable* if the analysis concludes that there could be a substantial adverse effect on the environment and that, even with the inclusion of feasible mitigation measures, the impact would not be reduced to a less-than-significant level.

- *Mitigation* refers to specific measures or activities adopted to avoid, minimize, rectify, reduce, eliminate, or compensate for an impact.

- A *cumulative impact* can result when a change in the environment results from the incremental impact of a project when added to other related past, present, or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively substantial projects. The cumulative impact analysis in this DEIR (provided in Section 4.2 of Chapter 4) focuses on whether the VMP's incremental contribution to significant cumulative impacts caused by past, present, or probable future projects is cumulatively considerable (i.e., significant).

Because the term "significant" has a specific usage in evaluating impacts under CEQA, it is used only to describe the level of significance of impacts and is not used in other contexts within this document. Synonyms such as "substantial" have been used when not discussing the significance of an environmental impact. Significant and Unavoidable Impact

CEQA requires that the Executive Summary to an EIR identify any environmental impacts that, even with mitigation, cannot be feasibly reduced to a less-than-significant level. As described in Section 3.10, "Noise and Vibration," and summarized in Table ES-3, the following significant and unavoidable impact would occur under the VMP:

- Impact NOI-1: Generate Substantial Temporary or Periodic Increase in Ambient Noise Levels; or Generate Noise in Violation of the City of Oakland Municipal Code, in Excess of General Plan Standards, California Noise Insulation Standards, or Applicable Standards Established by a Regulatory Agency

Table ES-3. Summary of Environmental Impacts and Mitigation Measures

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Aesthetics			
AES-1: Substantial Adverse Effects on Public Scenic Vistas	S	**AES-1**: Conduct Visual Reconnaissance Prior to Implementing Tree Removal Activities to Determine if Vegetation Relocation or Thinning of Publicly Visible Treatment Areas is Necessary	LSM
AES-2: Substantial Damage to Scenic Views, Including Those within a State or Locally Designated Scenic Highway	S	**AES-1**: Conduct Visual Reconnaissance Prior to Implementing Tree Removal Activities to Determine if Vegetation Relocation or Thinning of Publicly Visible Treatment Areas is Necessary	LSM
AES-3: Short-term Degradation of Visual Character or Quality of Public Views	S		LSM
Grazing	LTS	None required	LTS
Mechanical and Hand Labor Treatments	S	**AES-2:** Staging (VMP BMP GEN-4)	LSM
Herbicides	LTS	None required	LTS
AES-4: Long-term Degradation of Visual Character or Quality of Public Views	S	**AES-1**: Conduct Visual Reconnaissance Prior to Implementing Tree Removal Activities to Determine if Vegetation Relocation or Thinning of Publicly Visible Treatment Areas is Necessary	LSM
Air Quality			
AQ-1: Conflict with or Obstruct Implementation of Applicable Air Quality Plans	LTS	None required	LTS

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
AQ-2: Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation, or Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is in Nonattainment	S	**AQ-1:** Fugitive Dust BMPs **GEO-1:** Minimize Area of Disturbance (VMP BMP GEN-2) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
AQ-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations	S		LSM
Mechanical and Hand Labor Treatments	S	**AQ-1:** Fugitive Dust BMPs **AQ-2:** Comply with Asbestos ATCM by Obtaining an Approved Asbestos Dust Mitigation Plan or Exemption **GEO-1:** Minimize Area of Disturbance (VMP BMP GEN-2)	LSM
Grazing	LTS	None required	LTS
Herbicides	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements	LSM
AQ-4: Result in Other Emissions Such as Odors Adversely Affecting a Substantial Number of People	LTS	None required	LTS
Biological Resources			
BIO-1: Potential Adverse Effects on Special-Status Plant Species	S		LSM
BIO-1A: State-Listed and/or Federally Listed Special-Status Plants	S		LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Mechanical and Hand Labor Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-2b:** Provide Compensatory Mitigation for Special-Status Plant Species **BIO-3:** Seeding with Native Species (VMP BMP BIO-10) **BIO-4:** Avoid Presidio Clarkia Sensitive Time Periods **GEO-1:** Minimize Area of Disturbance (VMP BMP GEN-2)	LSM
Grazing	S	**BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Herbicides	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
BIO-1B: CRPR 1B or 2 Plants	S		LSM
Mechanical and Hand Labor Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-2b:** Provide Compensatory Mitigation for Special-Status Plant Species **BIO-3:** Seeding with Native Species (VMP BMP BIO-10) **GEO-1:** Minimize Area of Disturbance (VMP BMP GEN-2)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Grazing	S	**BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Herbicides	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-2b:** Provide Compensatory Mitigation for Special-Status Plant Species **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	
BIO-1C: CRPR 3 or 4 Plants and Plants Listed in the CNPSEB Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties Database with an A rank	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-2b:** Provide Compensatory Mitigation for Special-Status Plant Species **BIO-3:** Seeding with Native Species (VMP BMP BIO-10) **BIO-5:** Grazing (revised from VMP BMP BIO-6) **GEO-1:** Minimize Area of Disturbance (VMP BMP GEN-2) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
BIO-2: Potential Adverse Effects on Special-Status Wildlife Species	S		LSM
BIO-2A: Potential Adverse Effects on Special-Status Amphibians and Reptiles	S		LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
All Treatments	S	**BIO-6:** Trash Removal (revised from VMP BMP BIO-7) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3)	LSM
Mechanical and Hand Labor Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-7:** Protection of Alameda Whipsnake (revised from VMP BMP BIO-5) **BIO-8:** Protection of California Red-legged Frogs and Western Pond Turtles (based on VMP BMP BIO-4)	LSM
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Herbicides	S	**BIO-9:** Protection of California Red-legged Frogs from Herbicide Use (VMP BMP BIO-2) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	LSM
BIO-2B: Potential Adverse Effects on Special-Status Birds and Other Protected Bird Nests			LSM
All Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-6:** Trash Removal (revised from VMP BMP BIO-7) **BIO-10:** Minimize Impacts to Nesting Birds via Site Assessments and Avoidance Measures (revised from VMP BMP BIO-1)	LSM
Mechanical and Hand Labor Treatments	S	**BIO-10:** Minimize Impacts to Nesting Birds via Site Assessments and Avoidance Measures (revised from VMP BMP BIO-1)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Herbicides	S	**BIO-10:** Minimize Impacts to Nesting Birds via Site Assessments and Avoidance Measures (revised from VMP BMP BIO-1) **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
BIO-2C: Potential Adverse Effects on Special-Status Mammals and CEQA-relevant Bat Species	S		LSM
Mechanical and Hand Labor Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-11:** Protection of Bat Colonies (VMP BMP BIO-8) **BIO-12:** Protection of Dusky-footed Woodrats (VMP BMP BIO-9)	LMS
Grazing	LTS	None required	LTS
Herbicides	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	LMS
BIO-3: Potential Adverse Effects on Riparian Habitat or Other Sensitive Natural Communities Identified in Local or Regional Plans, Policies, Regulations or by CDFW, USFWS, or NMFS	S		LSM
BIO-3A: Impacts on Riparian Habitat or Other Sensitive Natural Communities	S		LSM
All Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Mechanical and Hand Labor Treatments	S	**BIO-13:** Avoid Riparian Habitat and Develop and Implement a Plan to Replace Affected Riparian Habitat	LSM
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6) **BIO-13:** Avoid Riparian Habitat and Develop and Implement a Plan to Replace Affected Riparian Habitat	LSM
Herbicides	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
BIO-3B: Impacts Caused by Non-native and Invasive Species and Pathogens	S		LSM
Mechanical Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-3:** Seeding with Native Species (VMP BMP BIO-10) **BIO-14:** Prevent the Spread of Invasive Plants and Plant Pathogens **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8)	LSM
Hand Labor Treatments	S	**BIO-14:** Prevent the Spread of Invasive Plants and Plant Pathogens	LSM
Grazing	LTS	None required	LTS
Herbicides	S	**BIO-14:** Prevent the Spread of Invasive Plants and Plant Pathogens	LSM
BIO-4: Potential Adverse Effects on Federally Protected or State-Protected Wetlands	S		LSM
Mechanical Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		BIO-6: Trash Removal (revised from VMP BMP BIO-7) **BIO-15:** Avoid Impacts on Federally Protected and State-Protected Wetlands and Waters, as Feasible **BIO-16:** Provide Compensatory Mitigation for Unavoidable Impacts on Waters of the United States and the State **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HAZ-6:** Spill Prevention and Response (VMP BMP GEN-7) **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	
Hand Labor Treatments	S	**BIO-15:** Avoid Impacts on Federally Protected and State-Protected Wetlands and Waters, as Feasible **BIO-16:** Provide Compensatory Mitigation for Unavoidable Impacts on Waters of the United States and the State **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	LSM
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Herbicides	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	LSM
BIO-5: Potential Interference with Wildlife Movement, Established Wildlife Corridors, or the Use of Native Wildlife Nursery Sites	S		LSM
BIO-5A: Wildlife Movement	LTS	None required; further reduced with **BIO-5:** Grazing (revised from VMP BMP BIO-6)	LTS
BIO-5B: Potential Adverse Effects on Non-special-status Fish	S		LSM
All Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-13:** Avoid Riparian Habitat and Develop and Implement a Plan to Replace Affected Riparian Habitat	LSM
Mechanical Treatments	S	**BIO-15:** Avoid Impacts on Federally Protected and State-Protected Wetlands and Waters, as Feasible **BIO-16:** Provide Compensatory Mitigation for Unavoidable Impacts on Waters of the United States and the State **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		HAZ-6: Spill Prevention and Response (VMP BMP GEN-7) **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	
Hand Labor Treatments	LTS	None required	LTS
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Herbicides	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
BIO-6: Conflict with Local Policies or Ordinances Protecting Biological Resources	S		LSM
All Treatments	S	**BIO-1:** Provide Biologist Review and Worker Training **BIO-2a:** Avoid Special-Status Plant Species (revised from VMP BMP BIO-3) **BIO-2b:** Provide Compensatory Mitigation for Special-Status Plant Species **BIO-3:** Seeding with Native Species (VMP BMP BIO-10) **BIO-4:** Avoid Presidio Clarkia Sensitive Time Periods **BIO-5:** Grazing (revised from VMP BMP BIO-6) **BIO-6:** Trash Removal (revised from VMP BMP BIO-7) **BIO-7:** Protection of Alameda Whipsnake (VMP BMP BIO-5) **BIO-8:** Protection of California Red-legged Frogs and Western Pond Turtles (revised from VMP BMP BIO-4) **BIO-9:** Protection of California Red-legged Frogs from Herbicide Use (VMP BMP BIO-2)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		BIO-10: Minimize Impacts to Nesting Birds via Site Assessments and Avoidance Measures (revised from VMP BMP BIO-1) **BIO-11:** Protection of Bat Colonies (VMP BMP BIO-8) **BIO-12:** Protection of Dusky-footed Woodrats (VMP BMP BIO-9) **BIO-13:** Avoid Riparian Habitat and Develop and Implement a Plan to Replace Affected Riparian Habitat **BIO-14:** Prevent the Spread of Invasive Plants and Plant Pathogens **BIO-15:** Avoid Impacts on Federally Protected and State-Protected Wetlands and Waters, as Feasible **BIO-16:** Provide Compensatory Mitigation for Unavoidable Impacts on Waters of the United States and the State **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HAZ-6:** Spill Prevention and Response (VMP BMP GEN-7) **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	
Herbicides	LTS	None required	LTS

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
BIO-7: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan	NI	None required	NI
Cultural Resources			
CUL-1: Adverse Change in Significance of Historical Resources of the Historic Era and Built Environment	LTS	None required	LTS
CUL-2: Adverse Change in Significance of Archaeological Sites that Are Historical Resources	S	**CUL-1:** Provide Sensitivity Training, Assess Archaeological Sensitivity, and Survey Areas of High or Highest Sensitivity **CUL-2:** Avoid Use of Techniques that Cause Ground Disturbance within Known Archaeological Historical Resources **CUL-3:** Response Measures for Potential Unknown Archaeological Resources and Tribal Cultural Resources	LSM
CUL-3: Disturb Human Remains, Including Those Interred Outside of Dedicated Cemeteries	S	**CUL-4:** Stop Work if Human Remains Are Unearthed during Project Activities	LSM
Geology, Soils, and Seismicity			
GEO-1: Result in Substantial Erosion or Loss of Topsoil	S		LSM
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Mechanical Treatments	S	**AES-2:** Staging (VMP BMP GEN-4) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		GEO-2: Erosion and Sediment Control Measures (VMP BMP GEN-3) **GEO-3:** Geotechnical Evaluation **HYD/WQ-1:** Work Windows (VMP BMP GEN-1)	
Hand Labor Treatments	S	**GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3)	LSM
Herbicides	LTS	None required	LTS
GEO-2: Substantial Adverse Effects Involving Landslides	S		LSM
Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6)	LSM
Hand Labor Treatment	LTS	None required	LTS
Mechanical Treatments	S	**AES-2:** Staging (VMP BMP GEN-4) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **GEO-3:** Geotechnical Evaluation	LSM
Herbicides	LTS	None required	LTS
GEO-3: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature	S	**GEO-4:** Stop Work if Paleontological Resources Are Unearthed during VMP Treatment Activities	LSM
Greenhouse Gas Emissions			
GHG-1: Generate GHG Emissions	LTS	None required	LTS

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
GHG-2: Potential to Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs	LTS	None required	LTS
GHG-3: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources or Conflict with a State or Local Plan for Renewable Energy or Energy Efficiency	S	**AQ-1:** Fugitive Dust BMPs	LSM
GHG-4: Reduction in Carbon Sequestration	LTS	None required	LTS
Hazards and Hazardous Materials			
HAZ-1: Create a Significant Hazard to the Public or the Environment from the Routine Transport, Use, or Disposal of Hazardous Materials	S		LSM
Grazing	S	**HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9)	LSM
Hand Labor Techniques	S	**HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9)	LSM
Mechanical Techniques	S	**HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5)	LSM
Herbicides	S	**HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		HAZ-4: Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	
HAZ-2: Create a Significant Hazard to the Public or the Environment through the Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment	S	**HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-6:** Spill Prevention and Response (VMP BMP GEN-7)	LSM
HAZ-3: Create a Significant Hazard to the Public through the Storage or Use of Acutely Hazardous Materials near Sensitive Receptors	S	**HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
HAZ-4: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Wastes within 0.25 Mile of an Existing or Proposed School	S	**HAZ-4:** Measures to Avoid or Minimize Adverse Effects on People, Pets, or Other Non-Target Organisms from Use of Herbicides **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2)	LSM
HAZ-5: Be Located on a Site that Is Included on a List of Hazardous Materials Sites Compiled Pursuant to California Government Code Section 65962.5, and as a Result, Create a Significant Hazard to the Public or the Environment	S	**HAZ-7:** Review Proximity of Proposed Treatment Sites to Known Hazardous Materials Clean-up Sites and Implement Safety Measures **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6) **HAZ-9:** Proper Handling and Disposal of Contaminated Soil and Groundwater	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
HAZ-6: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
Hydrology and Water Quality			
HYD/WQ-1: Violate Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Water Quality or Conflict with or Obstruct the Implementation of a Water Quality Control Plan or Conflict with the City of Oakland Creek Protection Ordinance through Hand Labor, Herbicide Application, or Mechanical Techniques	S	**HYD/WQ-1:** Work Windows (VMP BMP GEN-1) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HAZ-6:** Spill Prevention and Response (VMP BMP GEN-7) **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6)	LSM
HYD/WQ-2: Violate Water Quality Standards or Waste Discharge Requirement or Otherwise Substantially Degrade Water Quality or Conflict with or Obstruct the Implementation of a Water Quality Control Plan or Conflict with the City of Oakland Creek Protection Ordinance through Grazing	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3)	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
HYD/WQ-3: Substantially Alter Existing Drainage Pattern of Site or Area, or Create or Contribute Runoff Water that Exceeds Capacity of Stormwater Systems, or Results in Substantial Erosion or Exposes People or Structures to a Substantial Risk of Loss, Injury, or Death as a Result of Flooding or Inundation by Mudflow	S	**BIO-5:** Grazing (revised from VMP BMP BIO-6) **HYD/WQ-1:** Work Windows (VMP BMP GEN-1) **GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **HAZ-2:** Vehicle and Equipment Fueling (VMP BMP GEN-9) **HAZ-3:** On-Site Hazardous Materials Management (VMP BMP GEN-5) **HAZ-5:** Standard Herbicide Use Requirements (VMP BMP VEG-2) **HAZ-6:** Spill Prevention and Response (VMP BMP GEN-7) **HAZ-8:** Existing Hazardous Materials (VMP BMP GEN-6)	LSM
HYD/WQ-4: Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge Such That There Would Be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level	LTS	None required	LTS
Noise			
NOI-1: Generate Substantial Temporary or Periodic Increase in Ambient Noise Levels; or Generate Noise in Violation of the City of Oakland Municipal Code, in Excess of General Plan Standards, California Noise Insulation Standards, or Applicable Standards Established by a Regulatory Agency			

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Grazing and Herbicide Treatments	LTS	None required	LTS
Hand Labor Treatments	S	**NOI-1:** Limit Work Near Sensitive Receptors **NOI-2:** Notify Sensitive Receptors Near Treatment Areas	SU
Mechanical Treatments	S	**NOI-1:** Limit Work Near Sensitive Receptors **NOI-2:** Notify Sensitive Receptors Near Treatment Areas	SU
NOI-2: Generate Groundborne Vibration or Groundborne Vibration Levels that Exceed FTA Criteria	LTS	None required	LTS
Recreation			
REC-1: Increased Use of Recreational Facilities Such that Substantial Physical Deterioration Would Occur	LTS	None required	LTS
REC-2: Temporary Disruption of the Use of, or Access to, Recreational Facilities	S	**REC-1:** Provide Notification of Temporary Trail Closures	LSM
Transportation			
TRA-1: Conflict with a Program Applicable Plan, Ordinance or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities			
Roadside Treatment Areas and Medians	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
Ridgetop Areas	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
Canyon Areas	S	**TRA-1:** Maintain Traffic Flow	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		TRA-2: Traffic Control and Public Safety	
City Parks and Open Space Areas	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
Urban and Residential Parcels	LTS	None required	LTS
Other Areas	LTS	None required	LTS
TRA-2: Result in Substantial Increase in Vehicle Miles Traveled	LTS	None required	LTS
TRA-3: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
TRA-4: Result in Inadequate Emergency Access	S	**TRA-1:** Maintain Traffic Flow **TRA-2:** Traffic Control and Public Safety	LSM
Tribal Cultural Resources			
TCR-1: Substantial Adverse Change in the Significance of a Tribal Cultural Resource	S	**CUL-1:** Provide Sensitivity Training, Assess Archaeological Sensitivity, and Survey Areas of High or Highest Sensitivity **CUL-2:** Avoid Use of Techniques that Cause Ground Disturbance within Known Archaeological Historical Resources **CUL-3:** Response Measures for Potential Unknown Archaeological Resources and Tribal Cultural Resources **CUL-4:** Stop Work if Human Remains Are Unearthed during Project Activities	LSM
Wildfire			
WLD-1: Substantially Exacerbate Wildfire Risk and Expose People to Uncontrolled Spread of a Wildfire	S	**HAZ-1:** Vehicle and Equipment Maintenance (VMP BMP GEN-8) **WLD-1:** Fire Prevention	LSM

Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
WLD-2: Expose People or Structures to Substantial Risks Related to Post-Fire Landslides or Flooding			
Mechanical Treatments	S	**GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3) **GEO-3:** Geotechnical Evaluation	LSM
Hand Labor Treatments	S	**GEO-1:** Minimize Soil Disturbance (VMP BMP GEN-2) **GEO-2:** Erosion and Sediment Control Measures (VMP BMP GEN-3)	LSM
Grazing	LTS	None required	LTS
Herbicides	LTS	None required	LTS
Cumulative Impacts			
Cum-BIO-1: Cumulative Effects on Biological Resources	S	BIO-1 through BIO-16	LSM
Cum-NOI-1: Cumulative Effects Related to Noise	S	NOI-1 and NOI-2	SU

Notes: LSM = less than significant with mitigation; LTS = less than significant; NI = no impact; S = significant; SU = significant and unavoidable

This page intentionally left blank