**WEIR CANYON INVASIVE PEST MITIGATION AND FUELS REDUCTIONS PROJECT**

**WEIR CANYON, ORANGE COUNTY, CA**

***Prepared for:***

**Orange County Fire Authority**1 Fire Authority Road

Irvine, CA 92602

***Prepared by:***

**CHAMBERS GROUP, INC.**5 Hutton Centre Drive, Suite 750  
Santa Ana, California 92707  
(949) 261-5414

**April 2020**

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# INTRODUCTION AND OVERVIEW

## INTRODUCTION

The Orange County Fire Authority (OCFA), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this Initial Study (IS) to evaluate the potential environmental impacts associated with the Weir Canyon Invasive Tree Pest Mitigation and Fuels Reduction Project (Proposed Project or Project). The Proposed Project involves the spraying of barrier insecticide to eliminate and slow the spread rate of pests, enhancing the survival rate of existing tree populations and creating a fire safe condition.

## CEQA REQUIREMENTS

The Proposed Project is a discretionary action and therefore is subject to the requirements of CEQA (Public Resources Code (PRC), Division 13, Sections 21000–21177) and the State CEQA Guidelines (California Code of Regulations (CCR) Title 14, Sections 15000–15387). Initial studies such as this document are typically used as a basis for deciding whether to prepare an environmental impact report (EIR), a mitigated negative declaration (MND), or a negative declaration (ND) for a project pursuant to CEQA. However, in this case, this IS is being used to review the Proposed Project to determine its eligibility for an exemption from additional environmental review under CEQA.

The State CEQA Guidelines identify 33 classes of projects that have been determined not to have a significant effect on the environment and that are, therefore, exempt from the provisions of CEQA. These categorical exemptions are described in State CEQA Guidelines Sections 15301–15333.

The following categorical exemption applies to the Proposed Project.

* Section 15304. Minor Alterations to Land:

Class 4 consists of minor public or private alterations in the conditions of land, water and/or vegetation which do not involve removal of healthy, mature, and scenic trees except for forestry and agricultural purposes.

* Section 15307. Actions By Regulatory Agencies For Protection Of Natural Resources:

Class 7 consists of actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Examples include but are not limited to wildlife preservation activities of the State Department of Fish and Game. Construction activities are not included in this exemption.

* Section 15308. Actions By Regulatory Agencies For Protection Of The Environment:

Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and relaxation of standards allowing environmental degradation are not included in this exemption.

Section 15300.2 of the State CEQA Guidelines specifies a number of exceptions to the use of a categorical exemption.

* 1. Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
  2. Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
  3. Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.
  4. Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements that are required as mitigation by an adopted negative declaration or certified EIR.
  5. Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site that is included on any list compiled pursuant to Section 65962.5 of the Government Code.
  6. Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

This IS provides a comprehensive review of the potential environmental issues associated with the Proposed Project to ensure that none of the above exceptions are applicable to the Proposed Project.

A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant.

“Potentially Significant Impact” is appropriate if substantial evidence indicates that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

“Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” Mitigation measures are identified and explain how they reduce the effect to a less than significant level (mitigation measures may be cross referenced).

Earlier analyses may be used where, pursuant to the Program EIR or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (Section 15063[c] [3][D]. In this case, a brief discussion should identify the following:

1. Earlier analyses used where they are available for review
2. Which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and whether such effects were addressed by mitigation measures based on the earlier analysis
3. The mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project for effects that are “Less than Significant with Mitigation Measures Incorporated

References and citations have been incorporated into the checklist references to identify information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document, where appropriate, include a reference to the page or pages where the statement is substantiated.

Source listings and other sources used, or individuals contacted are cited in the discussion.

The explanation of each issue identifies:

1. The significance criteria or threshold, if any, used to evaluate each question
2. The mitigation measure identified, if any, to reduce the impact to less than significant

## INITIAL STUDY ORGANIZATION

The content and format of this report are designed to meet the requirements of CEQA. This IS identifies the potential environmental impacts of the Proposed Project to support the decision to prepare an EIR, MND, ND, or Notice of Exemption. The report contains the following sections.

* Chapter 1, Introduction and Overview, identifies the Proposed Project and the purpose of the IS.
* Chapter 2, Project Information, identities the location, background, and planning objectives of the Proposed Project and describes the Proposed Project in detail.
* Chapter 3, Environmental Impact Analysis, presents the CEQA checklist responses for each resource topic. This section includes a brief setting section for each resource topic and identifies the potential impacts of implementing the Proposed Project.
* Chapter 4, References, identifies all printed references and communications cited in this IS

Figure : Project Location and Vicinity Map

# Project Description

## Overview OF THE PROJECT

Approximately 163,992 acres throughout the County are experiencing high tree mortality due to a recent severe drought conditions and tree pests. The Gold Spotted Oak Borer (GSOB) and Invasive Shot Hole Borer (ISHB) are weakening and killing native hardwood and ornamental species in the southern California wildland and urban landscapes. The California Board of Forestry and Fire Protection has declared some areas in the County as Zones of Infestation (ZOI) for the GSOB. The OCFA, under the CalFire Fire Prevention Grant Program, proposes to treat infested trees located on both County- and privately-owned properties with a contact insecticide to prevent the spread of resident beetles to neighboring trees and re-infestation of current host trees. In addition, trees lacking pest exit holes, but within approximately 100 meters of trees with exit holes, would be treated preventatively with a barrier spray. These trees may either be infested from eggs laid during the previous flight season or may be un-infested but vulnerable due to their proximity to infested trees.

Ongoing maintenance activities following insecticide application may require limited mechanized removal of dead, dying, and diseased tree material. If tree material removal is deemed necessary, OCFA crew members would fall, limb, buck, and chip targeted trees and in some cases, stump grind. All root structures would remain intact underground, and a buffer zone encompassing six feet outside the tree canopy will be established in order to protect tree root structures. Within this buffer zone no parking will be allowed, there will be no change in the soil grade, and no material will be stockpiled. The felled tree parts will be hand-carried and chipped at predetermined locations that will not cause ground disturbance. The beetle infested tree material will be chipped into green waste bins and hauled away in a covered bin to green waste facilities or chipped onsite at the predetermined locations to be solarized. Chippers onsite would remain on pavement or would be used off-pavement only on previously disturbed ground, when the ground is not wet, in order to avoid ground disturbance. Haul trucks required for the removal of tree material and green waste bins would remain on existing roadways. Trees are an important component of natural ecosystems in California and treatment of infested trees would eliminate pests and slow the spread rate, enhancing the survival rate of existing tree populations. A decrease in tree mortality would ultimately reduce the wildfire risks to habitable structures by reducing potential fuel within parks and adjacent to roads, homes, and HOAs.

### Project Location

The Proposed Project would occur within Weir Canyon Nature Preserve, an unincorporated forested area on the northeastern edge of Orange County (OC), California. The Proposed Project site comprising of 142.13 acres of forested land, indicated in red in Figure 1, incorporates portions of the Weir Canyon area, in the northern part of the greater Irvine Ranch Open Space and spreads across both sides of State Route (SR) 241.Trees treated as a result of the Proposed Project are in areas designated as Very High Fire Hazard Severity Zones (VHFHSZ) within the County’s State Responsibility Area (SRA). (CalFire 2007). The Land Use designation of the Proposed Project site is Open Space Reserve. The Zoning of the site is General Agricultural Zoning District (A1) (County of Orange 2015).

### Pesticide Application

Pesticides would be applied using one to two diesel trucks that have attached booms with pressurized spray rigs. Trucks with pressurized spraying rigs would remain on established roadways, using hoses that are a minimum length of 200 feet to apply spray. Contact spray would be applied to completely cover the trunk and any branches greater than 8 inches in diameter. Barrier spray application will be evaluated annually and, with consultation, be repeated as necessary. Contact insecticides kill adult beetles when ingested at emergence and also kill eggs laid on the bark surface. These sprays will not control larvae feeding in the tree but are effective at killing adult beetles as they directly contact the insecticide on the bark surface. The insecticide Carbaryl would be used because of its apparent effectiveness against GSOB under laboratory and field conditions (unpublished IRC data).

The insecticide products would be applied by a registered pesticide applicator (Qualified Applicator Certificate or License) licensed for Forestry (Category E). IRC staff, as well as qualified contractors, have a Category E certification and the associated Operator IDs with the County Agricultural Commissioner to apply restricted chemicals. All pesticide applications would strictly follow label and label supplement specifications, and all pesticide use would be reported to the landowner and the Orange County Agricultural Commissioner at the end of each application month. Carbaryl is a restricted chemical and its use would be reported to the Orange County Agricultural Commissioner in advance of treatment.

### Schedule

The Proposed Project activities are anticipated to last approximately two months, operating Monday through Saturday between the hours of 8:00 AM and 4:00 PM. Insecticide treatment would occur between April and June to slightly precede adult beetle flight activity.

## Required permits and approvals

* Notice of Intent (NOI) with the County Agricultural Commissioner

# Environmental Determination

*The environmental factors checked below would potentially be affected by this project, involving at least one impact that is a “Potentially Significant Impact," as indicated by the checklists on the following pages.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *Aesthetics* |  | *Agriculture and Forestry Resources* |  | *Air Quality* |
|  | *Biological Resources* |  | *Cultural Resources* |  | *Energy* |
|  | *Geology / Soils* |  | *Greenhouse Gas Emissions* |  | *Hazards & Hazardous Materials* |
|  | *Hydrology / Water Quality* |  | *Land Use / Planning* |  | *Mineral Resources* |
|  | *Noise* |  | *Population / Housing* |  | *Public Services* |
|  | *Recreation* |  | *Transportation* |  | *Tribal Cultural Resources* |
|  | *Utilities / Service Systems* |  | *Wildfire* |  | *Mandatory Findings of Significance* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

### Aesthetics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a) Except as provided in Public Resources Code Section 21099 would the project have a substantial adverse effect on a scenic vista? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** Scenic vistas are uninterrupted views of the horizon that create an aesthetic viewpoint. The County of Orange General Plan – Transportation Element identifies the County's scenic highway routes. The primary purpose of the Scenic Highways Component is to define the policy guidelines pertaining to the implementation of the Scenic Highways Plan and in order to incorporate safety, utility, economy, and aesthetics into the planning, design and construction of scenic highways. (County of Orange 2012). The County's designated scenic highways have been divided into two categories: Viewscape Corridors and Landscape Corridors. A Viewscape Corridor is a route which traverses a corridor within which unique or unusual scenic resources and aesthetic values are found. A Landscape Corridor traverses developed or developing areas and has been designated for special treatment to provide a pleasant driving environment as well as community enhancement. Although, there are no Landscape Corridors or designated scenic vistas in close vicinity of the site, there are two Viewscape Corridors along the SR 91 and Weir Canyon Road (SR 241). However, the intention of the Project is to treat beetle-infested trees in the Weir Canyon area with insecticide to reduce the spread of invasive species, which as a result would improve on the aesthetical quality of the nature preserve over the long term. Additionally, any equipment utilized during the implementation of the Project or during subsequent maintenance activities, including the diesel trucks with pressurized rigs, haul vehicles, chainsaws and chippers, would only be momentarily visible to the drivers and travelers on SR 91 and SR 241, travelling at a high speed. Therefore, the Proposed Project would not have a significant impact on any scenic vistas, and the implementation of the Proposed Project would improve the existing natural surroundings.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| b) Except as provided in Public Resources Code Section 21099 would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The County has one eligible state scenic highway, along I-55 near Santa Ana Canyon and out of the viewshed of the Project area, but no officially designated scenic highways in the area (Caltrans 2019). However, the Project activities, involving the use of diesel trucks and mechanical equipment for insecticide application, would be used only during the implementation phase of the Project (March to June) and intermittently thereafter for subsequent fuel reduction activities. The implementation of the Project would have a minimal impact on the scenic resources with a state scenic highway. Furthermore, long term impacts of the Proposed Project to the viewshed include increasing of the survival potential of existing trees, which would improve the overall visual appeal of the Proposed Project site. Thus, no impacts are anticipated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| c) Except as provided in Public Resources Code Section 21099 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 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project involves the spraying of insecticide, using up to two large diesel trucks with attached pressurized rigs, on beetle-infested trees in the Weir Canyon area of the Irvine Ranch Open Space. As a part of subsequent fuel reduction activities, limited mechanized removal of trees might be required, including felling, limbing, bucking, and chipping of infested trees. This would result in removal of dead and decaying vegetation from the site and thus would improve the existing visual character and quality of public views in the site and its surroundings. Considering the Proposed Project’s consistency with the County General Plan and applicable zoning regulations governing scenic quality, impacts would be less than significant.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| d) Except as provided in Public Resources Code Section 21099 would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The implementation of the Proposed Project would be conducted by tree contractors or an OCFA crew who would spray barrier insecticides over beetle-infested trees, using up to two large diesel trucks with attached pressurized rigs. As a part of subsequent fuel reductions activities, thereafter, limited mechanized removal of infested trees might be required. The Project activities would be scheduled during the daylight hours, between 8:00 AM to 4:00 PM and thus would not require the need for additional lighting to carry out the activities. After the Project implementation, no new sources of substantial light or glare in the area would be added which would adversely affect the day or nighttime views. Thus, no impacts are expected.

### Agriculture & 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 Department 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 |  |  |  |  |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Farmland Mapping and Monitoring Program (FMMP) administered by the California Department of Conservation produces maps and statistical data to analyze impacts on California’s agricultural resources. Agricultural land is rated according to soil quality and irrigation status. The Proposed Project site is categorized as ‘Other Land’ as part of the FMMP (California Department of Conservation 2016). The California Department of Conservation defines ‘Other Land’ as land not included in any other mapping categories, including low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is also mapped as other land (California Department of Conservation 2016). Thus, the Proposed Project would not convert Prime Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. No impact would occur.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site is zoned for general agricultural uses and would not conflict with a Williamson Act contract (County of Orange 2013a). No impact would occur.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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))? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site is zoned in a General Agricultural Zoning District (A1) within the unincorporated area of Orange County (County of Orange 2016). Section 7-9-55.1 of the Orange County Zoning Code states that the intended uses for this district is agriculture, outdoor recreational uses, and low intensity uses which have a predominately open space character. This district may also be used as an interim zone in which the County of Orange General Plan may designate for more intensive urban uses in the future (County of Orange 2020). Thus, the Proposed Project would not conflict with any existing zoning for or cause rezoning of forest land or timberland. No impact is expected.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project activities include spraying beetle-infested trees with a barrier insecticide and subsequent maintenance in the form of limited mechanized removal of dead, dying and diseased trees within the Weir Canyon Nature Preserve area in Orange County, CA to reduce the risks associated with wildfire to habitable structures in the vicinity. The Project activities, thus, only involve clearing and disposal of infested vegetation and is not intended to convert forest land to non-forest uses. Less than significant impacts are anticipated.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted above, the Proposed Project activities only involve the treatment and limited mechanized removal of infested trees in the Weir Canyon Nature Preserve area, and does not result in the conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use. Thus, no impacts are anticipated.

### Air Quality

This section qualitatively describes the existing air quality setting and potential effects from project implementation on the site and its surrounding area.

#### Environmental Setting

The Project area is located within unincorporated areas of the County of Orange. The Project area is located within the South Coast Air Basin (Air Basin), and air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD). The SCAQMD implements the programs and regulations required by the federal and State Clean Air Acts.

#### Atmospheric Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographical features. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with physical features of the landscape to determine their movement and dispersal, and, consequently, their effect on air quality. The combination of topography and inversion layers generally prevents dispersion of air pollutants in the Air Basin.

The climate of the Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific, which results in a mild climate, tempered by cool sea breezes. Although the Air Basin has a semiarid climate, the air near the surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent; and low stratus clouds, often referred to as “high fog,” are a characteristic climate feature. Average temperatures for the Santa Ana Fire Station*[[1]](#footnote-1)*, which is the nearest monitored location, range from an average low of 43 degrees Fahrenheit (°F) in January to an average high of 85 °F in August. Rainfall averages approximately 14 inches a year, with almost all annual rainfall coming from the fringes of mid-latitude storms from late November to early April and summers being almost completely dry.

Winds are an important parameter in characterizing the air quality environment of a project area because they determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in the Air Basin are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean. These winds are usually strongest in the dry summer months. Nighttime winds in the Air Basin result mainly from the drainage of cool air off the mountains to the east, and they occur more often during the winter months and are usually lighter than the daytime winds. Between the periods of dominant airflow, periods of air stagnation may occur, both in the morning and evening hours. Whether such a period of stagnation occurs is one of the critical determinants of air quality conditions on any given day.

During the winter and fall months, surface high-pressure systems north of the Air Basin, combined with other meteorological conditions, can result in very strong winds from the northeast called “Santa Ana Winds.” These winds normally have durations of a few days before predominant meteorological conditions are reestablished. The highest wind speed typically occurs during the afternoon due to daytime thermal convection caused by surface heating. This convection brings about a downward transfer of momentum from stronger winds aloft. It is not uncommon to have sustained winds of 60 miles per hour with higher gusts during a Santa Ana Wind.

#### Regulatory Setting

The Project area lies within the Air Basin, which is managed by the SCAQMD. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O3), sulfur dioxide (SO2), nitrogen dioxide (NO2), inhalable particulate matter (PM10), fine particulate matter (PM2.5), and lead. The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Areas are classified under the federal Clean Air Act as either “attainment” or “nonattainment” areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The Air Basin has been designated by the federal Environmental Protection Agency (EPA) as a nonattainment area for O3 and PM2.5. Currently, the Air Basin is in attainment with the NAAQS for CO, SO2, NO2, and PM10. In addition, the Orange County portion of the Air Basin is in attainment for lead.

The EPA has designated the Air Basin as extreme nonattainment for the 8-hour average ozone standard. In 2015, the EPA strengthened its 8-hour “primary” and “secondary” ozone standards to 0.070 parts per million (ppm). The previous standard, set in 2008, was 0.075 ppm. The SCAQMD, the agency principally responsible for comprehensive air pollution control in the Air Basin, adopted the 2016 Air Quality Management Plan (AQMP) in March 2016 that provides measures to reduce 8-hour ozone levels to below the federal standard by 2037.

Additionally, the EPA has designated the Air Basin as nonattainment for PM2.5. In 1997, the EPA established standards for PM2.5 (particles less than 2.5 micrometers) which were not implemented until March 2002. PM2.5 is a subset of the PM10 emissions whose standards were developed to complement the PM10 standards that cover a full range of inhalable particulate matter. For the PM10 health standards, the annual PM10 standard was revoked by the EPA on October 17, 2006; and the 24-hour average PM10 attainment status was redesignated to attainment (maintenance) on July 26, 2013.

The 2012 AQMP provides measures to reduce PM2.5 emissions to within the federal standard by 2025. On December 14, 2012, the EPA revised the primary annual PM2.5 NAAQS from 15 micrograms per cubic meter (µg/m3) to 12 µg/m3. On August 3, 2015, the EPA announced the Clean Power Plan, which provides emissions guidelines for states to follow in developing plans to reduce greenhouse gas (GHG) emissions from existing fuel-fired power plants. On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan due to a legal challenge from 29 states. The Clean Power Plan was replaced with a proposed Affordable Clean Energy rule, which would give the authority for making greenhouse gas emissions reductions plans to individual states.

The Air Basin has been designated by CARB as a nonattainment area for ozone, NO2, PM10, and PM2.5. Currently, the Air Basin is in attainment with the State ambient air quality standards for CO, SO2, and sulfates and is unclassified for visibility-reducing particles and hydrogen sulfide. The adopted AQMPs provide measures to meet the State standards for ozone, NO2, PM10, and PM2.5. Table 1 presents the designations and classifications applicable to the Project area.

| Table : Designations/Classifications for the Project Area | | | |
| --- | --- | --- | --- |
| **Pollutant** | **Averaging Time**  **Standard** | **National Standards**  **Attainment Date1** | **California Standards2** |
| 1979  1-Hour Ozone (O3)3 | 1-Hour  (0.12 ppm) | Nonattainment (Extreme)  11/15/2010 (not attained) | Nonattainment |
| 1997  8-Hour Ozone (O3)4 | 8-Hour  (0.08 ppm) | Nonattainment (Extreme)  6/15/2024 |
| 2008  8-Hour Ozone (O3) | 8-Hour  (0.075 ppm) | Nonattainment (Extreme)  12/31/2032 |
| 2015  8-Hour Ozone (O3) | 8-Hour  (0.070 ppm) | Designation Pending  ~2037 |
| Carbon Monoxide (CO) | 1-Hour (35 ppm)  8-Hour (9 ppm) | Attainment (Maintenance)  6/11/2007 (attained) | Maintenance |
| Nitrogen Dioxide (NO2)5 | 1-Hour  (100 ppb) | Unclassifiable/Attainment  Attained | Attainment |
| Annual  (0.053 ppm) | Attainment (Maintenance)  9/22/1998 |
| Sulfur Dioxide (SO2)6 | 1-Hour (75 ppb) | Designation Pending/ Pending | Attainment |
| 24-Hour (0.14 ppm)  Annual (0.03 ppm) | Unclassifiable/Attainment  3/19/1979 (attained) |
| Particulate Matter (PM10) | 24-Hour  (150 µg/m3) | Attainment (Maintenance)  7/26/2013 | Nonattainment |
| Particulate Matter (PM2.5) | 24-Hour  (35 µg/m3) | Nonattainment (Serious)  12/14/2014 | Nonattainment |
| 1997 Annual  (15.0 µg/m3) | Nonattainment  4/5/2015 |
| Annual  (12.0 µg/m3) | Nonattainment  12/31/2025 |
| Lead (Pb) | 3-Months Rolling  (0.15 µg/m3) | Nonattainment (Partial)7  12/31/2015 | Nonattainment |
| * 1. 1 Obtained from Final 2012 AQMP, SCAQMD, 2013 and SCAQMD, 2016. A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.   2. 2 Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.   3. 3 1-hour O3 standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.   4. 4 1997 8-hour O3 standard (0.08 ppm) was reduced (0.075 ppm) in 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.   5. 5 New NO2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO2 standard retained.   6. 6 The 1971 annual and 24-hour SO2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO2 1-hour standard. Area designations are expected in 2012, with Basin designated Unclassifiable/Attainment   7. 7 Partial Nonattainment designation – Los Angeles County portion of Basin only. | | | |

##### Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Air Basin provided in the Final 2016 AQMP, March 2017, indicate that, collectively, mobile sources account for 33 percent of the volatile organic compounds (VOC), 88 percent of the NOx emissions, and 35 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust. However, the mobile source regulations currently in place are anticipated to reduce the share of emissions currently produced by mobile sources; and, by 2031, mobile source emissions are anticipated to create 14 percent of VOC emissions, 30 percent of NOx emissions, and 23 percent of PM2.5 emissions with another 14 percent of PM2.5 from road dust.

The SCAQMD has divided the Air Basin into 38 air monitoring areas with a designated ambient air monitoring station representative of each area. The Project area is located in Air Monitoring Area 19, which covers most of Saddleback Valley. The nearest air monitoring station to the Project area is the Anaheim-Pampas Lane Monitoring Station (Anaheim Station), which is located approximately 11 miles northwest of the Project area at 1630 West Pampas Lane, Anaheim. Since historical concentrations of carbon monoxide were found to be well below State and federal limits throughout the Air Basin, SCAQMD discontinued monitoring of carbon monoxide levels on March 31, 2013. It should be noted that due to the air monitoring station’s distance from the Project area, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy local air quality conditions at the Project area. Table 2 presents the composite of gaseous pollutants of the ambient air quality monitored from 2014 through 2016.

Table : Ambient Air Quality Monitoring Summary

| **Air Pollutant1** | **2014** | **2015** | **2016** |
| --- | --- | --- | --- |
| **Ozone (O3)** | | | |
| Max 1 Hour (ppm)   Days > CAAQS (0.09 ppm) | **0.111**  **2** | **0.100**  **1** | **0.103**  **2** |
| Max 8 Hour (ppm)  Days > NAAQS (0.070 ppm1)  Days > CAAQS (0.070 ppm) | **0.082**  **6**  **6** | **0.081**  **1**  **1** | **0.075**  **4**  **4** |
| **Nitrogen Dioxide (NO2)** | | | |
| Max 1 Hour (ppb)  Days > NAAQS (100 ppb)  Days > CAAQS (180 ppb) | 75.8  0  0 | 59.1  0  0 | 64.3  0  0 |
| **Particulate Matter (PM10)** | | | |
| Max Daily California Measurement  Days > NAAQS (150 µg/m3)  Days > CAAQS (50 µg/m3)  State Average (20 µg/m3) | 85.0  0  **2**  26.7 | 59.0  0  **2**  25.3 | 74.0  0  ND  ND |
| **Particulate Matter (PM2.5)** 1 | | | |
| Max Daily National Measurement  Days > NAAQS (35 µg/m3)  National Average (12 µg/m3)  State Average (12 µg/m3) | 45.0  **4**  ND  16.1 | 45.8  **3**  ND  14.8 | 44.4  **1**  9.4  9.4 |
| Abbreviations:  > = exceed ppm = parts per million ppb = parts per billion µg/m3 = micrograms per cubic meter CAAQS = California Ambient Air Quality Standard NAAQS = National Ambient Air Quality  ND = Insufficient or No Data **Bold** = exceedance  1 Measurement taken from Anaheim Station  Source: <http://www.arb.ca.gov/adam/> | | | |

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| a) 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 conflict with or obstruct implementation of the applicable air quality plan? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project area, located within the Weir Canyon Nature Preserve in Orange County, falls under the Inland Orange County – Central Orange County district of the SCAQMD. The Project activities, which include the treatment and limited mechanized removal of beetle-infested trees within the site, would require one to two large diesel trucks with attached pressurized spray rigs to conduct insecticide spraying activities, and chainsaws, chippers, and haul trucks for mechanized tree removal. All the equipment would comply regulations set forth by the SCAQMD Rule Book and would not conflict with any applicable air quality plan (SCAQMD 2019). Less than significant impacts are expected.

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| b) 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 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project activities, involving the use of up to two diesel trucks with attached pressurized spray rigs, chainsaws, chippers, and haul trucks would be limited to temporary phases only during the implementation of the Project and intermittently thereafter for subsequent maintenance. The Project activities would not result in a cumulatively considerable net increase of any criteria pollutant in the area, compared to the standards set forth by the SCAQMD. Thus, less than significant impacts are expected.

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| --- | --- | --- | --- | --- |
| c) 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 expose sensitive receptors to substantial pollutant concentrations? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project site is located in an uninhabited area within the Weir Canyon Nature Preserve and is more than 700 ft away from any sensitive receptors, the nearest being in the residential neighborhoods of the adjacent Anaheim Hills. Additionally, the Project activities would generate limited amount of pollutants by the operation of the diesel trucks and equipment during the Project implementation phase lasting from March to June. Thus, sensitive receptors in the area would experience less than significant impacts.

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| --- | --- | --- | --- | --- |
| d) 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 result in other emissions (such as those leading to odors adversely affecting a substantial number of people? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** As noted above, the Proposed Project is located within a protected, forested area in Orange County and is not in the close vicinity of any sensitive receptors. Additionally, the pollutant concentrations and emissions, such as those leading to odors, related to the Proposed Project would be minimal and temporary. Thus, less than significant impacts are expected.

### Biological Resources

#### Existing Conditions

Out of 1,453 trees surveyed by the Irvine Ranch Conservancy, 324 trees were determined to be infested by GSOB. The proposed treatment areas are located within the OC Parks’ Weir Canyon Nature Preserve. The proposed treatment areas are characterized by vegetation communities including (but not limited to) coastal sage scrub, cactus scrub, chaparral, oak woodland, riparian, non-native and native grassland habitats.

On October 9, 2017, the Canyon 2 Fire broke out in the area around Gypsum Canyon Road near the 91 Freeway. The fire quickly spread and burned thousands of acres within the northern portion of the Irvine Ranch Natural Landmarks, including all of OC Parks’ Weir Canyon Nature Preserve. Weir Canyon Nature Preserve contains an abundance of rare habitats and wildlife, including one of the largest intact coast live oak woodlands in Orange County (Irvine Ranch Conservancy 2019). The fire destroyed or damaged almost all the vegetation growing in Weir Canyon. In addition, the fire has greatly reduced or completely destroyed (in some areas) the native annual plant seed bank in the soils. Fires sterilize soils (destroy the seed bank in the topsoil) in the more severely burned areas. Fires also create an ideal environment for germinating invasive weeds by creating an open area and canopies, alkaline soil, and nutrient-rich ash that soaks up and holds rainfall. These weeds tend to invade these open areas and outcompete native plant re-establishment; give rise to plentiful seed production and ultimately lead to an increase in direct competition with native species that tend to reclaim open spaces more slowly.

The OC Parks Conservancy staff, partners, and volunteers have been actively restoring the Weir Canyon Nature Preserve. However, the recovery process can take decades, and the habitat quality present today is lower quality than before the fire. This lower quality habitat decreases the potential for sensitive plant and wildlife to occur.

To further improve the health of the Canyon, the OC Parks Conservancy began an oak restoration project in Weir Canyon funded by CDFW, in partnership with the OCFA, to replace trees that have been removed due to beetle infestation and damaged in the 2017 fire. To date, nearly 1,200 sets of acorns have been planted that will one day become shady oaks (Irvine Ranch Conservancy 2019). Part of the restoration includes over three years of monitoring the pesticide and fungicide treatment of the invasive shot-hole borer and gold-spotted oak borer in Weir Canyon. The treatment has been performed in compliance with the Orange County Natural Community Conservation Planning (NCCP) and the OC Parks Land Management and Operations Plan. This includes implementation of their Operational Constraints and best management practices for biological resources.

#### Literature Review

The most recent records of the California Natural Diversity Database (CNDDB) managed by California Department of Fish and Wildlife (CDFW 2020), the United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) site (USFWS 2020), and the California Native Plant Society’s Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2020) were reviewed for the U.S. Geological Survey (USGS) 7.5-minute *Santiago Peak* quadrangle containing and surrounding (up to 3 miles) the Proposed Project site. These databases contain records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise sensitive species or habitats, and critical habitat that may occur within or in the immediate vicinity of the Proposed Project site. The literature review resulted in the following:

* Twenty-seven rare and listed plant
* Twenty-nine rare and sensitive wildlife species
* No critical habitat is located within or adjacent to the Weir Canyon polygons.

Of the remaining 27 species of rare plants, the following 11 species have been recorded within one-mile of the proposed treatment areas within the last 40 years:

* Brauton’s milk-vetch (*Astragalus brauntonii*) – federally threatened, CRPR 1B.1, CNDDB 2007
* California beardtongue (*Penstemon californicus*) – California Rare Plant Rank (CRPR) 1B.2, CNDDB 1981
* chaparral nolina (*Nolina cismontane*) – CRPR 1B.2, CNDDB 2003, 2008, 2014, 2017
* hear-leaved pitcher sage (*Lepechinia cardiophylla*) – CRPR 1B.2, CNDDB 2003, 2016
* intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) –CRPR 1B.2, CNDDB 2003, 2008, 2016
* intermediate monardella (*Monardella hypoleuca* ssp. *intermedia*) – CRPR 1B.3, CNDDB 2008
* long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) – CRPR 1B.2, CNDDB 2001
* many-stemmed Dudleya (*Dudleya multicaulis*) – CRPR 1B.2, CNDDB 1989, 1990, 1998, 2013,2014
* mesa horkelia (*Horkelia cuneata* var. *puberula*) – CRPR 1B.1, CNDDB 2008
* Robinson’s peppergrass (*Lepidium virginicum* var. *robinsonii*), CRPR 4.3, CNDDB 2008
* Tecate cypress (*Hesperocyparis forbesii*) – CRPR 1B.1, CNDDB 2010

One species, Braunton’s milk-vetch, is a federally threatened species. This species is a perennial herb that blooms between January to August. This species is found in recently burned areas of chaparral, coastal scrub, and grassland areas.

None of these species have been recorded in the CNDDB or the USFWS sensitive species database since the Canyon Fire 2. However, the CNDDB and USFWS are positive-sighting databases and may not indicate the presence of species since 2017. Suitable habitat for these species is found within and/or surrounding the proposed treatment areas. However, ground disturbance and/or removal of suitable habitat is not proposed.

Of the 29 rare and sensitive wildlife species, the following ten species have been recorded within one-mile of the proposed treatment areas in the last 40 years:

* coast horned lizard (*Phrynosoma blainvillii*) –SSC, CNDDB 1986, 1988, 1990, 1991
* coast patch-nosed snake (*Salvadora hexalepis virgultea*) – SSC, CNDDB 1991
* coast range newt (*Taricha torosa*) – SSC, CNDDB 1997, 1999
* coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) – SSC, CNDDB 1989, 2001
* coastal California gnatcatcher (*Polioptila californica californica*) – federally threatened, CNDDB 1988, 1998, 2001, 2003, 2004
* coastal whiptail (*Aspidoscelis tigris stejnegeri*) – SSC, CNDDB 1991
* orange-throated whiptail (*Aspidoscelis hyperythra*) – state watch list, CNDDB 1988, 1990, 1991
* red-diamond rattlesnake (*Crotalus ruber*) – SSC, CNDDB 1991
* western spadefoot toad (*Spea hammondii*) – SSC, CNDDB 1999, 2003, 2010
* white-tailed kite (*Elanus leucurus*) – state fully protected species, CNDDB 2008

The white-tailed kite is a state fully protected species and was recorded nesting within the proposed treatment area in 2008. The nest site was revisited in 2009 and was determined to be an inactive nest. This species may forage in the area but is not expected to nest.

The coastal California gnatcatcher is a federally threatened species and was recorded by the CNDDB and USFWS sensitive species databases in multiple areas within one-mile of the treatment. This species was not recorded within the proposed treatment areas; however, it is possible that this species could occur adjacent to the treatment areas within sage scrub habitats.

Suitable habitat for these species is found within and/or surrounding the proposed treatment areas. However, ground disturbance and/or removal of suitable habitat is not proposed. None of these species have been recorded in the CNDDB or the USFWS sensitive species database since the Canyon Fire 2. However, the CNDDB and USFWS are positive-sighting databases and may not indicate the presence of species since 2017.

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| a) Would the project have a substantial adverse effect, either directly or through habitat modification, on any species identified as 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project involves the spraying of insecticide, using up to two large diesel trucks with attached pressurized rigs, on beetle infested trees in the Weir Canyon area of the Irvine Ranch Open Space. All infested trees, within the proposed treatment area, are proposed to be treated with a barrier insecticide to prevent the spread of resident beetles to neighboring trees and re-infestation of current host trees. Contact insecticides kill adult beetles when ingested at emergence and also kill eggs laid on the bark surface. These sprays would not control larvae feeding in the tree but are effective at killing adult beetles as they directly contact the insecticide on the bark surface. It is moderately to very toxic to humans and nontoxic to wild bird species, but it is toxic to bees and beneficial insects and would not be applied to flowers when bees are active. Furthermore, carbaryl is toxic to aquatic and estuarine invertebrates and would not be applied to water or wetted areas. Habitat removal is not proposed, and ground disturbances are not anticipated for this Proposed Project. As a part of ongoing maintenance, limited mechanized removal of trees might be required, including felling, limbing, bucking, and chipping of infested trees. This would result in removal of dead and decaying vegetation from the site and thus would reduce further infestation and fuel for fire. Impacts to sensitive habitat such as coastal sage scrub, cactus scrub, chaparral, native and non-native grassland are not anticipated. Treatment of infested trees include oak trees, sycamores, and other infected trees (outside of water areas). Treatment will reduce tree mortality and fire risk, will improve the quality of oak woodland and riparian habitat and natural communities, and will benefit species that occur within those habitats.

The Irvine Ranch Conservancy has identified the following communities as biologically significant and subject to degradation/fragmentation: oak woodlands and oak-sycamore woodlands, Tecate cypress stands, native perennial grasslands, coastal sage scrub and cactus scrub, chaparral, riparian, and rock outcrop areas (for bats and raptors). Due to the mortality of large oaks and other hardwood trees within Weir Canyon, OC Parks has been treating Weir Canyon for the invasive shot-hole bore and gold spotted oak borer for over three years. The treatment has been performed in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan. Treatment would continue with their Operational Constraints and best management practices for biological resources. These include the following:

* A biologist familiar with the biological resources in the area will escort the crew and trucks to the tree location using the path of least resistance (where trees are not located on the edge of a road) so disturbance to native vegetation (i.e., trampling or brushing against shrubs) will be avoided and/or minimized.
* Before work may begin, the biologist will conduct a pre-activity survey to search for species that may be present, including using a firm yet blunt tined, plastic rake, to gently sift up any reptiles or amphibians that may be buried in the leaf litter, where appropriate.
* The pre-activity survey includes a search for rare plant species that will be avoided during treatment.
* The biologist will have the authority to stop work if any wildlife enters the work area, or if a sensitive species is observed.
* The biologist will remove/flush (for non-sensitive wildlife) or let wildlife move out of the work area on its own and once wildlife is a safe distance away, will allow work to resume.
* The biologist will escort the crew back out to the road.
* A daily log will be completed to document biological monitoring activities, protected species observations, any necessary corrective action, or any other relevant biological data.

In addition, if work activities are planned during the nesting bird season (February 15 to August 31), in order to remain in compliance with the Migratory Bird Treaty Act and section 10(a)(1)(A) of the Endangered Species Act, a pre-activity nesting bird survey will be conducted.

* The nesting bird survey will be conducted at each tree location and along access to the tree location, including a 100-foot buffer for passerines and a 200-foot buffer for raptors (if terrain safely allows), prior to work being conducted. In the event an active nest is observed by the biologist, work will not be allowed to occur within 50 feet for passerines, 100 feet for listed species, and 200 feet for raptors until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young are no longer expected to be impacted by the proposed Project treatment activities.

Carbaryl is non-toxic to plant species. No ground disturbance or removal of habitat other than parts of infected trees are proposed for this Project. As part of the operational constraints and best management practices, if a sensitive plant is identified, the biologist will flag for avoidance. Impacts to rare plants and associated habitat is not anticipated.

Amphibians such as the western spadefoot toad and coast range newt occur in water or wet areas in the spring. No water or wetted areas would be treated with carbaryl.

Reptiles and mammals may occur in the area. As part of the operational constraints and best management practices, the biologist will conduct a pre-activity survey to search for species that may be present, including using a firm yet blunt tined, plastic rake, to gently sift up any reptiles or amphibians that may be buried in the leaf litter, where appropriate. If wildlife is identified, the biologist will stop work until the animals are safely out of the area. Impacts to amphibians, reptiles, and mammals and the associated habitat is not anticipated.

Carbaryl is non-toxic to bird species. As part of the operational constraints and best management practices, nesting bird surveys will be conducted, and nesting birds and associated buffers will be avoided. This includes nests within or adjacent to infested trees. Impacts to avian species is not anticipated.

Carbaryl is toxic to bees and other insects. As part of the operational and constraints and best management practices, carbaryl will not be applied to flowers if bees are present and minimized in areas where insects are prevalent.

With the continued implementation of these parameters for operational constraints and best management practices, less than significant impacts are expected.

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| --- | --- | --- | --- | --- |
| b) Would the project have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact**. The proposed Project aims to prevent the spread of infested trees which would reduce tree mortality and fire risk, improve the quality of riparian habitat and natural communities, and benefit the species that occur within those habitats. The treatment of the invasive shot-hole borer and gold-spotted oak borer in Weir Canyon has been performed in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan for over three years. The parameters for operational constraints and best management practices regarding spill kits, refueling, clean-up, transporting, and disposal of hazardous materials would be implemented to avoid contaminating riparian habitat and sensitive natural communities. Therefore, less than significant impacts are anticipated.

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| c) Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project activities include spraying of insecticide on trees. In addition, felling, limbing, bucking and chipping of targeted infested trees and in some cases, stump grinding could occur during routine maintenance of the site for fuel reduction. The Proposed Project does not include habitat removal or grading activities and the infected trees identified for treatment do not occur within a wetland. In addition, as carbaryl is toxic to aquatic and estuarine invertebrates, it will not be applied to water or areas with wetted soil. As part of the operational constraints and best management practices (see Section 3.1.4 a), the biologist will be present to identify and avoid all state and federally protected wetlands; therefore, no impacts are anticipated.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact**. The Proposed Project involves the spraying of insecticide, using up to two large diesel trucks with attached pressurized rigs, on beetle infested trees in the Weir Canyon area of the Irvine Ranch Open Space. Carbaryl is toxic to aquatic and estuarine invertebrates and will not be applied to water or areas with wetted soil. The treatment of these invasive species will follow the parameters for the operational constraints and best management practices regarding pre-activity surveys to identify and avoid wildlife. In addition, the Proposed Project activities would result in improved habitat, not loss of habitat and therefore, would not have an impact on the movement of wildlife through the treatment areas.

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| --- | --- | --- | --- | --- |
| e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The treatment will be conducted in compliance with OC Parks Land Management and Operations Plan which has included three years of monitoring the pesticide and fungicide treatment of the invasive shot-hole borer and gold-spotted oak borer in Weir Canyon. The combination of fungicides and pesticides have been used to improve the effectiveness of the treatment.  The beetle produces a fungus in the tree (which infects and eventually kills the tree). Other practices that can be implemented include soil injection, trunk injection, and root protection. Root protection includes protecting the roots from 6 feet outside of the canopy to protect the tree (root protection zone): not parking vehicles, no stockpiling material, no changing soil grade, no contamination of soil, etc. within the protected root zone. Trunk injections can be implemented instead of application to the bark to increase absorption of the pesticide/fungicide into affected trees. Soil injections can be implemented instead of trunk injections for some tree species. Trunk injections can cause wounds in oak trees. Long cracks in the bark may appear as a wound response to injection of coast live oaks, potentially allowing infection by secondary pathogens. Soil injections offer the advantage of placing the insecticide under mulch or turf and directly into the root zone. This also can also help to prevent runoff on sloped surfaces. Injections would be made just deep enough to place the insecticide beneath the soil surface (2-4 inches). Soil injections would be made within 18 inches of the trunk where the density of fine roots and absorption rates are highest.

This treatment has been performed in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan. This includes implementation of their operational constraints and best management practices for biological resources. Treatment of infected trees will reduce infestation, reduce risk of fire, and improve the quality of habitat for biological resources; therefore, no impacts are anticipated.

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| --- | --- | --- | --- | --- |
| f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservancy Conservation Plan, or other approved local, regional, or state habitat conservation plan? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The treatment will be conducted in compliance with OC Parks ongoing treatment, over three years of monitoring, pesticide and fungicide treatment of the invasive shot-hole borer and gold-spotted oak borer in Weir Canyon. The treatment has been performed in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan. This includes implementation of their operational constraints and best management practices for biological resources. Therefore, no impacts are anticipated.

### Cultural Resources

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| --- | --- | --- | --- | --- |
| a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. The Proposed Project consists of insecticide application using one to two trucks with spraying rigs and ongoing tree maintenance activities. Although there is potential for subsurface historical resources to be located within the of the Proposed Project site, no ground disturbing activities that could impact these subsurface resources are associated with the Proposed Project. Trucks used for spraying activities and hauling would remain on established roadways, and chippers would remain on paved areas or previously disturbed areas that are not wet. Furthermore, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. No impacts to historical resources would occur.

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| --- | --- | --- | --- | --- |
| b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** There is potential for subsurface archeological resources to be located within the of the Proposed Project site, but, as mentioned above, no ground disturbing activities that could impact these subsurface resources are associated with the Proposed Project. Trucks used for spraying activities and hauling would remain on established roadways, and chippers would remain on paved areas or previously disturbed areas that are not wet. Additionally, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. No impacts to archeological resources would occur.

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| c) Would the project disturb any human remains, including those interred outside of formal cemeteries? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** Although the Proposed Project site does not contain a formal cemetery or any known burial grounds, there is a limited potential for subsurface human remains to be located within the of the Proposed Project site. As previously mentioned, no ground disturbing activities that could impact these subsurface resources are associated with the Proposed Project. Trucks used for spraying activities and hauling would remain on established roadways, and chippers would remain on paved areas or previously disturbed areas that are not wet. Additionally, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. Should human remains be uncovered during construction, as specified by State Health and Safety Code Section 7050.5, no further disturbance would occur until the County Coroner has made the necessary findings as to the origin and disposition pursuant to Public Resources Code 5097.98. No impacts would occur.

### Energy

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| a) Would the project a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project activities comprise of spraying of barrier insecticide over beetle-infested trees, based on their types, as assessed by an OCFA hand crew or a qualified contractor. Subsequent fuel reduction and maintenance activities might require limited mechanized removal of dead and decaying trees. The barrier insecticide would be applied using one or two large diesel trucks with attached pressurized spray rigs. As a part of the subsequent maintenance activities, tree contractors or the OCFA crew would fall, limb, buck and chip targeted trees and in some cases, stump grind. The equipment to be used for these activities are chainsaws, chippers and haul trucks to remove the waste materials. All the Project implementation activities would utilize energy-efficient equipment to minimize wasteful, and inefficient use of equipment and resources. Additionally, after the implementation, the Project would not add any commercial or other operations within the site that would affect the energy consumption in the area. Thus, impacts would be temporary and less than significant.

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| --- | --- | --- | --- | --- |
| b) Would the project Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** Even though renewable energy resources (solar, wind, biomass, geothermal) presently do not comprise a significant amount of the County’s energy supply, the Resources Element of the Orange County General Plan presents goals and objectives to maximize efficient energy usage, through reducing per capita energy consumption and to encourage alternative energy systems by removing regulatory barriers, to the extent possible (County of Orange 2013a). The implementation of the Proposed Project only involves treatment through spraying of barrier insecticide, and probable subsequent mechanized removal of infested vegetation and does not include any activities that would conflict with these plans, goals and objectives for renewable energy or energy efficiency. Additionally, there would be no commercial or other activities on site after the treatment and removal of the infested trees that would induce a change in the existing energy consumption in the area. Thus, no impacts are anticipated.

### Geology and Soils

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| a) i) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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. | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**i)** **Less Than Significant Impact.** The Proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest fault to the Proposed Project site is the Whittier Fault, a westward continuation of the longer Elsinore Fault which trends along the northeast side of the Santa Ana Mountains into Mexico and is more than 5 miles north of the site (County of Orange 2013b). Due to the proximity of active and potentially active faults in and around Orange County and its degree of urbanization, the risk of structural damage and loss of life due to ground shaking is considerable. The risk of secondary hazards, like landslides, liquefaction, slope failure is also great. However, the Proposed Project site is in an uninhabited area of Orange County and would avoid the possibility of ground disturbance resulting from the Project activities. Trucks associated with spraying activities and hauling would remain on established roadways within the site. Furthermore, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. This would ensure that the Proposed Project does not, directly or indirectly, cause the risk of loss, injury or death due to the rupture of a known earthquake fault fuel. Additionally, all Project related activities would conform to the specific mandated County requirements to protect against strong seismic shaking. Thus, the potential impacts due to rupture of a known earthquake fault are less than significant.

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| --- | --- | --- | --- | --- |
| a) ii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a)**  **ii)** **Less Than Significant Impact.** The Proposed Project site is not located within an earthquake zone but is in close proximity to the Whittier-Elsinore Fault (County of Orange 2013b). Due to its location in Southern California, and due to the presence of active and potentially active faults in and around Orange County, in the event of an earthquake, the possibility of strong seismic ground shaking is high. However, the Project site, within the Weir Canyon Nature Preserve, is in an uninhabited and forested area of Orange County, and thus, the risk of loss, injury or death due to ground shaking is less than significant.

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| a) iii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a)** **iii) Less Than Significant Impact.** The Proposed Project site, located in close proximity to the Whittier-Elsinore Fault, is partially within a Liquefaction Hazard zone (California Department of Conservation 2020a). However, as noted above, due to the nature of Project activities avoiding ground disturbance, and absence of human habitation, the risk of loss, injury or death from seismic-related liquefaction is less than significant.

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| a) iv) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a) iv)** **Less Than Significant Impact.** Landslides are the movement of rock, debris, and soils moving down a slope. The Proposed Project site is partially within a Landslide Hazard zone (California Department of Conservation 2020a). But, as noted in Impact 4.3.7 a iii, due to the uninhabited nature of the site and the Project activities ensuring no resultant ground disturbance, the impact from a potential seismic activity, involving landslides, would be less than significant.

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| b) Would the project result in substantial soil erosion or the loss of topsoil? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

b) **Less Than Significant Impact.** The Proposed Project activities involve the treatment of beetle-infested vegetation within the Weir Canyon Nature Preserve by spraying barrier insecticide, utilizing up to two large diesel trucks with attached pressurized rigs. As a part of subsequent fuel reduction and maintenance, limited mechanized removal of trees may be required; however, tree roots would not be removed, the felled trees would be hand carried rather than dragged, and tree material would be chipped in predetermined locations area to avoid ground disturbance. The trucks associated with spraying activities and hauling would remain on established roadways. Thus, the Proposed Project activities would not result in substantial soil erosion or loss of topsoil; it would result in less than significant impacts.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** As noted above, the Proposed Project is located in an area that is designated as a Liquefaction and Landslide Hazard Zones by the California Department of Conservation. The Project activities, as mentioned in previous sections, would avoid ground disturbance and would not have any impact that might result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse of the soil in the area. Additionally, the subsequent fuel reduction activities involving limited mechanized tree removal, would follow specifically mandated protocols to ensure that the soil disturbance is controlled and kept to a minimum, thus not resulting in any landslide. Thus, any impact would be less than significant.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** Expansive soils are most often clay based soils and are defined by the way they expand when water is introduced and shrink when they dry out. The Proposed Project activities which include insecticide spraying of beetle infested trees and ongoing maintenance activities, would be small-scale, intermittent throughout the Proposed Project site, and would avoid ground disturbance. Further, the Proposed Project site is located in a forested, uninhabited area; it would not involve the construction of structures or buildings. Direct or indirect risk to life or property due to expansive soils would be less than significant. Thus, no impact to life or property due to the implementation of the project is not expected.

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| e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project includes the application of insecticides and subsequent maintenance of the area for fuel reduction, and the Project site does not include any structures. Currently, the Project site is a part of the protected Irvine Ranch Open Space, and it is intended to retain its existing open space character after the implementation of the Project. The Project activities would not result in the need of additional septic tanks or alternative waste water disposal systems, as compared to existing conditions. Thus, the presence of soil incapable of supporting the use of septic tanks and alternative waste water systems is not significant in this case. No impacts are anticipated.

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| --- | --- | --- | --- | --- |
| f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Department of Conservation’s Geologic Map of California shows that the Proposed Project site is underlain by an assortment of geologic units, of various ages. The oldest deposits are marine sedimentary rocks from the Eocene epoch and the youngest deposits are marine sedimentary rocks from the Miocene epoch (Department of Conservation 2010). Many of the lithological units underlying the Proposed Project site are paleontologically sensitive.

In general, the potential for a given project to result in adverse impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the Project. The Proposed Project entails insecticide application using one to two trucks with spraying rigs and ongoing tree maintenance activities. Trucks associated with spraying activities and hauling of tree material would remain on established roadways. Furthermore, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. No ground disturbance would occur as a result of the Proposed Project. Therefore, there is no potential for subsurface paleontological resources in previously undisturbed sediments to be encountered. No impact would occur.

### Greenhouse Gas Emissions

This section qualitatively describes the potential global climate change effects from implementation of the Proposed Project.

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| --- | --- | --- | --- | --- |
| a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** The Proposed Project activities will include use of one to two diesel trucks with attached pressurized spray rigs for the invasive species treatment. Subsequent fuel reduction measures may require the use of chainsaws, chippers, and haul trucks. Emissions of GHGs would occur during equipment operation through the burning of gas & diesel fuel in internal combustion engines. The operation of the vehicles and the equipment would meet the State and Federal regulations and due to the very temporary and limited use, would not generate significant greenhouse gas emissions. After application of the insecticide, maintenance of fuel within the Project site would be limited and similar to existing maintenance efforts in the Project area and throughout the County. Less than significant impacts are anticipated.

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| b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted above, the GHG emissions from the operation of the vehicles and equipment associated with the Project activities would be compliant with applicable State and Federal standards and would not conflict with any existing plans, policy or regulations adopted to reduce GHG emissions. Thus, no impacts are expected.

### Hazards and Hazardous Materials

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| --- | --- | --- | --- | --- |
| a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant.** The initial Project activities would be limited to barrier insecticide spraying which would only include up to two large, diesel trucks with attached pressurized spraying rigs. Thereafter, as a part of the subsequent fuel reduction activities through limited mechanized tree removal, crews would be working with chainsaws and chippers to remove and chip woody material. The insecticide products used must be applied by a registered pesticide applicator (Qualified Applicator Certificate or License) licensed for Forestry (Category E). IRC staff as well as qualified contractors have a Category E certification and the associated Operator IDs with the County Agricultural Commissioner to apply restricted chemicals. All insecticide applications would strictly follow label and label supplement specifications, and all insecticide use should be reported to the landowner and the Orange County Agricultural Commissioner at the end of each application month. Carbaryl, a restricted chemical, should be reported to the Orange County Agricultural Commissioner in advance of treatment. All crew members shall be supervised and would wear the proper personal protective equipment (PPE). Refueling of the heavy equipment and chainsaws would be conducted with attention to refueling protocols so that there is no potential to contaminate soil or a watercourse. Appropriate fueling protocols would be followed including use of only approved containers for transporting fuel to the Project site. With the implementation of these best management practices, less than significant impacts resulting from routine transport, use or disposal of hazardous materials, is anticipated.

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project activities include OCFA crews or contractors spraying barrier insecticides on beetle-infested vegetation. Thereafter, subsequent ongoing fuel reduction efforts through limited mechanized removal of trees may also occur. All insecticide application would strictly follow label and label supplement specifications and would be handled by registered professionals. All crew members shall be supervised at all times and would wear the proper PPE. Additionally, appropriate refueling procedures would be followed for all equipment, including use of only approved containers for transporting fuel to the equipment, dispensing fuel at least 10 feet away from any sources of ignition when performing construction activities, no smoking during fueling, use a funnel or a flexible hose when pouring fuel into the equipment, and never attempting to fuel running equipment or equipment dispensing fuel at least 10 feet away from any sources of ignition when performing construction activities. This would ensure that the Proposed Project maintains relevant safety protocols and thus, less than significant impacts are expected.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site is located in an uninhabited rural area of the Irvine Ranch Open Space, within the Weir Canyon Nature Preserve. The nearest school the Anaheim Hills Elementary School, which is approximately 1.7 miles away from the site (Google Earth 2020). Thus, no impacts are anticipated.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** A review of federal and state standard and supplemental databases indicated that the Proposed Project site is not located within any identified hazardous material site pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or environment (Department of Toxic Substances Control 2020). No impacts are anticipated.

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| e) For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site is not located within an airport land use plan (Airport land Use Commission 2005). The nearest airport to the site is the Corona Municipal Airport which is approximately 8.7 miles to the northeast of the site. Additionally, the Project site is uninhabited and part of a nature reserve. Thus, no impacts are expected.

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| f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The activities related to the Proposed Project would involve insecticide spraying utilizing one or two large, diesel trucks with attached pressurized spray rigs. Subsequent maintenance activities could occur through limited mechanized removal of infested trees with chainsaws, chippers and haul trucks. The implementation of the Project would not block or restrict any access routes. While the Proposed Project may cause temporary delays to traffic during initial activities and ongoing maintenance involving diesel trucks and haul trucks entering and exiting the site, these incidents are temporary and limited to pre-determined hours. Additionally, as a result of removal of the dead, dying and decaying trees, the trails and existing environment of the site and its surroundings would be cleared of obstructions, if any. The Proposed Project would also comply with the County’s Public Safety goals and objectives delineated in the County of Orange General Plan. (County of Orange 2013b). The Proposed Project would not interfere with emergency response plans or operations near the Proposed Project site. Less than significant impacts are expected.

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| --- | --- | --- | --- | --- |
| g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site lies within a ‘Very High Fire Hazard Severity Zone (VHFHSZ)’ defined by CalFire (CalFire 2007). However, the Project aims to remove infested trees, of various diameters, from the Weir Canyon Nature Preserve area to reduce the risks associated with wildfire and creating a fire safe environment in and around the site. Additionally, all Project related activities would be conducted in compliance with standard safety protocols, which would minimize potential release of flammable materials, including fuel, from any sources of ignition. Thus, no impacts are expected.

### Hydrology and Water Quality

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| --- | --- | --- | --- | --- |
| a) Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The Proposed Project site is partially located within the boundaries of the Orange County Groundwater Basin, as managed by the Orange County Water District (OCWD) (County or Orange 2013a). The OCWD and the Municipal Water District of Orange County are both concerned with the quality of imported water. Water quality monitoring is performed by several agencies including the State Water Resources Control Board, the Regional Water Control Board - Santa Ana Region, the Department of Health Services, and Orange County.

To help minimize both environmental and personal risk, the Proposed Project would implement the following BMPs: insecticide products used during the initial spraying activities must be applied by a registered pesticide applicator (Qualified Applicator Certificate or License) licensed for Forestry (Category E). IRC staff as well as qualified contractors have a Category E certification and the associated Operator IDs with the County Agricultural Commissioner to apply restricted chemicals. All insecticide applications should strictly follow label and label supplement specifications, and all insecticide use should be reported to the landowner and the Orange County Agricultural Commissioner at the end of each application month. Carbaryl, a restricted chemical, should be reported to the Orange County Agricultural Commissioner in advance of treatment. Additionally, to reduce the risk of water transport, the insecticides would not be applied prior to forecasted rain events. Watering of the Project site for dust control would be conducted in advance of application of insecticides, and watering for dust control would not be conducted immediately following insecticide applications. Thus, less than significant impacts are expected.

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| b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted above, the Proposed Project site is partially located within the boundaries of the Orange County Groundwater Basin, as managed by the Orange County Water District (OCWD) (County or Orange 2013a). However, the Proposed Project does not involve the ground excavation, drilling, addition of any impervious surfaces in the area or any physical change in the site and surroundings that might impact the groundwater recharge or supplies. No impacts are expected.

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| c) i) 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 result in substantial erosion or siltation on- or off-site? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **i) No Impact.** The Proposed Project activities include spraying of barrier insecticide on beetle-infested trees. In addition, felling, limbing, bucking and chipping of targeted infested trees and in some cases, stump grinding could occur during subsequent routine maintenance of the site for fuel reduction. No impervious surfaces would be added to the site and its surroundings as a result of the implementation of the Project. Additionally, the trees would be cut along roadways and open spaces and would not interfere or result in alteration of the course of a stream or river. Thus, no impacts are anticipated.

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| --- | --- | --- | --- | --- |
| c) ii) 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **ii) No Impact.** As noted above, the Proposed Project activities would not interfere with the existing drainage pattern of the site, either through alteration of the course of streams or rivers or by addition of impervious surfaces. The existing surface runoff conditions would remain the same after the implementation of the Project and through the ongoing maintenance efforts. Thus, no impacts are expected.

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| --- | --- | --- | --- | --- |
| c) iii) 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 create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **iii) Less than Significant Impact.** The Proposed Project would not result in runoff that would exceed the existing or planned capacities of stormwater drainage systems in the area. As noted above, the Project activities would not result in an addition of impervious surfaces in the area, which would create or contribute to additional surface runoff, compared to existing conditions.Additionally, the OCFA crew and contractors would implement BMPs to reduce the risk of polluted runoff or water contamination by the insecticides, including: the insecticides would not be applied prior to forecast rain events. Watering of the Project site for dust control would be conducted in advance of application of insecticides, and watering for dust control would not be conducted immediately following insecticide applications. Thus, less than significant impacts to the existing drainage pattern of the site is expected.

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| --- | --- | --- | --- | --- |
| c) iv) 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 impede or redirect flood flows? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **iv) No Impact.** According to the Resources Element of the County of Orange General Plan, historical records show flooding over substantial portions of low-lying Western Orange County near the Santa Ana River. Following the construction of Prado Dam in 1941, destructive floods with loss of life and severe damage, have been prevented. In spite of numerous improvements to the Santa Ana River Channel and a network of flood control facilities, the floodplain of the Santa Ana River remains the same and can expect to be subject to a standard project flood (statistically occurring approximately every 200 years) that would flood the cities sited on the floodplain (County of Orange 2013a). However, the Proposed Project site lies within an ‘Area of Minimal Flood Hazard’(FEMA 2020). Additionally, there are no proposed activities that would alter the existing topography that would impede or redirect flood flows. The incorporation of project BMPs would prevent polluted runoff and result in no impacts.

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| d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project is located inland and is not within the ocean, river, or stream. As noted above, the Proposed Project is located in an Area of Minimal Flood Hazard’. Additionally, with the implementation of the BMPs described in impact 3.1.10 a, the Project activities would not result in the risk of release of pollutants due to inundation. No Impact would occur.

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| e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impacts.** The Orange County Water District (OCWD) is responsible for the management of the Orange County Groundwater Basin, of which the Proposed Project site is a part of (County of Orange 2013a). Additionally, the County also has several goals, objectives and plans focusing on water quality of the region as delineated in the Resource Element of the General Plan. Water quality monitoring in the area is performed by several agencies including the State Water Resources Control Board, the Regional Water Control Board - Santa Ana Region, the Department of Health Services, and Orange County. However, the Proposed Project would not involve the modification of any water systems within the area. The Proposed Project does not include any construction or operational activities that would require changes to the projects and policies identified in these water quality management plans. Thus, no impacts are anticipated.

### Land Use Planning

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| a) Would the project physically divide an established community? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project site is located in the Weir Canyon Nature Preserve in the greater Irvine Ranch Open Space in Orange County, CA. The Weir Canyon area is a nature reserve and does not include any established community or residential neighborhood within its boundaries. Thus, the Project would not physically divide any established community, and no impacts are anticipated.

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impacts.** The Proposed Project activities mostly involve spraying of insecticide to prevent the spread of invasive species; the Project maintenance would also include removal of dead and decaying vegetation in the Weir Canyon Nature Preserve. The Proposed Project would not result in any physical change in the existing character of the site and its surroundings. The Proposed Project is consistent with the current land use of Open Space and General Agricultural (A1) Zoning designation and would cause no conflict with or impact to any existing plan, policy or regulation (County of Orange 2015, 2016).

### Mineral Resources

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impacts.** The Proposed Project site is identified as being within the MRZ-3 mineral resource zone in the California Department of Conservation’s Mineral Land Classification Map (California Department of Conservation, 2020b). MRZ-3 zones are areas containing mineral deposits (aggregate), the significance of which cannot be evaluated from available data. Additionally, the Resource Element of the County of Orange General Plan identifies portions of the Santa Ana River, Santiago Creek, San Juan Creek, Arroyo Weir as mineral resource areas (County of Orange 2013a). Thus, no known mineral resource of value is anticipated in the area. No impact would occur.

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project is only limited to the Weir Canyon Nature Preserve area and would not result in loss of availability of a known or locally important resource. As noted above, only portions of the Santa Ana River, Santiago Creek, San Juan Creek, Arroyo Weir has been identified as mineral resource areas (County of Orange 2013a). In addition, no mineral resource extraction would occur as part of the Proposed Project. No impact would occur.

### Noise

#### Environmental Setting

The Proposed Project site is located in the Weir Canyon Nature Preserve area within the greater Irvine Ranch Open Space, in Orange County, California. The site, a part of the protected nature reserve, is zoned as General Agricultural zoning district (A1) and is uninhabited. However, the site is in vicinity of a residential neighborhood along the southeastern boundary of Anaheim Hills.

The County of Orange General Plan – Noise Element establishes the following applicable policies related to the Project:

* Policy 4.3: To develop and enforce standards in addition to those presently included in the Noise Ordinance to regulate noise from construction and maintenance activities and commercial public and industrial 1 land uses.
* Policy 4.4: To consider noise reduction as a factor in the purchase of County maintenance equipment and the use of such equipment by County contractors and permittees.

The County of Orange Noise Ordinance, Section. 4-6-7. - Special provisions provides the following policies applicable to the Project (County of Orange 2020):

* (g) Mobile noise sources associated with agricultural operations, provided such operations do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or any time on Sunday or a Federal holiday.
* (h) Mobile noise sources associated with agricultural pest control through insecticide application, provided that the application is made in accordance with restricted material permits issued by or regulations enforced by the Agricultural commissioner.

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| --- | --- | --- | --- | --- |
| a) Would the project result in 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

#### Impact Analysis

1. **Construction-Related Noise**

**Less Than Significant Impact.** The Proposed Project would involve removal of infested trees in the Weir Canyon Nature Preserve through the spraying of barrier insecticide. The equipment to carry out the said activity would include up to two large diesel trucks with attached pressurized spraying rigs. Additionally, as a part of ongoing mechanized removal of infested vegetation, the OCFA crew and contractors would fall, limb, buck and chip targeted trees and in some cases, stump grind with chainsaws, chippers, and haul trucks. However, these activities would only be temporary, restricted to the implementation phase of the Proposed Project and would adhere to the County of Orange Noise Ordinance regulations, by limiting activities between the hours of 8:00 AM and 4:00 PM all days, excluding Sunday or a Federal holiday (County of Orange 2020). Thus, the impacts would be less than significant.

**Operation-Related Noise**

As a part of the routine maintenance of the site for fuel reduction, felling, limbing, bucking and chipping of targeted infested trees and in some cases, stump grinding could occur. This would include the use of chainsaws, chippers, and haul trucks. However, these activities would be intermittently planned and temporary, and hence the noise generated would be less than significant. The Project also does not include the construction of any commercial or otherwise facilities on the site or result in any change in the current use of the site, that might result in generate ambient noise in the area. Thus, less than significant impacts are anticipated.

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| --- | --- | --- | --- | --- |
| b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impacts.** The Proposed Project activities, as noted above, include the use of up to two large, diesel trucks with attached pressurized spray rigs, chainsaws, chippers, and haul trucks. The Project would not generate groundborne vibration or noise levels that would be considered excessive. The removal of vegetation within the Project site would not require pile driving, blasting, drilling, or additional processes that would contribute to groundborne vibration or groundborne noise levels. In addition, the nearest offsite residential uses are over 700 feet from the Project site. Therefore, no impact would occur.

### Population and Housing

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| --- | --- | --- | --- | --- |
| a) Would the project induce substantial unplanned 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)? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project involves the treatment and limited mechanized removal of infested trees in the Weir Canyon Nature Preserve in Orange County, CA through insecticide spraying, felling, limbing, bucking, and chipping of dead, dying and decaying trees. Post-removal, the Project site would not result in the addition of any new homes or businesses or any other physical changes in its built environment or its infrastructure. Thus, the Project would not induce any unplanned growth, either directly or indirectly. No impacts are anticipated.

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| --- | --- | --- | --- | --- |
| b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted in Section 3.1.11, the Project Site is part of the Weir Canyon Nature Preserve and does not include any housing community within its boundaries. Additionally, the Proposed Project, through treatment of invasive species and removal of infested trees, aims to minimize the risk of wildfires in the area, and in turn, minimizing the risk to loss of life and property in the surrounding neighborhoods. The Proposed Project would not displace any existing people or housing in the site and its surrounding areas. No impacts are anticipated.

### Public Services

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| --- | --- | --- | --- | --- |
| a) i) 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 fire protection? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **i)**  **No Impact.** The Proposed Project aims to create a fire safe environment and reduce the risk of wildfire in the Weir Canyon Nature Preserve area of Orange County by treating and removing infested trees from the area. Additionally, the Project does not include the addition of any commercial or residential uses within the site area. The Project would not increase the demand for fire protection, and no impacts would occur.

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| --- | --- | --- | --- | --- |
| a) ii) 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 police protection? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

* 1. **ii)** **No Impact.** As noted above, the Proposed Project activities only involve spraying of insecticide on infested vegetation and routine maintenance efforts through limited mechanized removal of dead, dying and decaying trees in the Weir Canyon Nature Preserve area. Project activities would not increase the demand for police protection. No impacts are expected.

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| a) iii) 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 schools? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a) iii) No Impact.** The Proposed Project does not involve the addition of any commercial or residential uses within the site and its surroundings in the Weir Canyon Nature Preserve. It would not induce growth, requiring the extension of existing school services or creation of new school facilities. No impacts are anticipated.

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| --- | --- | --- | --- | --- |
| a) iv) 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 parks? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a) iv) No Impact.** As noted above, the Proposed Project only involves treatment through spraying of barrier insecticide and subsequent limited mechanized removal of infested trees in the Weir Canyon Nature Preserve and thus would not increase the demand for parks in the area. No impacts are expected.

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| --- | --- | --- | --- | --- |
| a) v) 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 other public facilities? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a) v) No Impact.** The Project activities mostly consists of spraying of barrier insecticide on beetle-infested vegetation to prevent spread of invasive species. Subsequent routine maintenance efforts may include limited mechanized removal of dead, dying and decaying vegetation in the Weir Canyon Nature Preserve in Orange County, CA. It would not induce growth or add any commercial or residential uses within the site and its vicinity. Thus, the Project is not anticipated to increase the demand for any existing public facilities. No impacts would occur.

### Recreation

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| --- | --- | --- | --- | --- |
| a) 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project consists of insecticide spraying on infested vegetation, as well as ongoing fuel maintenance activities that may involve felling, limbing, bucking, and chipping of infested trees in the Weir Canyon Nature Preserve in Orange County, CA. The removal of the dead, dying and deceased trees would improve the existing visual character of the area, but it is not anticipated that the clearing up would result in substantial increase of use of the park or any other neighborhood recreational facilities. No impacts are anticipated.

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| --- | --- | --- | --- | --- |
| b) 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impacts.** As noted above, the Proposed Project only involves the treatment and removal of the infested trees but does not include any construction or expansion of the existing recreational facilities. Thus, no impacts are expected.

Transportation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project is located in parts of the Weir Canyon Nature Preserve, within the greater Irvine Ranch Open Space in Orange County, CA. The area is within a protected natural environment and consists of parts of only one existing hiking and riding trail, according to the Major Hiking and Riding Trails and Off-Road Paved Bikeways Map by OC Parks (OC Parks 2014). The County of Orange General Plan – Transportation Element also further aims to expand and support the Bikeways Plan to encourage alternative transportation within the County. The following policies from the Transportation Element are applicable to the Bikeways Plan and may be relevant to the Proposed Project:

* Policy 1.5: Recreation - Plan bicycle routes to facilitate access to recreational areas such as regional parks, beach areas, and major tourist commercial/recreational facilities.
* Policy 1.7: Incorporate pedestrian, equestrian, and bicycle trails into the right-of-way of scenic highways as designated by the County's Bikeways Plan and the Master Plan of Regional Riding and Hiking Trails.

The Proposed Project activities, though limited along the trails and open spaces within the park, would help clear dead, dying and decaying vegetation from the area. This would be beneficial to increase visibility along trails and should result in safer ingress and egress for trail users, and the construction diesel trucks utilized during implementation of the Project. The Project would not conflict with any existing circulation system or plans, and no impact is expected.

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| --- | --- | --- | --- | --- |
| b) Would the project Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** The Proposed Project activities do not involve any land use or zoning designation revisions. The Project also does not include a transportation element that would have a significant effect on the vehicle miles travelled (VMT) in the Project area. During the initial Project activities, up to two large diesel trucks with attached pressurized rigs would be employed to spray insecticide on the infested vegetation. The VMT impacts of the equipment would be temporary and only limited during the Project implementation phase, operating Monday through Saturday between the hours of 8:00 AM and 4:00 PM in March, and June. Thus, less than significant impacts are expected.

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| --- | --- | --- | --- | --- |
| 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)? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project activities are only limited to insecticide spraying, felling, limbing, bucking and chipping of targeted infested trees and in some cases, stump grinding in the Weir Canyon Nature Preserve in Orange County, CA. The Project does not consist of any changes to any existing physical design feature or uses within the area. Additionally, due to the removal of the infested vegetation, the Project would help improve visibility and access within the site. Thus, no impacts would occur.

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| --- | --- | --- | --- | --- |
| d) Would the project result in inadequate emergency access? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted above, the Proposed Project, by treatment and limited mechanized removal of dead, dying and decaying vegetation from the Weir Canyon Nature Preserve area, would help increase visibility along trails and should result in safer ingress and egress for trail users. The Project does not consist of any activities that would result in any hindrance to emergency routes in the area, either during implementation phase or thereafter. Thus, no impacts are anticipated.

### Tribal Cultural Resources

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| --- | --- | --- | --- | --- |
| 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 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)? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |
| b) 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 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

**a and b)** As mentioned in the previous sections, the Project activities, including the insecticide treatment, fuels reduction and subsequent maintenance would avoid ground disturbance to the site. The bucked wood would be hand carried to chippers, thus avoiding the possibility of ground disturbance by haul trucks. The chippers would be parked on pavements and only used off-pavement on previously disturbed ground that is not wet. Additionally, it has been confirmed with the manufacturers that the pesticides used during the Project activities would be narrowly targeted to the infested vegetation and would not have any impacts to collateral traditional use plants or plant species of importance to the tribes. Thus, it is unlikely that any tribal cultural resources would be discovered and/or disturbed as a result of the Proposed Project.

Additionally, pursuant to PRC Section 21080.3.1 (AB 52), California Native American tribes traditionally and culturally affiliated with a project area can request notification of projects in their traditional cultural territory. However, PRC Section 21080.3.1(b) further states that consultation shall occur prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. As documented throughout this Initial Study, the Proposed Project would not result in any significant impacts to any resource areas. Moreover, the Proposed Project qualifies for the use of a Categorical Exemption under Class 4, 7, and 8. Therefore, because the Proposed Project does not require the preparation of a negative declaration, mitigated negative declaration, or environmental impact report, it is not subject to the consultation requirements of AB 52. Consequently, no impacts on tribal cultural resources would occur.

### Utilities and Service Systems

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| --- | --- | --- | --- | --- |
| a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or expansion of which could cause significant environmental effects? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project aims to prevent the spread of invasive species, as well as treat and remove the dead, dying and decaying trees of various diameters in the Weir Canyon Nature Preserve through insecticide spraying, felling, limbing, bucking, and chipping. The Project does not involve any construction of new facilities, and thus would not require the relocation or construction of any water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. Further, during construction, the OCFA crew or contractor would utilize the existing electrical lines in the area for the consumption of the construction equipment. Thus, no impacts are expected.

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** As noted in previous sections, the Proposed Project only involves the treatment and subsequent limited mechanized removal of infested trees in the Project site; it does not include any new construction or change in the built environment. Thus, there would be no additional demand for water supply, as compared to present conditions, in the site and its surroundings, after the completion of the Project or in the reasonably foreseeable future. No impacts are anticipated.

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| --- | --- | --- | --- | --- |
| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project activities are only limited to treatment and limited mechanized removal of infested vegetation and do not include the addition of any new uses or expansion of existing uses in the site. The Project would also not induce any growth requiring additional wastewater treatment services. Thus, no impacts are expected.

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| 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project involve spraying of insecticide on beetle-infested trees, and following maintenance including limited mechanized removal of infested trees. The Project activities would generate minimal solid waste in the form of the insecticide product containers which would be strictly handled according to label and label supplement specifications. Any solid waste generated in the form of parts of the trees would be minimal and disposed to green waste facilities. No impacts would occur.

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| --- | --- | --- | --- | --- |
| e) Would the project negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** As noted in the previous section, the Project would have no significant effect on the existing solid waste service system. Thus, less than significant impacts are anticipated due to the implementation of the Project.

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| --- | --- | --- | --- | --- |
| f) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **No Impact.** The Proposed Project activities, at all times, would strictly follow label and label supplement specifications during application and disposal of insecticides. The minimal tree waste generated during the ongoing maintenance, would also be disposed of at a green waste facility, according to relevant protocols. No impacts would occur.

### Wildfire

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| --- | --- | --- | --- | --- |
| a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones would the project impair an adopted emergency response plan or emergency evacuation plan? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

* 1. **No Impact.** The Proposed Project, as noted in Impact 3.1.9, is located within a ‘Very High Fire Hazard Severity’ zone defined by CalFire (CalFire 2007). However, the Project activities do not include any physical changes in the site or its surroundings that might cause a hindrance to or impair the emergency response plans and emergency evacuation plans, adopted under the County of Orange General Plan - Safety Element. No impact is anticipated.

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| --- | --- | --- | --- | --- |
| b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

* 1. **No Impact.** The Proposed Project activities aim to reduce the risks associated wildfires by treating and removing dead, dying and decaying vegetation from the Weir Canyon Nature Preserve in Orange County, CA. Thus, in spite of its location within a ‘Very High Fire Hazard Severity’ zone, the Project activities would be beneficial in reducing wildfire risks and uncontrolled spread of a wildfire in the area. No impacts are expected.

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| --- | --- | --- | --- | --- |
| c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

* 1. **No Impact.** The Proposed Project activities include the treatment and limited mechanized removal of beetle-infested trees and does not involve the installation or maintenance of infrastructure such as roads, fuel breaks, emergency water sources, power lines, etc. that might exacerbate fire risk in the site and its surroundings. No impacts would occur.

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| --- | --- | --- | --- | --- |
| d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less Than Significant Impact.** Although the Proposed Project site is located in sloping, uneven terrain within the Weir County Nature Reserve, which is designated as a landslide prone area by the California Department of Conservation, the Project activities aim to reduce the wild fire risks in the area by removal of fire-prone infested vegetation. Thus, due to reduced risks of wildfire, the risks associated with flooding or landslide as a result of post-fire instability or drainage changes would also be less than significant.

### Mandatory Findings of Significance

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| --- | --- | --- | --- | --- |
| a) Does the project have the potential to substantially 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, substantially 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? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

* 1. **Less than Significant Impact.** A review of records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise sensitive species or habitats, and critical habitat that may occur within or in the immediate vicinity of the Proposed Project site, revealed the presence of twenty-seven rare and listed plant, twenty-nine rare and sensitive wildlife species but no critical habitat within or adjacent to the Weir Canyon polygons.

The Proposed Project activities involve the spraying of insecticide, using up to two large diesel trucks with attached pressurized rigs, on beetle infested trees to prevent the spread of resident beetles to neighboring trees and re-infestation of current host trees. As a part of ongoing maintenance, limited mechanized removal of trees might be required, including felling, limbing, bucking, and chipping of infested trees.

Impacts to sensitive habitat, as revealed from the records review, such as coastal sage scrub, cactus scrub, chaparral, native and non-native grassland, are not anticipated. Treatment of infested trees include oak trees, sycamores, and other infected trees (outside of water areas) which will reduce tree mortality and fire risk, will improve the quality of oak woodland and riparian habitat and natural communities, and will benefit species that occur within those habitats. The treatment would be in compliance with the relevant Operational Constraints and would also employ best management practices for biological resources, including a pre-activity survey, ceasing work in case any wildlife or sensitive species is observed in the work area, maintaining a daily log to document biological monitoring activities etc. In addition, if work activities are planned during the nesting bird season (February 15 to August 31), in order to remain in compliance with the Migratory Bird Treaty Act and section 10(a)(1)(A) of the Endangered Species Act, a pre-activity nesting bird survey will be conducted.

As a part of the treatment, a restricted chemical, Carbaryl would be used. Carbaryl is non-toxic to plant species. However, With the continued implementation of these parameters for operational constraints and best management practices, no impacts are anticipated due to the application of Carbaryl. The applicable best management practices would include flagging any identified sensitive plants for avoidance, avoiding treating any water or wetted areas with carbaryl to prevent impacts to amphibians, conducting nesting bird surveys and maintaining nesting bird buffers, avoiding application of the chemical to flowers if bees are present, and minimized in areas where insects are prevalent.

Although there is potential for subsurface historical and archeological resources to be located within the Proposed Project site, no ground disturbing activities that could impact these subsurface resources are associated with the Proposed Project. Trucks used for spraying activities and hauling would remain on established roadways, and chippers would remain on paved areas or previously disturbed areas that are not wet. Furthermore, tree roots would not be removed during tree removal activities, felled trees would be hand carried rather than dragged, and tree material would be chipped in an area that will not cause ground disturbance. No impacts to historical resources would occur.

Thus, the Proposed Project does not pose any threat to degrade the quality of the environment. Any impact to any cultural resources or biological resources and its habitat; rare plants, rare and sensitive wildlife species, would be less than significant.

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| --- | --- | --- | --- | --- |
| 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?) | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The potential for cumulative impacts occurs when the independent impacts of the Proposed Project are combined with the impact of related projects in proximity to the Project such that impacts occur that are greater than the impacts of the Project alone. As discussed above, it has been determined that the Project would have no impact, or impacts would be less than significant, with respect to the environmental issues. Where the Project would have no impact or a less than significant impact, it would not contribute to cumulative impacts. The Project is only for maintenance activities and not growth-inducing; thus, it would not contribute to the cumulative effects of population growth.

Noise from the Project related activities would be minor, temporary and localized in an uninhabited portion of the Weir Canyon Nature Preserve, thus not impacting the areas surrounding the site. Thus, the Project activities are not expected to result in a perceivable cumulative increase in ambient noise levels. As a result, the Project’s construction noise levels would not be considered cumulatively considerable. With regard to operational noise, the Project will not create operational noise and thus would not be cumulatively considerable with regard to operational noise impacts. Vehicle trips from activities of the Project are expected to be localized and, thus, would impact only the roads immediately along the Project route. Thus, cumulative impacts will be less than significant.

Cumulative impacts associated with the Project and identified related projects would be less than significant.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly? | Potentially  Significant  Impact | Less than Significant  With Mitigation  Incorporated | Less than  Significant  Impact | No  Impact |

1. **Less than Significant Impact.** The implementation Project would only involve maintenance related activities and thus, would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Short-term emissions from operation of equipment for the Project would not exceed the SCAQMD regional thresholds of significance for criteria pollutants and would not result in a significant project impact. Projects that do not generate a project-specific air quality impact would not be considered cumulatively considerable. Accordingly, the Project would not result in a cumulative air quality impact.

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# REPORT AUTHORS AND CONSULTANTS

|  |  |
| --- | --- |
| Name | Project Role/EIR Chapter |
|  | |
| **CEQA Consultant: Chambers Group, Inc.** | |
| Paul Morrissey | Project Manager, Director of Biology |
| Corinne Lytle Bonine | Director of Environmental Planning |
| Meghan Gibson | Senior Environmental Planner |
| Upasana Paul | Assistant Environmental Planner |
|  |  |
|  |  |
|  |  |
|  |  |
| **OCFA Staff & Technical Consultants** | |
|  |  |
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