**SANTIAGO CANYON INVASIVE PEST MITIGATION AND FUELS REDUCTIONS PROJECT  
SANTIAGO CANYON, ORANGE COUNTY, CA**

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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 Santiago Canyon Invasive 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 Initial Study (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 exemptions apply 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 1: Project Location and Vicinity Map

Figure : Tree Inventory and USFWS Critical Habitat

# PROJECT DESCRIPTION

## OVERVIEW OF THE PROJECT

Approximately 163,992 acres throughout Orange County (County) are experiencing high tree mortality due to 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 and ISHB. The OCFA, under the CalFire Fire Prevention Grant Program (Grant Number 5GG17194), 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, 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.

Trees would be felled in a controlled manner such that they can be laid down without causing ground disturbance to sensitive resources. To the extent that areas are available, the following locations will be utilized:

* Areas where understory and detritus covering the ground serve as protection
* Within a road prism
* Other previously disturbed areas (such as urban or suburban areas)
* Areas devoid of sensitive resources as determined by qualified biologists and archeologists

If no such areas are present, operational controls such as taking down the tree in pieces using rope systems would be utilized.

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 be located in western Orange County (OC or County), encompassing portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, and Silverado Canyon (Santiago Canyons). The Proposed Project site consists of a 100-foot buffer along roads spurring off of County roads S-18 and S-19 to the north east and east towards the Santa Ana Mountains. The Project site includes trees in both developed neighborhoods and uninhabited areas, covering a total of approximately 894.67 acres (Figure 1). Trees treated as a result of the Proposed Project are located in areas designated as Very High Fire Hazard Severity Zones (VHFHSZ).

The portion of the site in the vicinity of Trabuco Canyon is zoned Foothill/Trabuco Specific Plan Area and is designated within the County General Plan as Rural Residential. The portions of the Proposed Project site in the vicinity of Modjeska Canyon are zoned mainly General Agriculture (A1) and Open Space (OS), with smaller areas zoned Estates (E1), Residential Estates (RE), and Residential Hillside Estates (RHE) interspersed throughout. The County General Plan designates these areas as Rural Residential, Suburban Residential, Public Facilities, and Open Space. The last area of the Proposed Project site, in the vicinity of Santiago Canyon and Silverado, is zoned mainly General Agriculture (A1) with small areas zoned for Sand and Gravel Extraction (SG), RHE, and Local Business (C1). The County General Plan designates this portion of the Proposed Project site as Open Space, Rural Residential, and Suburban Residential (OC 2020).

### Pesticide Application

The Proposed Project site is designated as ZOI for the Invasive Shot Hole Borer (ISHB) and the Gold Spotted Oak Borer (GSOB).

The ISHB pest mitigation and fuels reduction activities would include tree removal, branch removal, stump grinding, insecticide spraying, and soil injections. Insecticides would be applied either as soil injection or trunk sprays. For reproductive host trees with low to moderate levels of infestation, the insecticide Imidicloprid is applied as a soil injection, followed by a trunk spray with a combination of Cease and Pentra Bark. A combination of Bifenthrin and Nu Film P is then applied. For non-reproductive host trees, only the Bifenthrin and Nu Film P spray will be applied. The spray activities will involve the use of one to two diesel trucks that have attached booms with pressurized spray rigs.

For the GSOB, pesticides would be applied using one to two diesel trucks that have attached booms with pressurized spray rigs. 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 2 months, operating Monday through Saturday between the hours of 8:00 AM and 4:00 PM. Insecticide treatment would occur between March 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* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**DETERMINATION**

**On the basis of this initial evaluation:**

|  |  |  |
| --- | --- | --- |
| **1.** | I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. |  |
| **2.** | I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared. |  |
| **3.** | I find the proposed Project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. |  |
| **4.** | I find that the proposed Project **may have a “potentially significant impact” or “potentially significant unless mitigated impact”** on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. |  |
| **5.** | I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required. |  |

Signature Date

Name Title

### 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.** The Scenic Highways Component of the County’s General Plan designates viewscape and landscape corridors to protect areas with unique visual character throughout the County. Both S-18 and S-19, which travel through portions of the Proposed Project area, are designated viewscapes within the County (County of Orange 2005). Additionally, there are 11 scenic viewpoints within Whiting Ranch Wilderness Park and Irving Ranch Open Space, along the eastern side of S-18, that potentially overlook the Proposed Project area (OC 2010; OC 2013). There is also one scenic viewpoint within O’Neill Regional Park that potentially overlooks the Trabuco Canyon portion of the Project site (OC 2019). Despite the presence of viewscapes and close proximity of scenic vistas, the removal of dead, dying, and diseased trees as a result of the Project would promote growth of healthy trees in the landscape and improve local views long-term. Furthermore, the Proposed Project consists of pesticide application using one to two trucks with pressurized spray rigs; thus, the equipment would be limited, would be in the viewscape temporarily, and would be constantly moving throughout the Project site. Ongoing maintenance activities would occur intermittently and would also require minor equipment including haul vehicles, chainsaws, and a chipper. Impacts would be less than significant.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 officially designated state scenic highway, State Route 91, located approximately 9 miles north of the closest portion of the Proposed Project site; thus, the Proposed Project site is outside the viewshed of the state scenic highway (Caltrans 2019). Further, 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. No impact would occur.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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.** There are 11 publicly accessible viewpoints within Whiting Ranch Wilderness Park and Irving Ranch Open Space, east of S-18, that would potentially have the Proposed Project site in their viewshed during Project implementation (OC 2010; OC 2013). Though, as previously mentioned, the Project would promote growth of healthy trees in the landscape, improving local views long-term. Additionally, Proposed Project activities would include limited equipment, would occur intermittently throughout the expansive Project site, and would be temporary in nature. 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.** None of the necessary equipment to complete pesticide application or ongoing maintenance for the Proposed Project, which includes one to two trucks with a pressurized spraying rig, would produce a substantial amount light or glare. Furthermore, the Proposed Project activities would occur only during daytime hours of 8 AM to 4 PM Monday through Saturday, thus no lighting will be required. No impact would occur.

### 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. **Less Than Significant Impact.** The majority of the Proposed Project site is zoned General Agriculture and adjacent to the Proposed Project site there are two, small sections of Unique Farmland designated by the Department of Conservation (County 2020). One area is located at the junction of Trabuco Canyon Road and Rose Canyon Road, and the other area is located at the junction of Santiago Canyon Road (S-18) and Silverado Canyon Road (DOC 2020). Although the Proposed Project would be located in close proximity to Unique Farmland, the Proposed Project only involves spraying and performing soil injections on pest-infested trees along the farmland property line. No farmland would be sprayed as a result of the Proposed Project and no ground disturbance would result from the Proposed Project. Additionally, to prevent any impacts resulting from pesticides on farmland, all pesticide applications would strictly follow label and label supplement specifications, and all pesticide applications would be reported to the landowner and the Orange County Agricultural Commissioner. Impacts would be less than significant.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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.** As mentioned above, the Proposed Project site includes various zoning designations, the majority of land being zoned General Agriculture (County 2020). Though, no land within the Proposed Project site is currently under a Williamson Act contract (County 2001). 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 encompasses rural forested areas of the County, but the zoning and land use designations do not include forest land or timberland zoned for timber production (County 2020). Moreover, the Proposed Project activities would involve spraying pesticides on beetle-infested trees to promote non-infested tree survival, and is not intended to convert forest land to non-forest uses. No impact would occur.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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. **No Impact.** As described in Impact c), the Proposed Project would include spraying pesticides on infested trees to promote the survival of existing trees. No forest land will be converted to non-forest land as a result of the Proposed Project; therefore, no impact would occur.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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. **Less Than Significant Impact.** As described above, the Proposed Project site is zoned mainly General Agriculture and Unique Farmland is located adjacent to the Proposed Project site. Though, the Proposed Project involves spraying and performing soil injections on pest-infested trees along the farmland property line and thus, no farmland would be sprayed as a result of the Proposed Project. To prevent any impacts resulting from pesticides on farmland, all pesticide applications would strictly follow label and label supplement specifications, and all pesticide applications would be reported to the landowner and the Orange County Agricultural Commissioner. Additionally, forest land will not be converted to non-forest use as a result of the Proposed Project. Impacts would be less than significant.

### Air Quality

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 requires, at most, two diesel fueled trucks with pressurized spraying rigs to carry out pesticide spraying activities. For ongoing maintenance activities, a few pieces of diesel and gasoline fueled equipment would be required: one or two haul trucks, chainsaws, and a chipper. Use of all the necessary equipment would occur on a highly temporary and minor scale. All equipment would be permitted by the South Coast Air Quality Management District (SCAQMD) and operations would comply with rules set forth in the SCAQMD Rule Book (SCAQMD 2019). Use of the equipment and vehicles will not significantly affect air quality due to the limited and temporary nature of the activities and construction equipment use.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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.** As mentioned in Impact a), the Proposed Project requires, at most, two diesel fueled trucks with pressurized spraying rigs to carry out pesticide spraying activities. For ongoing maintenance activities, a few pieces of diesel and gasoline fueled equipment would be required including one or two haul trucks, chainsaws, and a chipper. Use of all the necessary equipment would occur on a highly temporary and minor scale. All equipment would be permitted by the SCAQMD, and operations would comply with rules set forth in the SCAQMD Rule Book (SCAQMD 2019). Use of the equipment and vehicles will not significantly affect air quality due to the limited and temporary nature of the activities and construction equipment use.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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 covers portions of the Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon communities. The area is rural and activities would be consolidated along road edges; thus, the Proposed Project site only contains one sensitive receptor, the Earth Roots Field School. Two other sensitive receptors are within 500 feet of the Proposed Project site: Trabuco Canyon Elementary School and the private school Celebration Education. Though, as mentioned in Impacts a) and b), the use of equipment for the Proposed Project would occur on a highly temporary and minor scale; all equipment would be permitted by the South Coast Air Quality Management District (SCAQMD); and operations would comply with rules set forth in the SCAQMD Rule Book (SCAQMD 2019). Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations and impacts would be less than significant.

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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 described above, the Proposed Project site contains one sensitive receptor and is in close proximity of two others. Though, the use of equipment for the Proposed Project would occur on a highly temporary and minor scale; all equipment would be permitted by the South Coast Air Quality Management District (SCAQMD); and operations would comply with rules set forth in the SCAQMD Rule Book (SCAQMD 2019). The main odor producer associated with the Proposed Project activities would be diesel-fueled engines, but activities would occur throughout the area intermittently, allowing for quick dispersal of odors. Impacts would be less than significant.

### Biological Resources

#### Existing Conditions

The Proposed Project treatment areas are located at the base of or within canyons of the Santa Ana Mountains that rise from the Arroyo Trabuco Creek, a tributary to the San Juan River, or Santiago Creek, the main tributary to the Santa Ana River. Trabuco Creek flows in a southerly direction and enters the San Juan River in the City of San Juan Capistrano, which empties in the Pacific Ocean at Doheny State Beach. Santiago Creek flows in a northerly then westerly direction to the Santa Ana River, in the City of Santa Ana, and empties in the Pacific Ocean at Newport Beach. The Proposed Project area is generally referred to as Santiago Canyon.

Treatment areas for the Proposed Project include a 100-foot buffer on either side of roads spurring off of County roads S-18 and S-19, to the northeast and east, towards the Santa Ana Mountains. Proposed treatment areas include Trabuco Canyon, Modjeska Canyon, and Silverado Canyon (Santiago Canyons). Scattered residential and public facilities exist alongside these roads as well as open space. A series of creeks, and tributaries (i.e., drainages, creeks, or rivers, that flow into a larger body of water) to those creeks, occur alongside or cross the roadways within the treatment areas. Treatment areas for each canyon are described in more detail below.

* The Trabuco Canyon proposed treatment areas occur along scattered residential, or rural neighborhoods, and open space. Main roads include Live Oak Canyon Road, Trabuco Oaks Drive, and Rose Canyon Road. Tributaries that cross or that occur adjacent to the roads flow to Arroyo Trabuco Creek. Riparian areas mapped as Freshwater Forested/Shrub Wetland by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), occur along Live Oak Canyon and Rose Canyon Road. Elevations within Trabuco Canyon treatment areas range from approximately 980 feet to 1,880 feet above mean sea level (amsl).
* The Modjeska Canyon proposed treatment areas occur along residential neighborhoods, scattered residential or rural neighborhoods, and open space. Main roads include Modjeska Canyon Road, Crystal Canyon Road, and Topanga Canyon Road. Tributaries that cross or that occur adjacent to the roads flow to Aliso Creek. Riparian areas mapped as Freshwater Forested/Shrub Wetland by NWI occur along Santiago Canyon Road and Modjeska Canyon Road. Elevations within Modjeska Canyon treatment areas range from approximately 1,1970 feet to 1,450 feet amsl.
* The Silverado Canyon proposed treatment areas occur along scattered residential, or rural neighborhoods, and open space. Main roads include Silverado Canyon Road and Williams Canyon Road. Tributaries that cross or that occur adjacent to the roads flow to Santiago Creek. A riparian area mapped as Freshwater Forested/Shrub Wetland by NWI occurs along Santiago Canyon Road. Elevations within Silverado Canyon treatment areas range from approximately 1,100 feet to 1,600 feet amsl.

Although open space does occur within the Proposed Project boundaries, because the boundaries occur along roads and near development, various levels of disturbance to natural communities exist, lowering the value to sensitive biological resources. Open space within 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, and ornamental landscaping, all with various levels of human disturbance. Within rural neighborhoods, vegetation communities are intermixed with ornamental landscaping and native tree and plant species. Overall, habitat quality is low within the proposed treatment areas of Trabuco, Silverado, Modjeska (Santiago Canyons).

**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 *Anaheim*, *Black Star Canyon*, *Canada Gobernadora*, *Corona South*, *El Toro*, *San Juan Capistrano*,and *Santiago Peak* quadrangles 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:

* Thirty-eight rare and listed plant species (federal- or state listed as threatened or endangered and CNPS List 1 and 2 species)
* Thirty-one rare and listed wildlife species (federal- or state listed as threatened or endangered, watch list, and candidate species)
* Critical habitat for coastal California gnatcatcher (*Polioptila californica californica*) is located within most of the proposed treatment areas within the Trabuco Canyon polygons and is slightly within the Modjeska Canyon polygons along Santiago Canyon Road near Crystal Canyon Road. Critical habitat for arroyo toad (*Anaxyrus californicus*) is located within the southern tips of the Trabuco Canyon polygons adjacent to the Arroyo Trabuco Creek, within Modjeska Canyon along Santiago Canyon Road which runs along Santiago Creek, and within Silverado Canyon along Santiago Canyon Road and Silverado Canyon Road, which runs along Santiago Creek.

Of the 37 species of rare plants, the following 6 species have been recorded within one mile of the proposed treatment areas within the last 40 years:

* intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) – CRPR 1B.2, CNDDB 2000, 2001, 2007, 2008-2010, 2012, and 2014-2016
* summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*) – CRPR 1B.2, CNDDB 2013
* many-stemmed dudleya (*Dudleya multicaulis*) – CRPR 1B.2, CNDDB 2005
* intermediate monardella (*Monardella hypoleuca* ssp. *intermedia*) – CRPR 1B.3, CNDDB 1989, and 2008-2009
* chaparral nolina (*Nolina cismontane*) – CRPR 1B.2, CNDDB 19862001, 2007, 2012-2014, and 2016
* Allen’s pentachaeta (*Pentachaeta aurea* ssp. *allenii*) – CRPR 1B.1, CNDDB 2003

Lower quality habitat for rare and listed plant species is present within disturbed open space and within residential properties where ornamental landscaping is intermixed with native tree and plant species. The proposed schedule for treatment is between March and June; therefore, rare plant species would be within the blooming period and would be conspicuous, if present, and could be avoided. In addition, ground disturbance and/or removal of suitable habitat is not proposed, and treatment would not occur within wetted areas.

Of the 17 rare and sensitive wildlife species, the following 14 species have been recorded within one mile of the proposed treatment areas in the last 40 years:

* southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) - state watch list (CNDDB 2002)
* arroyo toad (*Anaxyrus californicus*) – federally endangered, SSC (USFWS 1985, 1998, 2005, and 2008)
* orange-throated whiptail (*Aspidoscelis hyperythra*) – state watch list (CNDDB 2015-2017)
* coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) – SSC (CNDDB 2002, 2015, and 2017
* northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) – SSC (CNDDB 2016)
* red-diamond rattlesnake (*Crotalus ruber*) – SSC (CNDDB 2001)
* western pond turtle (*Emys marmorata*) – SSC (CNDDB 1987-1988, and 1990)
* San Diego desert woodrat (*Neotoma lepida intermedia*) – SSC (CNDDB 2016)
* steelhead - southern California DPS (*Oncorhynchus mykiss irideus* pop. 10) – federally endangered (CNDDB 2013)
* southern grasshopper mouse (*Onychomys torridus ramona*) – SSC (CNDDB 2016)
* coast horned lizard (*Phrynosoma blainvillii*) – SSC (CNDDB 1985, 1990, and 2017)
* coastal California gnatcatcher (*Polioptila californica californica*) – federally threatened (CNDDB 1991, 1997-1998, 2001-2002, and 2015, USFWS 1981, 1997-1998, 2000-2002, 2004-2008, and 2011-2016)
* Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3) – SSC (CNDDB 1998-1999)
* western spadefoot toad (*Spea hammondii*) – SSC (CNDDB 2003 and 2017)
* Riverside fairy shrimp (*Streptocephalus woottoni*) – federally endangered (CNDDB 2001 and 2009)
* Coast range newt (*Taricha torosa*) – SSC (CNDDB 1997 and 1999)
* Two-striped garter snake (*Thamnophis hammondii*) – SSC (CNDDB 1998 and 2003)

Arroyo toad is a federal-listed as endangered species and a California species of special concern. This species could occur in riparian habitat and upland habitat located directly adjacent to riparian habitat.

Within southern California, steelhead is a federal-listed as endangered species. This species occurs in rivers, streams, estuaries, and marine environments. Steelhead are born in freshwater, where adults spawn, then migrate to estuaries and the ocean for their adult lives.

The coastal California gnatcatcher is a federal-listed as threatened species and was recorded by the CNDDB and USFWS sensitive species databases in multiple areas both within the proposed treatment areas and within one-mile of the proposed treatment areas. This species could occur adjacent to the treatment areas within sage scrub habitats.

Riverside fairy shrimp is a federal-listed as endangered species. This species occurs seasonally in pools filled by winter/spring rains.

Although low quality, suitable habitat for the above rare and listed wildlife species is found within and/or surrounding the proposed treatment areas, ground disturbance and/or removal of suitable habitat is not proposed, and treatment would not occur within wetted areas.

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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 site will include treatment of trees infested with the ISHB and GSOB and removal of dead, dying, or diseased trees.

For ISHB, depending on the stage of the host (reproductive or non-reproductive) and the severity of the infestation, treatment will include tree removals, branch removals, stump grinding, insecticide spraying, and soil injections Insecticides would be applied either as soil injection or trunk sprays. For reproductive host trees with low to moderate levels of infestation, the insecticide Imidicloprid will be applied as a soil injection, followed by a trunk spray with a combination of Cease and Pentra Bark. A combination of Bifenthrin and Nu Film P would then be then applied. For non-reproductive host trees, only the Bifenthrin and Nu Film P spray will be applied. The spray activities will involve the use of one to two diesel trucks that have attached booms with pressurized spray rigs. The pesticides and surfactants purpose and their toxicity are described below.

* Imidacloprid disrupts the nerve's ability to send a normal signal, and the nervous system stops working the way it should (NPIC 2020). Imidacloprid is a [systemic](http://npic.orst.edu/outreach/systemic-infographic.png) insecticide meaning plants take it up from the soil or through the leaves and it then spreads throughout the plant's stems, leaves, fruit, and flowers (NPIC 2020). When an insect chews or sucks on treated plants, they eat the imidacloprid, it damages their nervous system, and they eventually die (NPIC 2020). Imidacloprid binds better to receptors to insect nerve cells than nerve cells of mammals and birds; therefore, Imidacloprid is not very toxic to birds, is slightly toxic to fish, and is very toxic to honeybees and other beneficial insects (NPIC 2020).
* Fungicides kill or prevent the growth of fungus.  Cease biofungicide for the prevention, suppression, and control of foliar and soil-borne diseases (BioWorks 20216).  Cease is toxic to fish and invertebrates.
* Pentra Bark is a penetrating surfactant that takes water soluble insecticide, fungicide, plant growth regulators or fertilizer into the vascular system of the tree for translocation into foliage or roots (AGBIO 2020). Pentra bark is not toxic.
* Bifenthrin is a broad-spectrum insecticide that works by interfering with a nerve cell's ability to send a normal signal (NPIC 2020).  Bifenthrin binds to soil tightly so it is unlikely that it would reach groundwater, but it does have the potential to contaminate surface waters through runoff.  Bifenthrin on soil surfaces is also unlikely to become airborne.  Bifenthrin is low in toxicity to birds; however, there are potential risks for birds and mammals that eat aquatic organisms because Bifenthrin can last a long time in the environment and it may accumulate in fish.  Bifenthrin is highly toxic to fish and small aquatic organisms. It's also very highly toxic to bees.
* Nu Film P reduces the effects of rainfall erosion, volatility and ultraviolet (UV) degradation on pesticide spray deposits. Nu Film P is toxic to fish and invertebrates.

For the GSOB, pesticides would be applied using one to two diesel trucks that have attached booms with pressurized spray rigs. 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 pesticide is described below.

* Carbaryl is a man-made insecticide that stimulates an insect’s nervous system when they eat or touch carbaryl (NPIC 2020). The enzyme that normally breaks down this chemical is prevented from working properly and the stimulated nervous system stops breathing muscles from contracting, causing the death of the insects (NPIC 2020). Carbaryl is non-toxic to birds, slightly toxic to mammals, moderately to highly toxic to fish, and highly toxic to earth works and bees, and other invertebrates (NPIC 2020).

Low quality habitat occurs within the treatment areas with higher quality habitat adjacent to the proposed treatment areas. Ground disturbance and/or removal of suitable habitat is not proposed for the Project. Tree material will be hauled off site by hand carrying the material. Green waste will be chipped at pre-determined locations, in areas that will not cause ground disturbance, or placed in waste bins and hauled off by trucks from roadsides. 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. Spraying of pesticides will be accomplished from the roadside utilizing hoses up to 200-feet in length; therefore, not requiring off-road travel. In addition, the removal of dead and decaying vegetation from the treatment areas will reduce further infestation and fuel for fire. The reduction of fuel for fire and the treatment of ISHB and GSOB will protect and improve natural habitats within and adjacent to the sites where listed and rare species may occur.

Due to the mortality of large oaks and other hardwood trees within Orange County, OC Parks has been treating areas such as Weir Canyon for the ISHB and GSOB for over three years. The treatment of these invasive pests has been performed in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan. Treatment in Santiago Canyons would continue with their Operational Constraints and best management practices for biological resources. These include the following within or directly adjacent to natural habitats:

* A biologist familiar with the biological resources in the area will escort the crew 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 and to chipper and haul locations, where applicable.
* A daily log will be completed to document biological monitoring activities, protected species observations, any necessary corrective action, or any other relevant biological data.

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.

Imidacloprid is slightly toxic to birds and fish and is toxic to bees and other insects.  Cease is toxic to fish and invertebrates.  Bifenthrin is toxic to fish, bees, and other insects. Nu Film P is toxic to fish and invertebrates. Carbaryl is toxic to mammals, fish, invertebrates, and bees. As part of the operational and constraints and best management practices, pesticides will not be applied when there is a potential for drift for protection of nearby birds, work will not occur until mammals are located a safe distance from treatment areas, will not be applied to waters or wetted areas for protection of fish and aquatic invertebrates, will not be applied to flowers if bees are present, and application will be 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 ISHB and GSOB 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 tree removal, branch removal, stump grinding, insecticide spraying, and soil injections. The Proposed Project does not include habitat removal or grading activities and the biologist will be present to ensure that infected trees identified for treatment do not occur within a wetland community. In addition, as Imidacloprid, Cease, Bifenthrin, Nu Film P, and Carbaryl are toxic to fish and invertebrates, they will not be applied to water or wetted areas. 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 spray activities will involve the use of one to two diesel trucks that have attached booms with pressurized spray rigs and will utilize hoses of up to 200-feet in length while trucks remain parked along the road. Imidacloprid is slightly toxic to birds and fish and is toxic to bees and other insects.  Cease is toxic to fish and invertebrates.  Bifenthrin is toxic to fish, bees, and other insects. Nu Film P is toxic to fish and invertebrates. Carbaryl is toxic to mammals, fish, invertebrates, and bee. As part of the operational and constraints and best management practices, pesticides will not be applied when there is a potential for drift for protection of nearby birds, will not be applied until mammals are located a safe distance from treatment areas, will not be applied to waters or wetted areas for protection of fish and aquatic invertebrates, will not be applied to flowers if bees are present, and application will be minimized in areas where insects are prevalent. 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 |

**e) No Impact**. OCFA has been conducting three years of monitoring of pesticide treatment of the ISHB and GSOB in the Weir Canyon area. A combination of pesticides has been used to improve the effectiveness of treatment. The Proposed Project treatments will be conducted in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan which have been utilized in other areas such as Weir Canyon for over three years. 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 Proposed Project treatments will be conducted in compliance with the Orange County NCCP and the OC Parks Land Management and Operations Plan which have been utilized in other areas such as Weir Canyon for over three years. 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. **No Impact.** The Proposed Project consists of pesticide 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 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 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 remains limited potential for subsurface human remains to be located within 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 would involve spraying of pesticide on beetle-infested trees which would include implementing one to two diesel-fueled trucks with pressurized spraying rigs. Ongoing maintenance following pesticide application may require one to two haul trucks, chainsaws, and a chipper. The only energy requirements for the Proposed Project are diesel and gasoline fuel, and fuel requirements would remain below local and federal greenhouse gas (GHG) emission standards. Additionally, activities would occur during daylight hours, from 8AM to 4PM; thus, no lighting would be needed to execute the Proposed Project. Energy use would not be considered wasteful, inefficient, or unnecessary. Impacts would be 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. **Less Than Significant Impact.** As mentioned in Impact a), the only energy requirement for the Proposed Project is fuel to power the diesel trucks with pesticide spraying rigs and potential maintenance equipment. Fuel requirements for this equipment would remain below local and federal GHG emission standards. No structures would be built as a result of the Proposed Project; therefore, the 2016 California Green Building Standards Codes are not applicable. Impacts would be less than significant.

### 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 |

1. **i)** **Less Than Significant Impact.** The Proposed Project site is not within an Alquist-Priolo Fault Zone, with the closest Alquist-Priolo Fault Zone being the Elsinore Fault located approximately five miles northeast from the Proposed Project site at its closest point (DOC 2020a). In addition, the Proposed Project involves pesticide application using one to two trucks with spraying rigs and ongoing maintenance activities. No ground disturbing activities which could exacerbate the risk of fault rupture are associated with the Proposed Project. Trucks used for spraying activities and hauling would remain on established roadways; 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. Moreover, the Proposed Project activities would occur intermittently throughout the entirety of the Project site and would not include construction of any long-term structures that would increase use of the Proposed Project site. Therefore, the Proposed Project would not cause an increased risk of loss, injury, or death involving rupture of an unknown fault. No impact would occur.

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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.** As mentioned in Impact a) i) above, the Proposed Project site is approximately 5 miles southwest of the closest fault zone, but would avoid causing any ground disturbance. This would avoid the possibility of inducing rupture of a known fault. Moreover, the Proposed Project activities would occur intermittently throughout the Project site and would not include construction of any long-term structures that would increase use of the Proposed Project site. Therefore, the Proposed Project would not cause an increased risk of loss, injury, or death involving strong seismic shaking. Impacts would be 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.** Southern portions of the Proposed Project site are within the Santiago Peak Liquefaction Zone and northern portions of the Proposed Project site are within the Lake Forest liquefaction zone (DOC 2020a). Though, pesticide application and ongoing maintenance activities would avoid any ground disturbance that could exacerbate the risk of liquefaction. Further, the Proposed Project activities would be temporary and intermittent, with trucks moving throughout the Proposed Project site, and would not involve the construction of any long-term structures that would increase use of the area. Thus, risk of loss, injury, or death involving seismic-related ground failure would be 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.** Southern portions of the Proposed Project site are within the Santiago Peak Landslide Zone and northern portions of the Proposed Project site are within the Lake Forest and Black Star Canyon Landslide Zones (DOC 2020a). Though, as described above, pesticide spraying and ongoing maintenance activities would avoid any ground disturbance that could exacerbate the risk of landslide. Furthermore, Proposed Project activities would not involve the construction of long-term structures that would increase use of the area. Therefore, the risk of loss, injury, or death 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 |

1. **Less Than Significant Impact.** The Proposed Project would involve pesticide application to beetle infested trees and subsequent maintenance activities for fuel reduction. No ground disturbing activities would be associated with the Proposed Project site and activities would occur within the Proposed Project site on a temporary basis. In addition, Proposed Project activities would not involve the construction of long-term structures that would cause increased use of the area. Proposed Project activities would not result in substantial soil erosion or loss of topsoil; impacts would be less than significant.

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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.** The Proposed Project site is within the San Juan Capistrano liquefaction zone and landslide zone (DOC 2020). Though, as mentioned in Impacts a) and b), pesticide application and subsequent maintenance activities associated with the Proposed Project would be surficial and would not cause ground disturbance or destabilization of the geologic unit. Furthermore, Proposed Project activities would not involve the construction of long-term structures that would increase use of the area. Potential for the Proposed Project to result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is 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. **Less Than Significant 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. Approximately 25% of the soils within the Proposed Project area contain a clay component (USDA 2020). Although there may be expansive soils within the Proposed Project site, activities include pesticide spraying of beetle infested trees and ongoing maintenance activities, which would not involve the construction of long-term structures. Further, Proposed Project activities would be small-scale and intermittent throughout the Proposed Project site. Direct or indirect risk to life or property due to expansive soils would be less than significant.

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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.** As previously described, the Proposed Project would include spraying pesticide on infested trees and ongoing maintenance activities. No habitable structures that require the use of septic tanks or alternative wastewater disposal systems would be built as a result of the Proposed Project. No impact would occur.

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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 youngest deposits are marine and non-marine sedimentary rocks from the Pleistocene-Holocene epoch and the oldest deposits are marine sedimentary and metasedimentary rocks from the upper Cretaceous period (DOC 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 pesticide 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

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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, which include spraying pesticide and ongoing maintenance following, require at most two diesel trucks with pressurized spraying rigs, two diesel haul trucks, chainsaws, and a chipper. Operation of equipment would meet state and federal emission requirements and will not generate significant GHG emissions that would impact the environment. Both the initial pesticide spraying and ongoing maintenance would be temporary and limited efforts, and would result in less than significant impacts.

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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. **Less Than Significant Impact.** As described in Impact a), the Proposed Project activities, which include spraying pesticide on beetle infested trees and ongoing tree maintenance following, require at most two diesel trucks with pressurized spraying rigs, two diesel haul trucks, chainsaws, and a chipper. All equipment usage would meet state and federal emission requirements and would not generate significant GHG emissions that would impact the environment.

### 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 Impact.** The Proposed Project involves spraying pesticide on beetle infested trees and ongoing tree maintenance using diesel- and gasoline-fueled equipment such as trucks, chainsaws, and a chipper. Fueling of all equipment would be conducted following established protocols to prevent soil contamination and/or transport in a watercourse. Fueling protocols include using approved containers for transporting fuel to saws; dispensing fuel at least 10 feet away from any sources of ignition when performing construction activities; no smoking during fueling; using a funnel or a flexible hose when pouring fuel into saws; and never attempting to fuel running or hot equipment.

The Proposed Project would utilize a combination of up to four pesticides for trunk spraying: Bifenthrin, Nu Film P, Pentra-Bark, and Cease. Three of the four potential pesticides for trunk spraying, Bifenthrin, Nu Film P, and Cease, are moderately to very toxic to humans, fish, and invertebrates (Miller 2015; BioWorks 2019). Bifenthrin is also toxic to bees, while Pentra-Bark is only toxic to humans (Makhteshim 2015a; Quest 2015). The pesticide that would be used for soil injections, Imidicloprid, is moderately to very toxic to humans, invertebrates, and bees (Makhteshim 2015b). Other pesticides that could potentially be employed, Propizol and Tree-age, are moderately to very toxic to humans and fish (Arborjet 2015a; 2015b). To prevent impacts of these pesticides on people and the environment, all pesticide applications would strictly follow label and label supplement specifications, and all pesticide applications would be reported to the landowner and the Orange County Agricultural Commissioner. With implementation of the established strict fueling and pesticide-use protocols, impacts would be less than significant.

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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.** As mentioned in Impact a), a fueling protocol would be implemented during the Proposed Project to prevent release of hazardous material, such as diesel or gasoline, to the public or environment. Although the pesticides that would be used are considered toxic to humans or various species, all pesticide applications would strictly follow label and label supplement specifications; planned use would be reported to the Orange County Agricultural Commissioner in advance; and all completed pesticide applications would be reported to the landowner and the Orange County Agricultural Commissioner. These strict fueling and pesticide-use protocols would reduce foreseeable upset and accident conditions to less than significant.

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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. **Less Than Significant Impact.** As previously mentioned, the Proposed Project site includes one school and there are two schools within 0.25 mile of the Proposed Project site. Although, the strict fueling and pesticide-use protocols, described in Impact a), would be implemented to prevent the release of hazardous material to people or the environment. Potential for emission of hazardous materials within one-quarter mile of an existing or proposed school is less than significant.

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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. **Less Than Significant Impact.** According to the State Water Resources Control Board’s GeoTracker database, there are no recent hazardous materials sites that have open cases within one-quarter mile of the Proposed Project site. There are three previous hazardous material cases within the Proposed Project site, all leaking underground storage tanks, but these cases were closed over ten years ago (SWRCB 2020).

The Department of Toxic Substances Control’s EnviroStor database shows that the Formerly Used Defense Site (FUDS), Trabuco Bombing Range, is overlapping with the Trabuco Canyon portion of the Proposed Project site (DTSC 2020). The Marine Corps used the 1,800-acre site from 1944 to 1956 as a practice bombing/target range (DTSC 1999). The site is labeled as inactive and there’s no record of injuries caused by unexploded bombs and rockets, but in the event that any ordnance is identified, contracted workers will follow public safety campaign policies outlined by the City of Santa Rancho Margarita for potentially explosive ordnances in O’Neill Regional Park. These policies instruct park users to alert the authorities via 9-1-1, leave the location where the ordnance was found, and place a marker near the area with something readily available to help the authorities find the item upon return (Rancho Santa Margarita 2015). Additionally, the Proposed Project only involves spraying pesticides on pest-infested trees along the FUDS property line, thus, contracted workers would remain on the outer edge of the FUDS boundary. Further, Proposed Project activities would be highly temporary in nature and no ground disturbance would result from the Proposed Project that could potentially unearth a buried ordnance. Less than significant impacts would occur.

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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 closest airport to the Proposed Project site is the John Wayne Airport, approximately 12.5 miles to the northwest, and the Proposed Project site is not within the Airport Planning Area (County 2008). Therefore, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. No impact would occur.

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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. **No Impact.** The Proposed Project involves spraying pesticide on beetle infested trees and subsequent tree maintenance activities. Heavy equipment required for these activities would consist of one to two trucks with pressurized spraying rigs, and if maintenance is required, one to two hauling trucks. The presence of these trucks would be temporary, as they would travel throughout the Proposed Project site intermittently, and would avoid blockage of the roadways within the Project site. None of the Proposed Project activities would prevent execution of any emergency response or evacuation plans in the area, therefore no impact would occur.

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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 involves spraying pesticide on beetle infested trees and subsequent tree maintenance activities in hopes of eliminating pests, slowing the spread rate, and 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. No impact would occur.

### 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 served by the Irvine Ranch Water District (IRWD) and the Trabuco Canyon Water District (TCWD) (IRWD 2015, TCWD 2020). The District receives its water from various sources such as local groundwater from Trabuco Creek, imported water from the Municipal Water District of Orange County (MWDOC) and recycled water. Though very minimal wastewater discharge is expected to result from the Proposed Project activities, resulting only from watering for dust control, the Proposed Project would comply with all applicable water quality standards; this includes all standards set in the Urban Water Management Plans for the Water Districts.Additionally, all pesticide applications would strictly follow label and label supplement specifications to avoid any leeching into the surrounding surface or ground water. The Proposed Project would implement the following BMPs to help minimize both environmental and personal risk:

* Pesticide products used during the initial spraying activities will be applied by a registered pesticide applicator (Qualified Applicator Certificate or License) licensed for Forestry (Category E).
* All pesticide applications will strictly follow label and label supplement specifications, and all pesticide use will be reported to the landowner and the Orange County Agricultural Commissioner at the end of each application month.
* To reduce the risk of water transport, the pesticides 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 pesticides, and watering for dust control would not be conducted immediately following pesticide applications.

Implementation of BMPs and compliance with water quality standards for the applicable water districts would ensure that impacts from the Proposed Project would be less than significant.

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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. **Less Than Significant Impact.** The Proposed Project, as noted in the previous sections, involves treating infested trees with a barrier pesticide and fuel reduction activities; it does not involve significant water usage, 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. Therefore, impacts would be less than significant.

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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 involves spraying of pesticide on beetle infested trees and fuel reduction, as needed, along roadways and within their 100 feet buffer spaces in the Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon areas of Orange County. No impervious surfaces would be introduced to the Proposed Project site, and all Project related activities would avoid ground disturbance; the Proposed Project would not impact the drainage pattern, or interfere and result in alteration of the course of any stream or river within the site area; no impact would occur.

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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 mentioned in Impact c) i), no impervious surfaces would be introduced to the Proposed Project site. Further, ground disturbance, that might occur as a result of the Project activities, would be avoided. The amount of surface runoff from the Project site would remain unchanged after the implementation of the Proposed Project; thus, no impact would occur.

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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 |

**c) iii) No 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 in Impact c) ii), the Project activities would not result in ground disturbance or an addition of impervious surfaces in the area, which would create or contribute to additional surface runoff, compared to existing conditions.Additionally, the crew and contractors would implement BMPs to reduce the risk of polluted runoff or water contamination by the pesticides. The BMPs would ensure that the pesticides 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 pesticides, and watering for dust control would not be conducted immediately following pesticide application. No impact is anticipated.

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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.** As mentioned in the previous sections, no impervious surfaces would be introduced to the Proposed Project site and ground disturbance would be avoided. The drainage pattern of the Project site would not change as a result of the Proposed Project; thus, no impact would occur.

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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. **Less Than Significant Impact.** Most portions of the Project area, including Silverado Canyon, Modjeska Canyon and Trabuco Canyon fall under the Special Flood hazard Area identified by the Federal Emergency Management Agency (FEMA) (FEMA 2020). The Proposed Project site, at its closest point, is more than 14 miles from the Pacific coastline. The closest water body that could produce a seiche is the Upper Oso Reservoir near the Trabuco Canyon area, which is approximately 1.5 miles west of the Proposed Project site boundary but is separated from the site by an approximately 450 feet high ridgeline. Further, the Proposed Project activities would be temporary, minor, and intermittent and would avoid all kinds of ground disturbance. In the case of a flood, tsunami, or seiche, emergency warning systems would ensure the crews associated with the Proposed Project pack up the pesticide spraying and tree maintenance equipment and use the trucks to move outside the hazard zone immediately. Additionally, all pesticide applications would strictly follow label and label supplement specifications to avoid creating any polluted runoff into nearby waterbodies. Impacts would be less than significant.

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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. **Less Than Significant Impact.** The Proposed Project site is under the management plans of the Irvine Ranch Water District (IRWD) and the Trabuco Canyon Water District (TCWD). 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. The Proposed Project would not involve the modification of any water systems within the area. It does not include any construction or operational activities that would require changes to the projects and policies identified in these water quality management plans. Further, only a limited wastewater discharge is expected to result from the Proposed Project activities, resulting from watering to prevent dust, and all pesticide applications would strictly follow label and label supplement specifications to avoid any effects on water quality. Impacts would be less than significant.

### 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 involves spraying pesticide on beetle infested trees and removal of dead, dying and diseased trees along the roadways and their 100 feet buffer spaces within portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon. No permanent structures that could potentially divide a community would be built as a result of the Proposed Project. Additionally, the trucks required for the Proposed Project activities would travel along established roadways and would not result in any blockade. No impact would occur.

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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 Impact.** As noted in Section 2.1.1, the land use designations within the Project site include Rural Residential, Suburban Residential, Public Facilities, and Open Space and the existing uses range from residential estates and local businesses to uninhabited open spaces. The Proposed Project activities would include spraying pesticide on beetle infested trees and fuel reduction activities to eliminate tree pests, slow the spread rate, and enhance the survival rate of existing tree populations. Enhancing survival of existing trees would protect the open space and promote a visually appealing natural character of the inhabited areas, which is consistent with all land use designations for the Proposed Project site; no impact would occur.

### 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 Impact.** Most of the Proposed Project site, encompassing portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon, is unclassified, with some potions identified as being within MRZ-1 and MRZ-3 mineral resource zones in the California Department of Conservation’s Mineral Land Classification Map for Orange County (California Department of Conservation 1994). MRZ-1 zones are areas where adequate information indicates that no significant mineral deposits are present, or that little likelihood exists for their presence. MRZ-3 zones are areas containing mineral deposits (aggregate), the significance of which cannot be evaluated from available data. There are three previous mines in the vicinity of the Project area. These are the Marion clay mine, approximately 1000 feet south of the Trabuco Canyon, and two Irvine Lake sand and gravel mines, approximately 3 miles north of the Silverado Canyon area (California Department of Conservation 2020). However, ground disturbance from the Proposed Project would be avoided and the Proposed Project activities would be minor and temporary. The Proposed Project would not affect mineral resources within the site; thus, 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.** As mentioned in Impact a) above, no presence of known or locally important mineral resources were identified within the Proposed Project area. There are three previously reclaimed mines in the vicinity of the Proposed Project site. However, the Project activities would avoid ground disturbance and would not affect mineral resources within the site. No impact would occur.

### Noise

#### *Environmental Setting*

The Proposed Project encompasses portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon and consists of trees along roads, spurring off of County roads S-18 and S-19 to the north east and east towards the Santa Ana Mountains, and within a 100-foot buffer along them. The Project site includes trees in both developed neighborhoods and uninhabited areas, and falls under Rural Residential, Suburban Residential, Public Facilities, and Open Space land use designations.

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 pesticide 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 |

1. **Less Than Significant Impact.**

*Construction-Related Noise:*

The Proposed Project would involve removal of beetle-infested tree material within uninhabited and developed residential neighborhoods in western Orange County. The pest mitigation and fuel reduction activities would include tree removals, branch removals, stump grinding, possible pesticide spray and soil injections. The equipment to carry out the said activity would include up to two large diesel trucks with attached pressurized spraying rigs, 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 Noise Ordinance regulations for the respective jurisdictions which are applicable, as noted above. Thus, the impacts would be less than significant.

*Operation-Related Noise*

As a part of the routine maintenance of the site, diesel- and gasoline-powered equipment such as chainsaws, chippers, and one or two trucks could be required. However, these activities would be intermittently planned and temporary, and hence the noise generated would be less than significant. The Project also does not involve the construction of any built facilities on the site or result in any change in the current use of the site, that might result in generation of 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 Impact.** As described in Impact a) above, the Proposed Project activities include the use of diesel- or gasoline-powered equipment, such as one to two trucks with pressurized spraying rigs, chainsaws, and chippers. None of the above-mentioned equipment would result in excessive groundborne vibration or groundborne noise levels. Additionally, 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. No impacts 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 includes pest mitigation and fuel reduction activities along roadways and within a 100-foot buffer around them in portions of uninhabited and residential neighborhoods within the Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon areas of Orange County. 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 impact would occur.

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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.** The Proposed Project includes pest mitigation and fuel reduction activities, which would be temporary and intermittent throughout the Proposed Project area. As previously noted, the Project activities, including tree removal, branch removal, stump grinding, pesticide spraying and soil injections along and around roadways and sidewalks and for street trees, would not affect or displace people or any existing housing in the area. 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 site and its surroundings. No impact would occur.

### 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 Proposed Project area, encompassing portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon in western OC, by spraying pesticide on beetle-infested trees and removing dead, dying, and diseased tree material as needed. Additionally, the Proposed Project does not include the addition of commercial or residential uses within the Project site. The Proposed Project would not increase the demand for fire protection, and no impact 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 involve spraying pesticide on beetle-infested trees and removal of dead, dying and decaying trees in the Proposed Project area; these activities would not increase the demand for police protection. No impact would occur.

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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 Proposed Project site or its surroundings. It would not induce growth requiring the extension of existing school services or creation of new school facilities. No impact would occur.

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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 pesticide treatment and potential removal of beetle-infested trees in the Proposed Project area to promote existing tree survival and remove any dead, dying or decaying vegetation in the area. Though increased tree survival, along with the removal of dead and dying vegetation, may increase the visual appeal of the Project area, the Proposed Project would only restore the areas to their originally intended conditions. The use of the surrounding regional parks would not be expected to increase as a result of the Proposed Project, and there would be no increase in demand for additional parks in the area overall. No impact would occur.

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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 consist of pest mitigation and fuel reduction through treatment and removal of dead, dying and decaying trees in the Proposed Project area. 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 impact 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. **Less Than Significant Impact.** The Proposed Project activities would promote the survival of existing trees within the Project site, which includes unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon in western Orange County. Though increased tree survival may improve the visual appeal of the site and its surroundings, the Proposed Project would only restore the areas to their originally intended conditions; it would not induce any increase in the use of any facilities, including neighborhood and regional parks to a point where substantial physical deterioration of the facility would be expected. No impacts would occur.

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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 Impact.** The Proposed Project includes spraying pesticide on beetle-infested trees and infested tree removal along roadways and within a 100-foot buffer space within the unincorporated portions of Orange County. No recreational facilities would be constructed or expanded as a result of the Project. No impact would occur.
   * 1. Transportation

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| --- | --- | --- | --- | --- |
| 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 encompasses portions of the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon in western Orange County and consists of trees along and within a 100-foot buffer of roads spurring off of County roads S-18 and S-19 to the north east and east towards the Santa Ana Mountains. The Project site includes trees in both developed neighborhoods and uninhabited areas. However, the Proposed Project activities would involve a low level of intervention and would be limited along the roadways and buffer area within the site; the trucks required for the Project activities would travel along established roads and would use a 200-foot hose to spray pesticide on infested vegetation. It would help clear dead, dying and decaying vegetation from the area. This would be a beneficial Project to increase visibility along the roadways and should result in safer ingress and egress for vehicles, pedestrians, bikers, 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 Project activities, up to two large diesel trucks with attached pressurized rigs would be employed to spray pesticide 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 limited to tree removal, branch removal, stump grinding, pesticide spraying and soil injections in established roadways within the site boundaries. 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 within the open spaces and along the city streets, the Project would help improve visibility and access across the site. Thus, no impact 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 trucks required to execute Proposed Project activities would access the Project site using established roadways. The Proposed Project activities, including the treatment and removal of dead, dying and decaying vegetation from the Project site, would be temporary and intermittent. In addition to ensuring fuel reduction measures, it would help increase visibility along the roadways and cross streets and should result in safer ingress and egress for vehicles, pedestrians and 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 pesticide treatment, fuel 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 pavement 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 activities.

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 Proposed Project area through tree removal, branch removal, stump grinding, pesticide spray and soil injections. 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 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 removal of infested trees along roadways and within a 100 feet buffer 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 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 involves spraying pesticide on beetle-infested trees, and removal of dead, dying or decaying trees. The Project activities would generate minimal solid waste in the form of the pesticide product containers which would be strictly handled according to label and label supplement specifications. Any solid waste generated in the form of chipped parts of the trees would be hauled away in a covered bin to green waste facilities or chipped onsite at the predetermined locations to be solarized. 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.** The Proposed Project activities include spraying pesticide on and removal of beetle-infested trees and subsequent ongoing maintenance. The Proposed Project, therefore, would generate minimal solid waste in the form of pesticide containers. These would be disposed of by strictly following label and label supplement specifications. The limited beetle infested tree material that may be removed from the Proposed Project site would be chipped into green waste bins and hauled away in a covered bin to green waste facilities or chipped onsite at predetermined locations to be solarized. There are seven permitted green waste facilities located throughout the County that would be available for the Proposed Project (County 2012). Impacts would be less than significant.

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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.** As discussed in Impact e), the Proposed Project would generate limited solid waste in the form of pesticide containers and tree material. The Proposed Project activities, at all times, would strictly follow label and label supplement specifications during application and disposal of pesticides. The minimal tree waste generated during the ongoing maintenance, would also be disposed of at a green waste facility or solarized at predetermined locations onsite, 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 trees treated as a part of the Proposed Project, as noted in Section 2.1.1, are located within an SRA VHFSZ defined by CalFire (CalFire 2007). However, Project activities are temporary and intermittent throughout the Project site. Moreover, the Proposed 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. It would help clear out dead, dying and decaying vegetation from the area which would, in turn, be beneficial to increase visibility along the roadways and result in safer ingress and egress for emergency vehicles after implementation of the Project. No impact would occur.

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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 with wildfires by eliminating tree pests that increase tree mortality and consequently removing dead, dying and decaying trees that are potential fuel for wildfires. Thus, in spite of its location within a VHFSZ, the Project activities would be beneficial in reducing wildfire risks and uncontrolled spread of a wildfire in the area. No impact would occur.

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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 treatment and removal of beetle-infested trees and do 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 impact 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 a sloping terrain in the unincorporated communities of Trabuco Canyon, Modjeska Canyon, Silverado, and Santiago Canyon, the Project activities aim to reduce the wildfire risks in the area by removal of fire-prone, beetle-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 will 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 pesticide, 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 the Project site’s 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 Proposed Project would have no impact or a less than significant impact, it would not contribute to cumulative impacts. The Project is only to promote existing tree survival in the area and is not growth-inducing; thus, it would not contribute to the cumulative effects of population growth.

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

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| --- | --- | --- | --- | --- |
| c) Does the project have environmental effects which will 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. **No Impact.** The implementation Project would only involve promote existing tree survival in the area 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 Proposed 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.

Noise from the Proposed Project related activities would be minor, temporary and localized within the Proposed Project site, which is mostly rural and forested. It would not significantly impact the areas surrounding the Project site. Thus, the Proposed Project activities are not expected to result in a perceivable cumulative increase in ambient noise levels. As a result, the noise levels associated with Proposed Project activities would not be considered cumulatively considerable. With regard to operational noise, the Proposed 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.

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