

5.17 FOREST RESOURCES

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Spring Trails Specific Plan (proposed project) to impact forest resources in the County of San Bernardino and the City of San Bernardino.

The CEQA Guidelines as updated and effective March 18, 2010, added forest resources to the Appendix G checklist (Section II, *Agriculture and Forest Resources*, parts c, d, and e). Project impacts to agricultural resources were determined to be less than significant in the Initial Study, included as Appendix A1. This section addresses the forest resource checklist questions, including impacts to timber and other commercial forestry products. Other issues associated with the onsite tree resources include aesthetics, biology, recreation, greenhouse gas, and water quality, which are discussed elsewhere in this Draft EIR. The analysis in this section is based in part on the following technical reports:

- *Arborist Report, Martin Ranch, San Bernardino County*, Integrated Urban Forestry, 1998
- *Post-disturbance Arborist Report Update, Martin Ranch Project Site*, Michael Brandman Associates, August 2, 2007
- *Spring Trails Forest Resource Analysis*, Dudek, September 2, 2010

Complete copies of these studies are included in the Technical Appendices to this DEIR (Volume II, Appendices D1 and D4).

5.17.1 Environmental Setting

Federal, state, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

Regulatory Setting

Federal

San Bernardino National Forest Land and Resource Management Plan

The northern portion of the project site (approximately 160 acres) is within the boundaries of the San Bernardino National Forest (SBNF). Long-range goals and objectives for management of the SBNF are set forth in the San Bernardino National Forest Land and Resource Management Plan, adopted in 1988. The forest plan establishes the management and associated long-range goals and objectives for the SBNF; specifies standards, guidelines, approximate timing, and vicinity of the practices necessary to achieve that direction; and establishes monitoring and evaluation requirements and standards needed to ensure that the direction is carried out and to determine how well outputs and effects were predicted.

Although the project site is partially within the SBNF, the land is privately owned and is not part of the forest plan. The Record of Decision of the San Bernardino National Forest Land Management Plan, written by the Regional Forester for the Pacific Southwest Region, establishes the land to be included in the forest plan. The decision "...applies only to the San Bernardino National Forest and does not apply to any other federal, state, or private lands, although the effects to these lands and the effects of [the] decision on lands surrounding the national forest have been considered."



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State

Forest Land and Timberland Classification

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

Timberland: California PRC Section 4526. Land—other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land—that is available for and capable of growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others.

Timberland Production Zone: California PRC Section 51104. An area that has been zoned pursuant to PRC Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

Fire and Resource Assessment Program

The California Department of Fire and Forestry (CAL FIRE) published the Fire and Resource Assessment Program (FRAP) report to assess the amount and extent of California's forests and rangelands, analyze their conditions, and identify alternative management and policy guidelines with an eye toward sustainable forest management practices (CAL FIRE 2003a). As part of FRAP, CAL FIRE produced maps showing both the land cover and landscape management areas for the State of California.

Timberland Productivity Zones

The Timberland Productivity Act of 1982 was adopted to protect properties conducting timber operations from being prohibited or restricted due to conflict or apparent conflict with surrounding land uses. The Act requires counties and cities in California with productive timberland to establish timberland productivity zones (TPZ) to prevent the conversion of these lands to other land uses.

Local

City of San Bernardino Tree Ordinance

The City of San Bernardino has adopted an ordinance (City of San Bernardino Municipal Code Section 19.28.090) that is designed to conserve important tree resources. The ordinance states:

Removal of healthy, shade providing, aesthetically valuable trees shall be discouraged. In the event that more than five trees are to be cut down, uprooted, destroyed or removed within a 36 month period, a permit shall first be issued by the Department of Parks, Recreation and Community Services.

Prior to any permit issued for tree removal, all existing trees on-site shall be surveyed by the Department of Parks, Recreation and Community Services at the developer's expense. Unless there is a pre-approved tree replacement plan, each tree that is removed in a new subdivision and is considered to be of significant value by the Department shall be replaced with a 36-inch box specimen tree in the subdivision in addition to any other required landscaping. Such a plan does not necessarily require a tree-for-tree replacement provision.

Commercial tree farms, City Government projects, and individual, single-family residential lots less than one acre shall be exempt from this provision.

Existing Forest and Timberland Uses

Arborist reports were prepared for the site in 1998 and 2007 (IUF 1998; MBA 2007c). The 2007 report was prepared as an update of conditions on the site following the October 2003 Old Fire. A general inventory and assessment of the condition of the trees on the site were undertaken during both the 1998 and 2007 surveys. The 2007 report found that the native tree species on the site had vigorously recovered from the effects of the 2003 fire.

The 1998 survey found approximately 4,000 trees on the project site. Approximately 34 percent were native tree species, while the remaining 66 percent were eucalyptus and nonnative ornamental species. Eucalyptus trees constituted the majority of the nonnative species, with approximately 2,560 trees located on the site. These trees were originally planted for lumber and fuel wood. Evidence was present to suggest that the eucalyptus on the site had been harvested numerous times. Evidence also suggested that the trees had been damaged during previous fire events. Both of these determinations were made based on the presence of stump sprouts that likely became established following fire damage or coppicing (i.e., a way of harvesting trees that grow shoots from stumps or roots). A number of other nonnative species were also observed on the site, including tree-of-heaven, olive, and fruit-bearing orchard trees such as apricot, peach, and apple trees.

The 1998 survey found approximately 1,350 native trees on the project site, not including small trees or multitrunked shrubs. Native trees included California bay, California black walnut, white alder, California sycamore, and canyon live oak. See Table 5.3-3 for summary of the native tree species identified on the site during the 1998 survey.



5.17.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- FOR-1 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)).
- FOR-2 Result in the loss of forest land or conversion of forest land to non-forest use.
- FOR-3 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

5.17.3 Environmental Impacts

The Spring Trails project assumes that the Southern California Edison (SCE) overhead electric lines that traverse the western portion of the site will be located underground. In the event that the overhead electric lines cannot be located underground, an alternative plan accommodating the lines above ground, as shown in Chapter 3, *Project Description*, Figure 3-3A, *Alternative (Overhead Electric Lines) Development Plan*, is proposed for the project site. The alternative plan for Spring Trails is the same as the preferred plan in every respect except for the treatment of the land beneath the aboveground electric lines and the number of

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residential lots. The alternative plan contains 304 single-family detached units compared to 307 units proposed in the preferred development plan. Both scenarios are analyzed in this section to assess their respective impacts to forest resources.

The proposal also includes the annexation of an adjacent 26.4-acre area consisting of six parcels owned by various property owners, with four of the lots occupied. The annexation area is not located within the boundaries of the San Bernardino National Forest. A land use proposal has not been submitted for this 26.4-acre area and it is not owned or otherwise under the control of the applicant. For these reasons, no development is expected to occur on these parcels, and therefore would not contribute to impacts related to forest resources.

The arborist reports prepared for the project site determined that development of the proposed project would result in the removal of approximately 2,400 trees. The bulk of native trees on the site are located within and around Cable Creek or in the northern portion of the site (see Table 5.3-3) and are not within the development footprint (see Figure 5.1-1). These trees would not be impacted by the project. Of the approximately 2,400 trees within the development footprint, only about 220 of these (less than 1 percent) are native species, mostly walnut and sycamore. The majority of the trees requiring removal are part of a remnant eucalyptus plantation (approximately 2,170 trees). The remaining nonnative trees that would be removed consist of approximately 10 ornamental nonnative trees.

IMPACT 5.17-1: THE PROPOSED PROJECT SITE IS NOT CONSIDERED FOREST LAND, TIMBERLAND OR ZONED AS TIMBERLAND PRODUCTION. [THRESHOLD FOR-1]

Impact Analysis:

The following analysis is applicable to both the preferred development plan and the alternative (overhead electric lines) development plan.

Forest Land

Implementation of the proposed project would develop single-family residences and result in the removal of 220 native tree species on the project site. However, the project site is not considered forest land because it cannot and has not supported 10-percent native tree cover (Dudek 2010b). Therefore, the proposed project would conflict with project site's ability to continue to be designated as forest land.

Timberland

The project site was previously been used for agriculture, and a previous landowner grew eucalyptus trees to be used as windrows for crop protection, with a secondary use as firewood (Dudek 2010). Despite the presence of the eucalyptus trees, the site does not include timberland as defined by PRC Section 4526, which would require the project site to be capable of growing "a crop of trees of any commercial species used to produce lumber and other forest products." Per Section 895.1 of Title 14 of the California Code of Regulations (CCR), "commercial species" is defined as "those species found in group A and those in group B that are found on lands where the species in group A are now growing naturally or have grown naturally in the recorded past." The commercial species list for the Southern Forest District is shown in Table 5.17-1.

**Table 5.17-1
Southern District Commercial Species List**

Group A	
Coulter pine (<i>Pinus coulteri</i>)	Douglas fir (<i>Pseudotsuga menziesii</i>)
Jeffrey pine (<i>Pinus jeffreyi</i>)	California red fir (<i>Abies magnifica</i>)
Ponderosa pine (<i>Pinus ponderosa</i>)	White fir (<i>Abies concolor</i>)
Sugar pine (<i>Pinus lambertiana</i>)	Incense cedar (<i>Libocedrus decurrens</i>)
Lodgepole pine (<i>Pinus contorta</i>)	Coast redwood (<i>Sequoia sempervirens</i>)
Monterey pine (<i>Pinus radiata</i>)	Sierra redwood (<i>Sequoiadendron giganteum</i>)
Western white pine (<i>Pinus monticola</i>)	Mountain hemlock (<i>Tsuga mertensiana</i>)
Group B	
White alder (<i>Alnus rhombifolia</i>)	Pacific madrone (<i>Arbutus menziesii</i>)
Cottonwood (<i>Populus fremontii</i>)	California black oak (<i>Quercus kelloggii</i>)
Eucalyptus (<i>Eucalyptus</i> sp.)	Tanoak (<i>Lithocarpus densiflorus</i>)

Source: Section 895.1, Title 14 of CCR.

Although eucalyptus trees are included in group B, the project site does not have any naturally occurring trees of species that are included in group A (see Table 5.3-3; IUF 1998; MBA 2007). Therefore, per this definition, the project site does not meet the definition of timberland. Implementation of the proposed project would not conflict with or cause a rezoning of any designated timberland areas.

Timberland Production

The project site is in the Verdmont community of unincorporated San Bernardino County and in the City of San Bernardino’s sphere of influence (SOI). The project site is not currently zoned for timberland production per CPRC 51104. The site is currently subject to County of San Bernardino’s General Plan and Zoning Code. As shown in Figure 4.6 of the County’s General Plan, “Land Use Designations,” the northern portion of the site, approximately 160 acres, is designated as private unincorporated land within the San Bernardino National Forest. The southern portion of the site, approximately 190.6 acres, is designated Rural Living (RL-5), which allows up to one dwelling unit per five acres. Since the project site is within the City of San Bernardino’s SOI, the entire project site is currently rezoned by the City as Residential Estate (RE), allowing one dwelling unit per acre. Therefore, implementation of the proposed project would not conflict with or cause a rezoning of any timberland production zone, and impacts would be less than significant.



IMPACT 5.17-2: THE PROPOSED PROJECT WOULD REMOVE 220 NATIVE TREES, REQUIRING REPLACEMENT OF TREES PER THE CITY’S TREE ORDINANCE. [THRESHOLDS FOR-2 AND FOR-3]

Impact Analysis: Implementation of the project would involve the removal of approximately 2,400 trees within the development footprint. Approximately 220 of these are native species and 2,170 are eucalyptus. This analysis is applicable to both the preferred development plan and the alternative (overhead electric lines) development plan.

Native Tree Species

The areas of Cable Creek, Cable Canyon, and Meyer Creek contain the majority of native trees (see Table 5.3-3). However, the proposed project would be required to comply with the City’s Tree Ordinance, which would require replacement of any removed native trees (see Impact 5.3-5). Native species of trees within this affected area would have the potential to be impacted by development from direct removal of forest resources and indirectly from forest resources removed as a result of fuel modification activities. Areas within

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Fuel Modification Zone B would require removal of all undesirable plant species, while areas within Zone A would require a 50 percent thinning of native species.

The City's Tree Ordinance requires that "significant" trees be mitigated. In determining what constitutes a significant tree, the initial arborist report prepared for the site (IUF 1998) determined that healthy, structurally sound native and ornamental trees over 20 feet in height would be considered significant. Approximately 220 trees on the site met these criteria during the 1998 tree inventory. Thus the removal of these trees during project development would be considered a potentially significant impact and thus subject to the requirements of the City's Tree Ordinance. To ensure that removed native trees are adequately replaced and to comply with the City's Tree Ordinance, impacts to forest resources are considered potentially significant without incorporation of Mitigation Measure 3-12.

Eucalyptus Trees

Eucalyptus trees present a particular problem for this site because they are nonnative and a severe fire hazard (see Impact 5.3-5). Eucalyptus can also be considered an invasive species (Dudek 2010). They were formerly included on List A of invasive species by the California Exotic Pest Plant Council (CalEPPC). List A of the Exotic Pest Plants of Greatest Ecological Concern in California consists of the most invasive wildland pest plants, documented as aggressive invaders that displace natives and disrupt natural habitats. The list highlights the nonnative plants that are serious problems in wildlands such as national forests. The project site shares its northern border with the San Bernardino National Forests and the eucalyptus trees are a potential threat to native plant communities in the national forest.

The 1999 CalEPPC exotic pest plant list was updated by the California Invasive Plant Council in 2006, and the status of blue gum eucalyptus changed to "moderate." Moderate invasive species have substantial and apparent ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal. The plant assessment form identifies this species' impacts on the abiotic and biotic ecosystem processes. Impacts include:

- Changes to fire intensity (increase)
- Affects local soil moisture regimes and light availability
- Litter reduces nitrogen mineralization rates in soil
- Allelopathic effects on other species
- Alters canopy structure, displacing most native species
- Inhibits germination and growth of native plant species
- Eliminates shrub and herbaceous layers
- Replaces a diversity of native plant species, including forage for wildlife
- Purported to cause mortality in native bird species
- May disrupt native bird migratory patterns

Based on these potential effects, the eucalyptus species poses a considerable threat to native tree and plant populations within and surrounding the project site.

The USDA Forest Service identifies the blue gum eucalyptus as highly flammable and recommends the tree not be planted near homes and other structures (Dudek 2010). The understory of dense eucalyptus stands are devoid of vegetation. Once the species becomes established it may suppress or eliminate other species. The leaves release a number of terpenes and phenolic acids that may be responsible for the lack of accompanying vegetation in plantations. This threatens the native trees and vegetation that occur in the

adjacent drainages on the project site and surrounding areas. These drainages offer optimal growing conditions for the eucalyptus to become established, proliferate, and suppress native vegetation.

Lastly, Section 12220(g) of the PRC defines "forest land" as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. The land where the eucalyptus trees are currently located cannot be identified as forest land because it cannot and has not supported 10 percent native tree cover. Furthermore, Section 4793(f) of the PRC defines "forest land conservation measures" as measures designed to protect, maintain, or enhance the forest resource system, including soil and watershed values, diversity of forest species, and protection of a forest stand from fire. These measures include thinning, shaded fuel breaks, and other land treatments or forest resource improvement projects consistent with PRC Section 4794 (Dudek 2010). Based on these considerations, the removal of the eucalyptus from the project site can be considered an overall benefit in protecting the adjacent native forest stands from fire and in maintaining a diversity of native species; therefore, it is a less than significant impact to forest resources.

5.17.4 Cumulative Impacts

The project would encroach upon forest lands. However, implementation of the project would not result in significant and unavoidable impacts to forest resources with incorporation of mitigation measures. Therefore, the proposed project would not cumulatively contribute to a loss of forest land or timberland, and cumulative impacts to forest resources would be less than significant. This analysis of cumulative impacts is applicable to both the preferred development plan and the alternative (overhead electric lines) development plan.

5.17.5 Existing Regulations and Standard Conditions

City of San Bernardino

- Municipal Code Section 19.28.090 (Tree ordinance)

5.17.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.17-1.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.17-2 The proposed project would remove 220 native trees, requiring replacement of trees per the City's tree ordinance.

5.17.7 Mitigation Measures

Impact 5.17-2

Mitigation Measure 3-13 from Section 5.3, *Biological Resources*, also applies to impacts to forest resources.

- 3-13 Significant tree resources that are removed from the site during project development shall be replaced at a 1:1 ratio or at the exchange ratios specified below. Significant tree resources are defined as any native or nonnative ornamental tree—excluding species of the *Eucalyptus* genus—that is healthy, structurally sound, and over 20 feet in height. Prior to the issuance of



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grading permits, a certified arborist shall conduct an inventory of all significant trees within the development footprint. This inventory shall be used to determine the number and types of significant trees that will be impacted and the subsequent replacement quantities. The number of replacement trees shall be, at a minimum, 220. Should the aforementioned inventory determine that a greater number of significant trees will be impacted, then that quantity shall be used in determining replacement quantities. The following exchange ratios shall be used: 1) one 36-inch box tree is equivalent to one replacement tree; 2) five 15-gallon trees are equivalent to one replacement tree; 3) ten 5-gallon trees are equivalent to one replacement tree; and 4) fifteen 1-gallon trees are equivalent to one replacement tree.

During the development of the project, the project applicant shall incorporate the recommendations as set forth in the project arborist report (Integrated Urban Forestry 1998). A certified arborist shall be retained at the developer's expense to oversee the implementation of these requirements and to specify other requirements as deemed appropriate. The measures to be followed include, but are not limited to, specified protocols for the following: 1) the removal of nonnative trees from the site; 2) the removal and transplantation, when feasible, of structurally sound and healthy native trees to other areas of the project site; 3) the installation of tree protection barriers on all trees to be preserved that are within the reach of vehicles and equipment; 4) tree protection training of construction personnel by a certified arborist; 5) irrigation of trees where the natural water supply is interrupted or diminished or where protected trees may require additional water to endure construction-induced stresses; 6) subsequent replacement of any trees that are damaged or have not survived transplantation and relocation; and 7) implementation of the tree replacement plan, as outlined in the first paragraph of this measure. This measure shall be implemented to the satisfaction of the Development Services Director.

5.17.8 Level of Significance After Mitigation

Impact 5.17-2

Incorporation of Mitigation Measure 3-13 would ensure that any removed native tree identified as significant would be replaced with another native tree. Overall, the mitigation measure includes protocols for removal and relocation of native trees, tree protection during construction, and the preservation of specific trees on the project site. Performance measures are provided to mandate replacement ratios and the types and sizes of specimens required to meet the terms of the mitigation. Measures are also included to mandate improvements to tree resources in specific areas of the site and would ensure the protection and preservation of the remaining natives onsite. As this mitigation would replace all removed native trees and preserve all other native tree species onsite, potential impacts associated with loss of forest resources would be reduced to a less than significant level.