

2.15 Plant Species

2.15.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.17, Threatened and Endangered Species, in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. The California Department of Transportation (Caltrans) projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Sections 1900–1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000–21177.

2.15.2 Affected Environment

The information presented in this section was compiled from two technical reports prepared in 2017 and 2018, including the Amended Natural Environment Study prepared for the SR-133 Safety Improvement Project at El Toro Road (EA 0N0600) and the Natural Environment Study prepared for the SR-133 Improvement Project (EA 0Q3600).

Literature reviews, records searches, and appropriately timed botanical surveys were conducted in 2016 and 2017 to identify the existence or potential occurrence of sensitive or special-status plant species located within or in the vicinity of the Biological Study Area (BSA). For special-status plant species, the BSA is defined as area of direct effects of the Build Alternative plus a 100-foot (ft) buffer. The literature

review and records search area covered the following 7.5-minute United States Geological Survey (USGS) quadrangles: *Dana Point*, *El Toro*, *Laguna Beach*, *Newport Beach*, *San Juan Capistrano*, and *Tustin*. Of the 56 special-status plant species identified in the literature review, 27 species have suitable habitat present within the BSA, as confirmed during the focused botanical surveys.

Of the 27 special-status plant species with habitat present in the BSA, four are federally and/or State-listed as endangered or threatened species and are not discussed in this section (refer to Section 2.17, Threatened and Endangered Species). Two non-listed special-status plant species with potentially suitable habitat in the BSA (cliff spurge [*Euphorbia misera*] and California box-thorn [*Lycium californicum*]) are considered absent from the BSA because these conspicuous perennial shrubs were not observed during focused botanical surveys. The remaining 21 non-listed special-status plant species (not State or federally listed but those with a California Rare Plant Rank listing of 1, 2, 3, or 4) identified in the records searches have suitable habitat present within the BSA and at least a low probability of occurrence within the BSA:

- Chaparral sand-verbena (*Abronia villosa* var. *aurita*)
- Coulter's saltbush (*Atriplex coulteri*)
- Catalina mariposa lily (*Calochortus catalinae*)
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*)
- Lewis' evening-primrose (*Camissoniopsis lewisii*)
- Southern tarplant (*Centromadia parryi* ssp. *australis*)
- Western dichondra (*Dichondra occidentalis*)
- Many-stemmed dudleya (*Dudleya multicaulis*)
- Palmer's grapplinghook (*Harpagonella palmeri*)
- Vernal barley (*Hordeum intercedens*)
- Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)
- Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*)
- Cliff malacothrix (*Malacothrix saxatilis* var. *saxatilis*)
- Allen's pentachaeta (*Pentachaeta aurea* ssp. *allenii*)
- South coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*)
- Nuttall's scrub oak (*Quercus dumosa*)
- Chaparral ragwort (*Senecio aphanactis*)
- San Bernardino aster (*Symphotrichum defoliatum*)
- Paniculate tarplant (*Deinandra paniculata*)
- Southern California black walnut (*Juglans californica* var. *californica*)
- Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)

Three of the non-listed special-status species listed above were observed within the BSA during the focused botanical surveys and are discussed below: paniculate tarplant, southwestern spiny rush, and southern California black walnut. The following five non-listed special-status plant species are also discussed below because they have at least a moderate probability of occurrence within the BSA: south coast branching phacelia, vernal barley, many-stemmed dudleya, intermediate mariposa lily, and Catalina mariposa lily.

The remaining non-listed special-status species are not expected to occur within the BSA or have a low probability of occurrence within the BSA because suitable habitats are absent, there are no known occurrences in the vicinity of the BSA, the species were not observed in the BSA during appropriately-timed surveys, and/or the BSA is outside of the known geographic or elevation range for the species. Therefore, these species are not discussed further below. The Amended Natural Environment Study prepared for the SR-133 Safety Improvement Project at El Toro Road (EA 0N0600) and the Natural Environment Study prepared for the SR-133 Improvement Project (EA 0Q3600) provide further details regarding the rationale for determinations regarding each species' potential to occur within the BSA.

2.15.2.1 Paniculate Tarplant

Paniculate tarplant is a non-listed special-status southern California annual herb that occurs in coastal sage scrub (CSS), grassland, and vernal pool habitats up to 3,055 ft in elevation. The species typically occurs on mesic soils and in disturbed areas. This species is considered rare due to its limited range and historical trends of habitat loss stemming from urban development and roadway construction. Paniculate tarplant has a California Rare Plant Rank (CRPR) of 4 (plants of limited distribution in California).

Individuals of this plant species were observed in multiple locations in the BSA during focused field surveys. Highly suitable habitat for this species occurs throughout the BSA; however, no individuals were observed within the direct effect limits of the Build Alternative.

2.15.2.2 Southwestern Spiny Rush

Southwestern spiny rush is a non-listed special-status southern California perennial rhizomatous herb that occurs in alkaline meadows and seeps, coastal marshes and swamps, and mesic coastal dunes up to 3,000 ft in elevation. This species is considered rare due to its limited range and historical trends of habitat loss stemming

from urban development and flood control activities. Southwestern spiny rush has a CRPR of 4 (plants of limited distribution in California).

Individuals of this plant species were observed in one location in the BSA during focused field surveys. Suitable habitat for this species occurs in several locations within the BSA; however, no individuals were observed within the direct effect limits of the Build Alternative.

2.15.2.3 Southern California Black Walnut

Southern California black walnut is a non-listed special-status perennial deciduous tree species of limited distribution within California. The species generally occurs on alluvial soils within CSS, chaparral, and riparian woodland habitats up to 3,000 ft in elevation. Southern California black walnut, particularly the walnut forest vegetation community, is considered rare due to its limited range, slow rate of reproduction, and historical trends of habitat loss stemming from urbanization, grazing, and non-native plants. The species has a CRPR of 4 (plants of limited distribution in California).

Individuals of this species were observed in multiple locations within the BSA during focused field surveys. Highly suitable habitat for this species occurs throughout the BSA, and several individuals are located within the direct effect limits of the Build Alternative.

2.15.2.4 Other Non-Listed Special-Status Plant Species

The following five non-listed special-status plant species were not observed within the BSA during project surveys, but have at least a moderate probability of occurrence within the BSA due to the presence of suitable habitats and known occurrences in the project vicinity: south coast branching phacelia, vernal barley, many-stemmed dudleya, intermediate mariposa lily, and Catalina mariposa lily. Each of these species occurs within CSS and other habitat types found within the BSA. Many-stemmed dudleya and intermediate mariposa lily have a CRPR of 1B (plants considered to be rare, threatened, or endangered in California and elsewhere). South coast branching phacelia and vernal barley have a CRPR of 3 (plants about which more information is needed). Catalina mariposa lily has a CRPR of 4 (plants of limited distribution in California).

None of these species was observed within the BSA during focused botanical surveys, although suitable habitat is present throughout the BSA for all five species, and these species are known to occur in the general project vicinity. The many-

stemmed dudleya is present on several rock outcrops within the 500 ft study area, well outside the direct effect limits of the Build Alternative.

2.15.3 Environmental Consequences

2.15.3.1 Temporary Impacts

Alternative 1 (Build Alternative)

Construction of the Build Alternative is not anticipated to result in direct temporary effects to paniculate tarplant, southwestern spiny rush, south coast branching phacelia, vernal barley, many-stemmed dudleya, intermediate mariposa lily, or Catalina mariposa lily because these species were not observed within the Build Alternative direct effect limits.

Construction of the Build Alternative would result in direct temporary effects to individual southern California black walnut trees. Such effects would involve tree damage associated with the trimming of trees for construction access or temporary construction work within the root zone of individual trees.

Construction of the Build Alternative has the potential to result in indirect temporary effects to the non-listed special-status species listed in Sections 2.15.2.1 through 2.15.2.4, above, if present in the BSA during construction, through increased dust, erosion, temporary changes in hydrology from dewatering, or the introduction of invasive species in areas adjacent to the project footprint. Implementation of Measures BIO-1 through BIO-6, provided in Section 2.13, Natural Communities, would avoid and/or minimize temporary indirect effects to non-listed special-status plant species by (1) designating ESAs that are to be preserved during construction, (2) restoring areas temporarily affected by construction activities, (3) utilizing best management practices (BMPs) to prevent construction runoff from entering adjacent habitat areas, (4) preventing the spread of invasive species, (5) monitoring construction activities to ensure that practicable measures are being employed to avoid and minimize incidental disturbance to sensitive resources, and (6) training all construction personnel regarding the applicable avoidance and minimization measures.

To further minimize and avoid direct temporary effects to southern California black walnut trees and other non-listed special-status plant species, ESA fencing will be installed around retained trees and any other identified special-status plant populations as specified in Measure BIO-11 and provided in Section 2.13, Natural Communities. In addition, implementation of Measures BIO-1 through BIO-6,

provided in Section 2.13, Natural Communities, would avoid and/or minimize temporary effects to southern California black walnut trees and other non-listed special-status plant species by (1) designating ESAs that are to be preserved during construction, (2) restoring areas temporarily affected by construction activities, (3) utilizing BMPs to prevent construction runoff from entering sensitive habitat areas, (4) preventing the spread of invasive species, (5) monitoring construction activities to ensure that practicable measures are being employed to avoid and minimize incidental disturbance to sensitive resources, and (6) training all construction personnel regarding the applicable avoidance and minimization measures. With implementation of Measures BIO-1 through BIO-6 and BIO-11, construction of the Build Alternative is not expected to result in temporary adverse effects to populations of any non-listed special-status plant species that have the potential to occur within the BSA.

Alternative 2 (No Build Alternative)

The No Build Alternative would not include construction of any of the project improvements and therefore, would not result in temporary effects to any non-listed special-status plant species. The existing operation of SR-133 would continue under the No Build Alternative.

2.15.3.2 Permanent Impacts

Alternative 1 (Build Alternative)

Construction of the Build Alternative may result in direct permanent effects to southern California black walnut trees associated with the removal of individual trees within the Build Alternative direct effect limits (e.g., where new roadway and drainage infrastructure would be added or where existing roadway and drainage infrastructure is modified). Loss of southern California black walnut trees would be addressed by the proposed compensatory mitigation for permanent effects to riparian habitats (refer to Measure BIO-11 detailed in Section 2.13, Natural Communities). No direct permanent effects to any other non-listed special-status plant species are anticipated because such species were not found within areas to be directly and permanently affected by the Build Alternative.

Construction of the Build Alternative may result in indirect permanent effects to paniculate tarplant and southwestern spiny rush due to the proximity of known occurrences or observed individuals of these species to the direct effect limits. Suitable habitat for south coast branching phacelia, vernal barley, many-stemmed dudleya, intermediate mariposa lily, and Catalina mariposa lily would also be

subjected to indirect effects, although these species are not known to occur in the BSA. Such indirect permanent effects may consist of erosion, changes in hydrology, or the introduction of invasive species in areas adjacent to the direct effects limits. If additional populations of special-status plant species are observed during pre-construction surveys, vegetation clearing, or project limit staking, additional ESA fencing will be installed around the plant populations as specified in Measure BIO-12.

With implementation of Measure BIO-12, along with Measures BIO-1 through BIO-6 and BIO-11 (described above and provided in Section 2.13, Natural Communities), construction of the Build Alternative is not expected to result in permanent adverse indirect effects to populations of non-listed special-status plant species that have the potential to occur within the BSA.

Alternative 2 (No Build Alternative)

The No Build Alternative would not include the construction or operation of any of the project improvements. Therefore, the No Build Alternative would not result in any of the permanent effects to non-listed special-status plant species described for the Build Alternative. Effects on these species within the BSA associated with the existing operation of SR-133 (e.g., dust, litter, degraded water quality from roadway runoff) would continue under the No Build Alternative.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

The following measure, in conjunction with Measures BIO-1 through BIO-6 and BIO-11 described in Section 2.13, Natural Communities, would be implemented to avoid, minimize, and/or compensate for effects to non-listed special-status plant species:

BIO-12

Special-Status Plant ESA Fencing. Retained southern California black walnut trees shall be protected in place and delineated by ESA fencing. If large populations of any other special-status plant species are observed during vegetation clearing or project limit staking, additional ESA fencing will be installed. For unavoidable direct effects to individual plants, attempts will be made to salvage the affected plants and incorporate them into the revegetation effort described in Measure BIO-2.

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