

## ***BIOLOGICAL ENVIRONMENT***

### **2.15 Natural Communities**

#### **2.15.1 Regulatory Setting**

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

No habitat areas have been designated as critical habitat under the Federal Endangered Species Act within the project area. Wetlands and other waters are also discussed below in Section 2.16, Wetlands and Other Waters.

#### **2.15.2 Affected Environment**

Information presented in this section was obtained from the Natural Environment Study/minimal impacts report (NES [mi]) (January 2019).

##### **2.15.2.1 Local Requirements**

##### **Orange County Transportation Authority Measure M2 (Natural Communities Conservation Plan/Habitat Conservation Plan)**

In 2006, Orange County voters approved the renewal of Measure M, effectively extending the half-cent sales tax to provide funding for transportation projects and programs in the county. As part of the renewed Measure M (or Measure M2), a portion of the M2 freeway program revenues were set aside for the M2 Environmental Mitigation Program (EMP) to provide funding for programmatic mitigation to offset impacts from the freeway projects in the 13 freeway segments covered by Measure M2. The proposed project is included as one of the covered projects under the NCCP/HCP (or Plan) and is referred to as Project F. OCTA prepared the Plan as a mechanism to offset potential project-related effects on threatened and endangered species and their habitats in a comprehensive manner. The Plan achieves higher value conservation than what would be expected through project-by-project mitigation in exchange for a streamlined project review and permitting process for the Measure M2 freeway program as a whole.

The Plan fulfills the requirements for issuance of permits from CDFW and U.S. Fish and Wildlife Service (USFWS), collectively referred to as the Wildlife Agencies, which allows for the take of threatened and endangered species and their habitats. OCTA is the sole Permittee receiving permits from the Wildlife Agencies with terms of 40 years from the date of issuance. Caltrans, as the owner and operator of the state highway system, is included as a Participating Special Entity (ICF 2016).

### 2.15.2.2 Biological Study Area

The Study Area assessed for biological resources is referred to as the biological survey area (BSA). The BSA for sensitive biological resources included a 0.5-mile buffer from the centerline of the proposed project to capture any potential direct and indirect impacts resulting from the proposed project (approximately 6.5 linear miles along SR 55) and is shown in Figure 2.15-1 (maps 1 through 9). The northern limit of the BSA is in the City of Anaheim at SR 91. The BSA's southern terminus is south of the I-5/SR 55 interchange in the City of Tustin.

The proposed project segment of SR 55 and the BSA traverses parts of the cities of Santa Ana, Tustin, Orange, and Anaheim in Orange County. The BSA comprises mostly urban settings consisting of residential, recreation, commercial, and undeveloped land uses. Santiago Creek passes under SR 55 just north of SR 22 toward the middle of the BSA.

### 2.15.2.3 Vegetation

#### Disturbed Riparian

The majority of the right-of-way within the proposed project consists of the existing SR 55 corridor, including freeway lanes, retaining and sound walls, median strips and other barriers, on-ramps and off-ramps, two freeway interchange systems (with SR 22 and I-5), connector lanes, arterial roadway under- and overcrossings, and various infrastructure associated with SR 55. These developed areas do not support any vegetation or provide resources that would be of value to wildlife in general. Vegetation mapping is provided in Figure 2.15-1 (maps 1 through 9). One disturbed riparian woodland/scrub natural community was observed within the Study Area. The disturbed riparian area occurs along Santiago Creek primarily between SR 55 and Chapman Avenue. A remnant of riparian vegetation within Santiago Creek is best described as a black willow-seep willow alliance (*Salix goodingii-Baccharis salicifolia* association) based on descriptions in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). The black willows represent a riparian habitat with near permanent subsurface water, and the seep willow represents disturbed drier riparian habitat.

Based on the three plant surveys, 65 species of plants were observed growing within the banks of Santiago Creek in the vicinity of SR 55. Many of the species are escaped ornamentals (19 species) or non-native weeds (31 species) (see Table 2.15-1). Much of the banks are rip-rap lined and lack vegetation. The channel bottom contains non-native weedy annuals which were all dried when the plant survey was conducted. Two patches of riparian vegetation are separated artificially by man-made disturbances. One is southwest of the Chapman Avenue bridge, and the other is north of Chapman Avenue.

Most of the Santiago Creek survey area does not contain loose sand; the soil texture is clay. The soil and rocks are cemented by the high concentration of calcium and sodium salts in the main channel bottom. Numerous paths are present within the riparian vegetation along with large amounts of trash, and the quality of riparian vegetation is low. The native vegetation occurs as isolated patches of mature individuals.

Figure 2.15-1. Vegetation Map (1 of 9)



Figure 2.15-1. Vegetation Map (2 of 9)



Figure 2.15-1. Vegetation Map (3 of 9)



Orange County Parcels  
 Vegetation Classification:  
 Landscape Ornamental  
 Ruderal

EA 0K7200  
 Federal Project Number:  
 1213000149  
 Project Limits:  
 12 ORA 55 PM 10.4 - R17.9

SR-55 Improvement Project: I-5 to SR-91  
 Vegetation  
 Map 3 of 9

9/25/2018

Figure 2.15-1. Vegetation Map (4 of 9)



Figure 2.15-1. Vegetation Map (5 of 9)

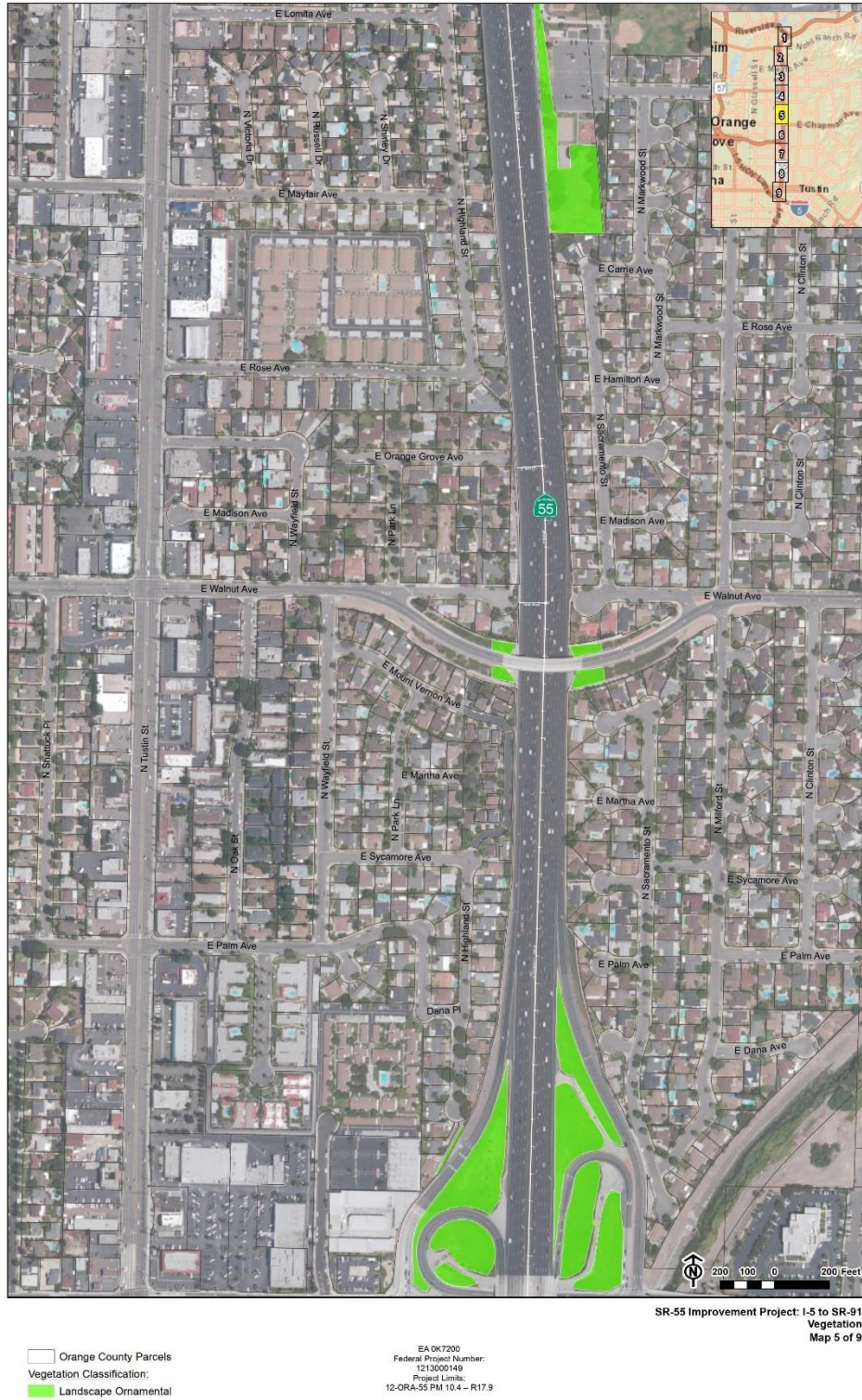


Figure 2.15-1. Vegetation Map (6 of 9)





Figure 2.15-1. Vegetation Map (7 of 9)



Figure 2.15-1. Vegetation Map (8 of 9)



SR-55 Improvement Project: I-5 to SR-91  
Vegetation  
Map 8 of 9

Orange County Parcels  
Vegetation Classification:  
Landscape Ornamental

EA 0K7200  
Federal Project Number:  
1213000149  
Project Limits:  
12-ORA-55 PM 10.4 - R17.9

9/25/2018

Figure 2.15-1. Vegetation Map (9 of 9)



**Table 2.15-1: Plants Observed within Study Area**

| Scientific Name                  | Common Name          | Species Type    | Abundance |
|----------------------------------|----------------------|-----------------|-----------|
| <i>Abelia grandiflora</i>        | Chinese abelia       | ornamental      | LC        |
| <i>Acacia baileyi</i>            | Bailey's acacia      | ornamental      | R         |
| <i>Ailanthus altissimum</i>      | tree-of-heaven       | non-native weed | R         |
| <i>Artemisia californica</i>     | coast sagebrush      | NA              | UN        |
| <i>Arundo donax</i>              | giant reed           | non-native weed | R         |
| <i>Asclepias curassavicum</i>    | milkweed             | non-native weed | R         |
| <i>Avena barbata</i>             | slender wild oats    | non-native weed | FC        |
| <i>Avena fatua</i>               | wild oats            | non-native weed | FC        |
| <i>Baccharis pilularis</i>       | coyote bush          | NA              | R         |
| <i>Baccharis salicifolia</i>     | seep willow          | NA              | FC        |
| <i>Bebbia juncea</i>             | sweet bush           | NA              | LC        |
| <i>Bidens pilosa</i>             | tickseed             | non-native weed | R         |
| <i>Bougainvillea glabra</i>      | bougainvillea        | ornamental      | R         |
| <i>Bromus diandrus</i>           | ripgut brome         | non-native weed | FC        |
| <i>Bromus madritensis rubens</i> | red brome            | non-native weed | FC        |
| <i>Bromus carthacicus</i>        | rescue grass         | non-native weed | R         |
| <i>Carpobrotus edulis</i>        | pickleweed iceplant  | ornamental      | LC        |
| <i>Cassia sp.</i>                | cassia               | ornamental      | LC        |
| <i>Centaurea melitensis</i>      | yellow star thistle  | non-native weed | R         |
| <i>Chenopodium album</i>         | lambquarter          | non-native weed | R         |
| <i>Chenopodium murale</i>        | nettleleaf goosefoot | non-native weed | R         |
| <i>Convolvulus arvensis</i>      | field bindweed       | non-native weed | R         |
| <i>Croton setigerus</i>          | doveweed             | NA              | UN        |
| <i>Cupaniopsis anacardioides</i> | carrotwood           | ornamental      | UN        |
| <i>Cynodon dactylon</i>          | Bermuda grass        | non-native weed | FC        |
| <i>Cyperus esculentus</i>        | yellow nutsedge      | non-native weed | UN        |
| <i>Datura wrightii</i>           | Jimsonweed           | non-native weed | R         |
| <i>Descaurainia sophia</i>       | flixweed             | non-native weed | UN        |
| <i>Encelia californica</i>       | California encelia   | NA              | UN        |
| <i>Erigeron canadensis</i>       | Canadian horseweed   | non-native weed | FC        |
| <i>Eriogonum fasciculatum</i>    | bush buckwheat       | NA              | FC        |
| <i>Eucalyptus camaldulensis</i>  | red river gum        | ornamental      | UN        |
| <i>Eucalyptus citriodora</i>     | lemon gum            | ornamental      | R         |
| <i>Eucalyptus viminalis</i>      | ribbon gum           | ornamental      | UN        |
| <i>Euphorbia maculata</i>        | spotted spurge       | non-native weed | FC        |
| <i>Ficus carica</i>              | edible fig           | ornamental      | R         |
| <i>Ficus elastica</i>            | rubber plant         | ornamental      | R         |
| <i>Ficus repens</i>              | creeping fig         | ornamental      | LC        |
| <i>Foeniculum vulgare</i>        | fennel               | non-native weed | UN        |
| <i>Fraxinus latifolia</i>        | Oregon Ash           | ornamental      | UN        |
| <i>Gazania rigens</i>            | gazania              | ornamental      | FC        |
| <i>Hedera canariensis</i>        | Algerian ivy         | ornamental      | LC        |

| Scientific Name                        | Common Name          | Species Type    | Abundance |
|--|----------------------|-----------------|-----------|
| <i>Helianthus annuus</i>               | annual sunflower     | non-native weed | UN        |
| <i>Helmenthotheca echioides</i>        | bristly ox tongue    | non-native weed | UN        |
| <i>Heliotropium curasavicum</i>        | Chinese pusley       | NA              | R         |
| <i>Heterotheca grandiflora</i>         | telegraph weed       | NA              | R         |
| <i>Hirschfeldia incana</i>             | biennial mustard     | non-native weed | UN        |
| <i>Isocoma menziesii</i>               | coastal goldenbush   | NA              | LC        |
| <i>Juglans sp.</i>                     | walnut               | ornamental      | R         |
| <i>Koelreuteria paniculata</i>         | golden raintree      | ornamental      | FC        |
| <i>Lactuca serriola</i>                | prickly lettuce      | non-native weed | UN        |
| <i>Lagerstroemia indica</i>            | crape myrtle         | ornamental      | R         |
| <i>Lantana montevidensis</i>           | lantana              | ornamental      | R         |
| <i>Lepidospartum squamatum</i>         | chaparral broom      | NA              | UN        |
| <i>Leptochloa fasciculatum</i>         | bearded sprangletop  | non-native weed | UN        |
| <i>Lobularia maritima</i>              | sweet alyssum        | ornamental      | R         |
| <i>Lonicera japonica</i>               | Japanese honeysuckle | ornamental      | UN        |
| <i>Magnolia grandiflora</i>            | southern magnolia    | ornamental      | R         |
| <i>Malva parviflora</i>                | cheeseweed           | non-native weed | UN        |
| <i>Marrubium vulgare</i>               | horehound            | non-native weed | UN        |
| <i>Melaleuca quinquervia</i>           | paperbark tree       | ornamental      | UN        |
| <i>Melilotus albus</i>                 | white sweetclover    | non-native weed | R         |
| <i>Melilotus officinalis</i>           | yellow sweetclover   | non-native weed | UN        |
| <i>Mirabilis coccinea</i>              | four o'clock         | ornamental      | LC        |
| <i>Morus alba</i>                      | fruitless mulberry   | ornamental      | R         |
| <i>Myoporum parviflorum prostratum</i> | prostrate myoporum   | ornamental      | FC        |
| <i>Nerium oleander</i>                 | oleander             | ornamental      | UN        |
| <i>Nicotiana glauca</i>                | Indian tobacco       | non-native weed | UN        |
| <i>Olea europa</i>                     | European olive       | ornamental      | R         |
| <i>Opuntia littoralis</i>              | coast prickly pear   | NA              | UN        |
| <i>Paspalum dilatatum</i>              | Dallis grass         | non-native weed | UN        |
| <i>Pennisetum clandestinum</i>         | Kikuyu grass         | non-native weed | UN        |
| <i>Pennisetum setaceum</i>             | fountain grass       | non-native weed | UN        |
| <i>Penstemon sp.</i>                   | beard tongue         | NA              | R         |
| <i>Phoenix dactylifera</i>             | Phoenix date palm    | ornamental      | R         |
| <i>Photinia fraseri</i>                | Fraser's photinia    | ornamental      | R         |
| <i>Pinus canariensis</i>               | Canary Island pine   | ornamental      | UN        |
| <i>Pipantherum miliaceum</i>           | smilo grass          | non-native weed | FC        |
| <i>Platanus racemosa</i>               | California sycamore  | NA              | R         |
| <i>Plantago lanceolata</i>             | narrow leaf ribgrass | non-native weed | R         |
| <i>Plantago major</i>                  | broadleaf ribgrass   | non-native weed | R         |
| <i>Polygonum arenastrum</i>            | knotweed             | non-native weed | R         |
| <i>Polypogon monspeliensis</i>         | rabbitsfoot grass    | non-native weed | C         |
| <i>Quercus agrifolia</i>               | coast live oak       | NA              | UN        |
| <i>Quercus ilicifolia</i>              | holly oak            | ornamental      | R         |

| Scientific Name                                  | Common Name            | Species Type    | Abundance |
|--|------------------------|-----------------|-----------|
| <i>Raphanus sativa</i>                           | wild radish            | non-native weed | UN        |
| <i>Raphiolepis indica</i>                        | India hawthorn         | ornamental      | LC        |
| <i>Ricinus communis</i>                          | castor bean            | non-native weed | R         |
| <i>Rumex obtusifolius</i>                        | bitter dock            | non-native weed | UN        |
| <i>Salix gooddingii</i> (var <i>variabilis</i> ) | black willow           | NA              | LC        |
| <i>Salvia mellifera</i>                          | black sage             | NA              | UN        |
| <i>Salsola tragus</i>                            | tumbleweed             | non-native weed | UN        |
| <i>Schinus terebenthifolius</i>                  | Brazilian pepper       | ornamental      | R         |
| <i>Schinus molle</i>                             | California pepper tree | ornamental      | UN        |
| <i>Sisymbrium altissimum</i>                     | tumble mustard         | non-native weed | R         |
| <i>Sonchus oleracea</i>                          | sowthistle             | non-native weed | C         |
| <i>Tradescantia fluminensis</i>                  | small-leaf spiderwort  | ornamental      | LC        |
| <i>Typha</i> sp.                                 | cattails (sterile)     | NA              | UN        |
| <i>Ulmus americana</i>                           | American elm           | ornamental      | R         |
| <i>Ulmus parvifolia</i>                          | Chinese elm            | ornamental      | R         |
| <i>Urtica urens</i>                              | stinging nettle        | NA              | R         |
| <i>Vitis</i> sp.                                 | ornamental grape       | ornamental      | LC        |
| <i>Yucca gloriosa</i>                            | soft-tipped yucca      | ornamental      | UN        |
| <i>Washingtonia mexicana</i>                     | Mexican fan palm       | ornamental      | R         |

**Notes:** NA: not applicable  
 Abundance: LC: Locally Common; C: Common; UN: Uncommon; R: rare

### Ornamental Landscaping

Ornamental landscaping occurs between streets and on/off ramps, along bike paths, at parks, and along drainages. In well-irrigated areas trees, shrubs, and vegetated ground cover persist. In areas where irrigation sprinklers do not do an adequate job, the ground cover in the landscaping reverts to ruderal. Many of the ornamental species in or along Santiago Creek have reseeded from ornamental landscaping along the bike path and persist because the soil remains damp near the bridges for much of the dry season.

### Wildlife Movement

The opportunity for wildlife movement within the Study Area is minimal. Santiago Creek may provide for wildlife movement of common animal species associated with the proposed project area such as coyotes, raccoons, ground squirrels, and other small mammals. Nearest project improvements to Santiago Creek are approximately 1.0 mile south near the eastbound SR 22 to northbound SR 55 connector and approximately 3.0 miles north at the Katella/SR 55 southbound on-ramp.

## **2.15.3 Environmental Consequences**

### **2.15.3.1 Temporary Impacts**

#### Build Alternative

##### *Local Requirements*

The proposed project would comply with the criteria set forth in the OCTA NCCP/HCP and the USACE Programmatic Individual Permit. Therefore, local requirements would be met, and no direct or indirect impacts would occur.

##### *Natural Communities*

#### Disturbed Riparian

No habitats or natural communities of special concern would be directly or indirectly impacted by the proposed project. Although Santiago Creek crosses SR 55 within the Study Area and contains riparian vegetation, the nearest improvements to Santiago Creek are approximately 1.0 mile south near the eastbound SR 22 to the northbound SR 55 connector and approximately 3.0 miles north at the Katella Avenue/SR 55 southbound on-ramp. No construction would take place within the section of SR 55 that crosses the creek; and, therefore, no impacts to riparian vegetation would occur.

#### Wildlife Movement

As described above, no construction would take place within the section of SR 55 that crosses Santiago Creek, which may provide for wildlife movement of common animal species such as coyotes, raccoons, ground squirrels, and other small mammals. Therefore, direct impacts to wildlife movement are not anticipated to occur as a result of the proposed project. Additionally, indirect impacts to wildlife movement are not anticipated since construction activities would occur 1 to 3 miles away from the creek.

#### No Build Alternative

The No Build Alternative would not result in construction or improvements within the project area and, therefore, would not result in temporary or permanent impacts on natural communities.

### **2.15.3.2 Permanent Impacts**

#### Build Alternative

The Build Alternative would not result in any permanent impacts to natural communities of special concern. Indirect or secondary impacts are not anticipated to occur.

#### No Build Alternative

The Build Alternative would not result in any direct permanent impacts to natural communities of special concern. No indirect or secondary impacts on these resources would result from implementation of the No Build Alternative.

## **2.15.4 Avoidance, Minimization, and/or Mitigation Measures**

### **2.15.4.1 Local Requirements**

The proposed project would implement the measures in OCTA's NCCP/HCP. Applicable measures are provided in Appendix D of the Natural Environment Study (minimal impacts) and included in the Avoidance, Minimization, and or Mitigation summary in Appendix C of this document.

### **2.15.4.2 Natural Communities**

#### Disturbed Riparian

No avoidance or minimization measures are proposed, as no impacts to riparian habitat or other natural communities would occur.

#### Wildlife Movement

No avoidance or minimization measures are proposed, as no impacts to wildlife movement would occur.