



5.12 Biological Resources



5.12 BIOLOGICAL RESOURCES

5.12.1 PURPOSE

This section describes biological resources within the Study Area and provides an analysis of potential impacts associated with implementation of the General Plan Update. Potential impacts are identified and mitigation measures to address potentially significant impacts are recommended, as necessary.

5.12.2 EXISTING REGULATORY SETTING

FEDERAL REGULATIONS

Federal Endangered Species Act

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (FESA) of 1973. FESA Section 9 prohibits “take” of threatened or endangered species. “Take” under the FESA is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” The presence of any Federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

“Harm” has been defined by the regulations of the USFWS to include types of “significant habitat modification or degradation.” The U.S. Supreme Court, in *Babbitt v. Sweet Home*, 515 U.S. 687, ruled that “harm” may include habitat modification “...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” Activities that may result in “take” of individuals are regulated by USFWS.

Under the FESA, “Critical Habitat” is also designated at the time of listing or within one year of listing. “Critical Habitat” refers to habitat or a specific geographic area that contains the elements and features that are essential for the survival and recovery of the species. In the event a project may result in take or in adverse effects to a species’ designated Critical Habitat, the project proponent may be required to provide mitigation. If the project has a Federal nexus (i.e. occurs on Federal land, is issued Federal permits, or receives any other Federal oversight or funding), the proponent would be required to enter into Section 7 informal and/or formal consultations with the United States Fish and Wildlife Service (USFWS) to obtain, if possible, a biological opinion allowing for incidental take of the species in question. If the project is on private land or would not require any Federal permits, the proponent would be required to prepare a habitat management plan to address the impacts.

The FESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is a species that is likely to become endangered in the foreseeable future. A “proposed”



species is one that has been officially proposed by USFWS for addition to the Federal threatened and endangered species list.

USFWS produced an updated list of candidate species for listing in June 2002.¹ Candidate species are regarded by USFWS as candidates for addition to the "List of Endangered and Threatened Wildlife and Plants." Although candidate species are not afforded legal protection under the FESA, they typically receive special attention from Federal and State agencies during the environmental review process.

USFWS also uses the label "species of concern," an informal term that refers to species which might be in need of concentrated conservation actions. As the species of concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species would be proposed for listing as a threatened or endangered species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

Bald and Golden Eagle Preservation Act

The Bald and Golden Eagle Protection Act (BGEPA) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds (16 USC Section 668(a)). "Take" under BGEPA includes actions which significantly disturb eagles (50 CFR Section 22.3). 1972 amendments increased penalties for violating provisions of the Act and strengthened other enforcement measures. A 1978 amendment authorized the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations, and recent amendments authorize USFWS to issue permits for incidental and practically unavoidable take of eagles.

Section 404 of the Clean Water Act

Clean Water Act (CWA) Section 404 requires that a permit be obtained from the Corps prior to the discharge of dredged or fill materials into any "waters of the United States or wetlands." Waters of the United States are broadly defined in the Army Corps of Engineers (Corps) regulations (33 CFR 328) to include navigable waterways, their tributaries, lakes, ponds, and wetlands. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support,

¹ Federal Register: Volume 67, Number 114, 50 Code of Federal Regulations [CFR] Part 17, June 13, 2002.



and that normally do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”² Wetlands that are not specifically exempt from Section 404 regulations (such as drainage channels excavated on dry land) are considered to be “jurisdictional wetlands.” In a recent Supreme Court Case, the Court acted to limit the regulatory jurisdiction of the Corps under CWA Section 404 as it applies to adjacent waters (USSC 2001). Specifically, the Court ruled that waters that are non-navigable, isolated, and intrastate are not subject to the Corps jurisdiction.³ The Corps is required to consult with the USFWS, Environmental Protection Agency, and State RWQCB, among other agencies, in carrying out its discretionary authority under Section 404.

The Corps grants two types of permits, individual and nationwide. Project-specific individual permits are required for certain activities that may have a potential for more than a minimal impact and necessitate a detailed application. The most common type of permit is a nationwide permit. Nationwide permits authorize activities on a nationwide basis unless specifically limited and are designed to regulate with little delay or paperwork certain activities having minimal impacts. Nationwide permits typically take two to three months to obtain whereas individual permits can take a year or more. To qualify for a nationwide permit, specific criteria must be met. If the criteria restrictions are met, permittees may proceed with certain activities without notifying the Corps. Some nationwide permits require a pre-construction notification before activities can begin.

Section 401 of the Clean Water Act

Applicants for a Federal license or permit for activities which may discharge to waters of the U.S. must seek Water Quality Certification from the State or Indian tribe with jurisdiction. Such Certification is based on a finding that the discharge would meet water quality standards and other applicable requirements. In California, RWQCBs issue or deny Certification for discharges within their geographical jurisdiction. Water Quality Certification must be based on a finding that the proposed discharge would comply with water quality standards, which are defined as numeric and narrative objectives in each RWQCB's Basin Plan. Where applicable, the State Water Resources Control Board (SWRCB) has this responsibility for projects affecting waters within the jurisdiction of multiple RWQCBs. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the U.S., including wetlands.

CWA Section 401 requires that “any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge would comply with the applicable provisions under the Federal Clean Water Act.” Therefore, before the Corps would issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB.

2 United States Environmental Protection Agency, *Section 404 of the Clean Water Act: How Wetlands are Defined and Identified*, <https://www.epa.gov/cwa-404/section-404-clean-water-act-how-wetlands-are-defined-and-identified>, accessed on April 10, 2018.

3 Guzy, G. S., and R. M. Anderson, *Memorandum: Supreme Court Ruling Concerning CWA Jurisdiction of Isolated Waters: U.S. Environmental Protection Agency and Army Corps of Engineers*, 2001.



STATE

California Endangered Species Act

State-listed threatened and endangered species are protected under provisions of the California Endangered Species Act (CESA). Activities that may result in "take" of individuals (defined in CESA as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by the CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a Species of Special Concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection.

California Environmental Quality Act

CEQA Guidelines Section 15380 independently defines "endangered" and "rare" species separately from the definitions in the CESA. Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

Fish and Game Code

LAKE AND STREAMBED ALTERATION PROGRAM

California Fish and Game Code Sections 1600 through 1616 establish a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, State, or local governmental agency or public utility to notify the CDFW before beginning any activity that would do one or more of the following:

- 1) Substantially obstruct or divert the natural flow of a river, stream, or lake;



- 2) Substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
- 3) Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that would take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

NATIVE PLANT PROTECTION ACT

Fish and Game Code Sections 1900 through 1913 were developed to preserve, protect, and enhance Rare and Endangered plants in the State of California. The act requires all State agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

Sections 3503, 3503.5, 3511, 4700, 5050, and 5515

The CDFW administers the Fish and Game Code. There are particular sections of the Fish and Game Code that are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy the nests or eggs of any birds that are protected under the MBTA. Furthermore, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Fish and Game Code Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW would be required prior to the removal of any bird of prey nest that may occur on a project site. Fish and Game Code Sections 3511, 4700, 5050, and 5515 list fully protected bird, mammal, reptile and amphibian, and fish species, respectively. The CDFW is unable to authorize the issuance of permits or licenses to take these species. Examples of species that are State fully protected include golden eagle and white-tailed kite (*Elanus leucurus*). Fish and Game Code Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.



California Native Plant Society Rare or Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under State and Federal endangered species legislation are defined as follows:

- California Rare Plant Rank
 - 1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere
 - 1B- Plants Rare, Threatened, or Endangered in California and Elsewhere
 - 2A- Plants Presumed Extirpated in California, But More Common Elsewhere
 - 2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
 - 3- Plants about Which More Information is Needed - A Review List
 - 4- Plants of Limited Distribution - A Watch List
- Threat Ranks
 - .1- Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
 - .2- Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
 - .3- Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

LOCAL

Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan

Orange County's Southern Subregion NCCP/MSAA/HCP is still considered to be a draft document. While the HCP portion of it was approved by USFWS, the NCCP and MSAA portions of it have not yet been approved by CDFW under the State of California's NCCP program or the Lake and Streambed Alteration Program. The NCCP/MSAA/HCP encompasses a total area of 132,000 acres, including 40,000 acres in the Cleveland National Forest and 92,000 acres (the Planning Area) divided into four subareas; the City of Rancho Santa Margarita includes Subareas 1 through 3 within its limits. Nearly all of the remaining open space in the City is designated as part of a habitat reserve; refer to [Exhibit 5.12-5](#). The primary goal of the NCCP/MSAA/HCP is to protect and preserve coastal sage scrub and other natural vegetation communities that occur within the Reserve System, as well as associated habitats and species. This includes a proposed list of covered species comprising seven plant species, 25 wildlife species, and 10 habitat types.



The City of Rancho Santa Margarita is currently not a participating landowner in the NCCP/MSAA/HCP and therefore is not subject to take coverage/permits obtained under the NCCP/MSAA/HCP.

Rancho Santa Margarita Municipal Code

Rancho Santa Margarita Municipal Code (Municipal Code) Chapter 7.04, Tree City USA Designation, encourages and supports the development and continuance of a tree maintenance program by the community associations within the City; to promote thoughtful and planned urban forestation of parks and public rights-of-way and other areas which may be appropriate for urban forestation; to support the designation of the City as an official Tree City USA; and to further the mission of Tree City USA.

Specifically, Municipal Code Section 7.04.030, *Tree Board*, forms a Tree Board consisting of one representative from each participating Association in the City, as appointed by each participating Association, to be ratified by the City Council. Each participating Association is responsible for the development and adoption of policies, guidelines, and procedures for planting, maintaining, and removing trees within its respective jurisdiction as defined in its governing documents. Pursuant to Municipal Code Chapter 7.04, *Tree City USA Designation*, no tree owned and maintained by the City shall be removed from public rights-of-way, parks, and/or other public places without cause, except in cases where the tree is diseased, or the City determines that it is an issue of public safety, health, or general welfare of the community. Any such tree shall be replaced with another tree of similar type.

Municipal Code Chapter 9.03, *Zoning Districts and Standards*, establishes the City's open space (OS) district, which is intended to provide open space for outdoor recreation, buffering of incompatible uses, preservation of natural resources, and protection of public health and safety.

5.12.3 EXISTING ENVIRONMENTAL SETTING

EXISTING CONDITIONS

Methodology

A literature review and records search were conducted to document all special-status biological resources potentially occurring within or adjacent to the City. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the City were determined through a query of the CDFW's California Natural Diversity Database (CNDDB) Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the USFWS species listings, including the USFWS Information for Planning and Conservation (IPaC) database. Literature detailing biological resources previously observed in the City and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources: *City of Rancho Santa Margarita General Plan Program Environmental Impact Report* Section



3.7, Biological Resources; *City of Rancho Santa Margarita General Plan* (2002 General Plan) Conservation/Open Space Element; *CDFW 2012 Staff Report on Burrowing Owl Mitigation*; United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey; USFWS Critical Habitat designations for Threatened and Endangered Species; Primary Constituent Elements for California gnatcatcher; and Habitat requirements for California gnatcatcher, Cactus wren, and orange-throated whiptail.

A habitat assessment inventoried and evaluated the current extent and conditions of the plant communities found within the City limits in May 2016. Areas evaluated included those previously mapped as "riparian habitat" or "woodland habitat" for the 2002 General Plan. The goal of the survey was to refine these communities into more specific, species-based riparian and woodland communities to satisfy CNDDDB special-status community record search requirements. Adjacent terrestrial plant communities identified in the 2002 General Plan were verified or refined during the riparian/woodland mapping survey. All observed wildlife species were recorded. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

On-site and adjoining soils were researched prior to the field visit using the USDA NRCS Soil Survey for Orange County and part of Riverside County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes the project area has undergone.

Plant communities were mapped using 7.5-minute United States Geological Survey (USGS) topographic base maps and aerial photography. Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were photographed and later identified using taxonomical guides.

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other signs were recorded during surveys in a field notebook. Field guides were used to assist with identification of species during surveys. Although common names of wildlife species are well standardized, scientific names are provided immediately following common names in this section (first reference only).

Aerial photography was reviewed prior to conducting the habitat assessment. The aeriels were used to locate and inspect potential natural drainage features and water bodies that may be considered riparian or riverine habitat and/or fall under the jurisdiction of the Corps, Regional Water Quality Control Board (RWQCB), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to State and Federal regulatory authorities.

Local Climate

Orange County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to



other areas in southern California, winters are colder with frost and with chilly to cold morning temperatures. Climatological data obtained for the City of Rancho Santa Margarita indicates the annual precipitation averages 14.13 inches per year. Almost all precipitation occurs in the months between November and April, with hardly any occurring between the months of May and October. The wettest month is February, with a monthly average total precipitation of 3.38 inches. The average maximum and minimum temperatures for the City of Rancho Santa Margarita are 74 and 54 degrees Fahrenheit respectively with August being the hottest month and January being the coldest.

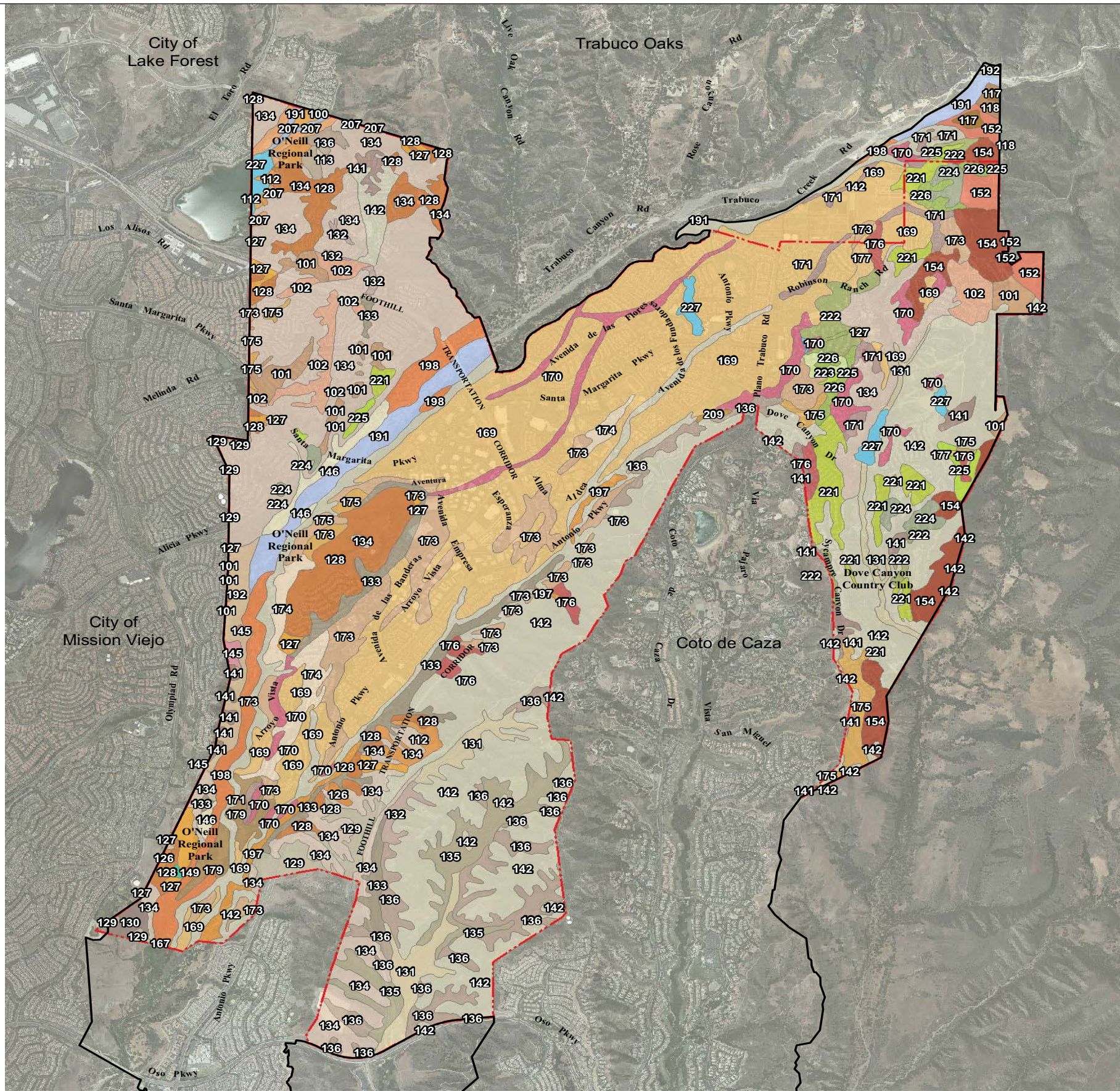
Topography and Soils

The City contains varying degrees of topography. Much of the developed portion of the City is built on a former expansive shortgrass mesa known as the Plano Trabuco and is at a generally even grade. However, multiple canyons, including Trabuco Canyon and Tijeras Canyon, pass through the City, and the northern and eastern City limits extend into the foothills of the Santa Ana Mountains. Elevations range from about 350 feet above mean sea level in the valleys to about 2,400 feet at the highest ridgeline north of the City and generally slope to the southwest, where the Arroyo Trabuco flows toward San Juan Creek and ultimately to the Pacific Ocean.

The City of Rancho Santa Margarita is underlain by a number of soil units as illustrated on Exhibit 5.12-1, Soils.



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LEGEND

- 100 Alo clay, 9 to 15 percent slopes
- 101 Alo clay, 15 to 30 percent slopes
- 102 Alo clay, 30 to 50 percent slopes, warm MAAT, MLRA 20
- 112 Balcom clay loam, 15 to 30 percent slopes
- 113 Balcom clay loam, 30 to 50 percent slopes
- 117 Blasingame stony loam, 9 to 30 percent slopes
- 118 Blasingame stony loam, 30 to 65 percent slopes
- 126 Bosanko clay, 9 to 15 percent slopes
- 127 Bosanko clay, 15 to 30 percent slopes
- 128 Bosanko clay, 30 to 50 percent slopes
- 129 Bosanko-Balcom complex, 15 to 30 percent slopes
- 130 Bosanko-Balcom complex, 30 to 50 percent slopes
- 131 Botella clay loam, 2 to 9 percent slopes, warm MAAT, MLRA 19
- 132 Botella loam, 2 to 9 percent slopes, warm MAAT, lower MAP, MLRA 19
- 133 Botella clay loam, 9 to 15 percent slopes
- 143 Calleguas clay loam, 60 to 75 percent slopes, eroded
- 145 Capistrano sandy loam, 2 to 9 percent slopes
- 146 Capistrano sandy loam, 9 to 15 percent slopes
- 147 Cienega sandy loam, 15 to 30 percent slopes
- 148 Cienega sandy loam, 30 to 75 percent slopes, eroded
- 149 Cienega-Rock outcrop complex, 30 to 75 percent slopes
- 150 Corralitos loamy sand
- 151 Cropley clay, 2 to 9 percent slopes, warm MAAT, MLRA 19
- 152 Exchequer-Rock outcrop complex, 30 to 75 percent slopes
- 154 Gabino gravelly clay loam, 15 to 50 percent slopes
- 157 Mocho loam, 2 to 9 percent slopes, warm MAAT, MLRA 19
- 159 Modjeska gravelly loam, 2 to 9 percent slopes
- 170 Modjeska gravelly loam, 9 to 15 percent slopes
- 171 Modjeska gravelly loam, 15 to 30 percent slopes
- 172 Myford sandy loam, 2 to 9 percent slopes
- 173 Myford sandy loam, 2 to 9 percent slopes, eroded
- 174 Myford sandy loam, 9 to 15 percent slopes
- 175 Myford sandy loam, 15 to 30 percent slopes
- 176 Myford sandy loam, 30 to 75 percent slopes, eroded
- 177 Myford sandy loam, thick surface, 2 to 9 percent slopes
- 191 Riverwash
- 192 Rock outcrop-Cienega complex, 30 to 75 percent slopes
- 197 Soboba gravelly loamy sand, 0 to 5 percent slopes
- 198 Soboba cobbly loamy sand, 0 to 15 percent slopes
- 200 Soper loam, 30 to 50 percent slopes
- 207 Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19
- 209 Sorrento clay loam, 2 to 9 percent slopes, warm MAAT, MLRA 19
- 221 Yorba gravelly sandy loam, 2 to 9 percent slopes
- 222 Yorba gravelly sandy loam, 9 to 15 percent slopes
- 223 Yorba gravelly sandy loam, 15 to 30 percent slopes
- 224 Yorba cobbly sandy loam, 9 to 30 percent slopes
- 225 Yorba cobbly sandy loam, 9 to 30 percent slopes, eroded
- 226 Yorba cobbly sandy loam, 30 to 50 percent slopes
- 227 Water
- City Boundary
- Sphere of Influence



Sources: United States Department of Agriculture, 2008 and Orange County Local Area Formation Commission, 2013.



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Surrounding Land Uses

The City of Rancho Santa Margarita is in coastal southern California, a region which has generally been converted from natural habitats into residential, commercial, industrial, recreational, and other land uses, including oceanic resource extraction. The northeastern, eastern, and southern boundaries of Orange County are primarily composed of the Santa Ana Mountains and their foothills, and as a result, much of the inland portion of southern Orange County is far less developed than areas along coastal or central Orange County. The Santa Ana Mountains are immediately north and east of the City, and the Cleveland National Forest is located immediately outside of the City's eastern boundary and to its north. The City is bounded to the west by the City of Mission Viejo and to the south by the communities of Ladera Ranch, Las Flores, and Coto de Caza.

Site Conditions

Many of the naturally occurring habitats within the City limits and its Sphere of Influence have been modified since the 19th century, particularly during the last 30 years. The City of Rancho Santa Margarita sits generally on an area formerly known as the Plano Trabuco, a large shortgrass mesa that extended southwest out of the Santa Ana Mountains, sandwiched between Trabuco and Tijeras Canyons. With development of the current City in the 1980s, most of the original grassland habitat was lost, leaving only a select few areas of truly open grassland habitat, particularly in the southwest portion of the City along the eastern banks of the Arroyo Trabuco south of Santa Margarita Parkway, as well as small areas along the foothills of the Santa Ana Mountains. Riparian habitat has remained mostly intact, with the Arroyo Trabuco and Tijeras Canyon each cutting through the City. Select hillsides, particularly along the Foothill Transportation Corridor State Route 241 (SR-241), south of Antonio Parkway, have remained relatively intact, with some evidence of historic cattle grazing/ranching. The foothills to the north are still partially undeveloped due to their designation as part of O'Neill Regional Park, but the foothills to the east have been mostly developed within the City limits as a result of the creation of the Robinson Ranch and Dove Canyon communities.

Despite the moderate extent of development within City limits, the City of Rancho Santa Margarita continues to support a wide and diverse array of vegetation, wildlife, and habitats.

Vegetation

Eleven vegetation communities were identified within the City limits including coastal sage scrub, chaparral, southern sycamore alder riparian woodland, southern willow scrub, southern mixed riparian forest, mulefat scrub, southern riparian scrub, southern coast live oak riparian forest, freshwater marsh, non-native grassland, and agriculture; refer to [Exhibit 5.12-2, *Vegetation Communities*](#). In addition, there are two land cover types that would be characterized as open water and disturbed/developed. Areas mapped during the survey are illustrated on [Exhibit 5.12-2](#) and are described in further detail below.



COASTAL SAGE SCRUB (1,561.31 ACRES)

Coastal sage scrub is present on slopes throughout the City, primarily along the Arroyo Trabuco, in hillsides surrounding Tijeras Canyon and east of SR-241, and in the undeveloped foothills of the Santa Ana Mountains. It is generally dominated by California sagebrush (*Artemisia californica*) throughout, with co-dominants prickly pear (*Opuntia* sp.), deerweed (*Acmispon glaber*), chaparral yucca (*Hesperoyucca whipplei*), and California buckwheat (*Eriogonum fasciculatum*). Areas of coastal sage scrub in the western portion of the City (e.g., the Arroyo Trabuco) also contain a high percent cover of scalebroom (*Lepidospartum squamatum*), California everlasting (*Pseudognaphalium biolettii*), and elderberry (*Sambucus nigra*). Areas around Tijeras Canyon and on the eastern side of the City contain higher percent cover of black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and sticky monkeyflower (*Mimulus aurantiacus*). Coastal sage scrub in Robinson Ranch also contains relatively high amounts of wavyleaf sea lavender (*Limonium sinuatum*).

CHAPARRAL (368.61 ACRES)

Chaparral is present in isolated locations on slopes throughout the City, generally surrounded by coastal sage scrub. This community is composed of fire-adapted, broad-leaved shrubs. Dominant plants within the City include coast live oak (*Quercus agrifolia*), California lilac (*Ceanothus* spp.), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), elderberry, prickly pear, toyon (*Heteromeles arbutifolia*), and chaparral yucca. Some areas, such as along the north-facing slopes Upper Trabuco Creek in the northeast portion of the City, are heavily dominated by coast live oaks.

SOUTHERN SYCAMORE ALDER RIPARIAN WOODLAND (248.73 ACRES)

The southern sycamore alder riparian woodland is present primarily in the Arroyo Trabuco between O'Neill Regional Park and the Arroyo Trabuco Reservoir. It is generally characterized as open stands of California sycamore (*Platanus racemosa*) with lower percent composition of other arboreal species such as coast live oaks, willows (*Salix* spp.), mulefat (*Baccharis salicifolia*), non-native grasses, and poison oak (*Toxicodendron diversilobum*). Within the creek, its understory varies from being dominated by mulefat, coastal sage scrub, or non-native grasses.

SOUTHERN WILLOW SCRUB (27.09 ACRES)

Southern willow scrub is present within several discreet locations in the City, including the inlet to Oso Reservoir and the unnamed creek running through Robinson Ranch. This community is heavily dominated by black willow (*Salix gooddingii*), with some areas almost entirely composed of black willow. Other co-dominant species include arroyo willow (*Salix lasiolepis*), coast live oak, California sycamore, and mulefat.



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SOUTHERN MIXED RIPARIAN FOREST (226.05 ACRES)

The southern mixed riparian forest is present in the Arroyo Trabuco south of the Arroyo Trabuco Reservoir, along the entire length of Tijeras Creek, in associated tributary drainages, and in portions of the creek that runs through Robinson Ranch. It contains a mixture of coast live oak, California sycamore, white alder (*Alnus rhombifolia*), black willow, and arroyo willow, with no discernible dominant species among them. The understory is generally composed of wild cucumber (*Marah macrocarpa*), shortpod mustard (*Hirschfeldia incana*), mulefat, giant reed (*Arundo donax*, primarily in the Arroyo Trabuco), mugwort (*Artemisia douglasiana*), and coyote brush (*Baccharis pilularis*).

MULEFAT SCRUB (0.16 ACRE)

Mulefat scrub is present within small, discreet locations within City limits. Aside from being an understory of the southern sycamore alder riparian woodland, it is present in a small, isolated stand within non-native grassland in Tijeras Canyon. This isolated stand is composed only of mulefat.

SOUTHERN RIPARIAN SCRUB (26.81 ACRES)

Southern riparian scrub is present in discreet drainages in the southern portion of the City, east of SR-241 in the Chiquita Canyon Conservation Area, an area that is characterized as a mixture of coastal sage scrub and non-native grassland. These drainages are dominated by riparian shrubs underlain by coastal sage scrub and non-native grassland vegetation. These drainages are heavily dominated by elderberry, with mulefat and coyote brush as co-dominants. Other species present in these drainages include California buckwheat, shortpod mustard, and various non-native grasses.

SOUTHERN COAST LIVE OAK RIPARIAN FOREST (263.56 ACRES)

Southern coast live oak riparian forest is present throughout the City in undeveloped land. It is found along both banks of the Arroyo Trabuco and in riparian drainages elsewhere. The dominant species within this community is coast live oak, with lesser cover from species such as prickly pear, elderberry, lemonadeberry, and arboreal species such as California sycamore and black willow. In Upper Trabuco Creek, this community mixes in with oak-dominated chaparral. The creek running through Robinson Ranch, downstream of Heritage Drive, contains a co-dominant mixture of coast live oak and California scrub oak (*Quercus berberidifolia*).

FRESHWATER MARSH (13.94 ACRES)

Freshwater marsh is present in a few locations within the City, primarily associated with water retention basins such as the Arroyo Trabuco Reservoir and the reservoirs in Robinson Ranch. These areas are dominated entirely or nearly entirely by California bulrush (*Schoenoplectus californicus*), with some minor percent cover of broadleaf cattail (*Typha latifolia*) and overhanging overstory of black willow and California sycamore.



NON-NATIVE GRASSLAND (1,439.24 ACRES)

Areas of non-native grassland are disturbed or graded areas that have revegetated with opportunistic weedy species. Within City limits, non-native grassland is present primarily on hillsides, particularly on the remaining portion of the Plano Trabuco in the southwest portion of the City (the hillsides overlooking the Arroyo Trabuco Wilderness) and on hillsides overlooking Tijeras Canyon and in the vicinity of SR-241. These areas are heavily dominated by oats (*Avena* spp.), especially on the remaining Plano Trabuco where the non-native grassland is almost entirely oats. The Plano Trabuco area also contains a very large patch of redstem filaree (*Erodium cicutarium*) that takes up all or nearly all of the area that it occurs in. Other co-dominants throughout the City include ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), shortpod mustard, black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), Russian thistle (*Salsola tragus*), and star thistle (*Centaurea* sp.). Tijeras Canyon and non-native grassland on the eastern portion of the City also contain higher percent cover of mouse barley (*Hordeum murinum*), wild radish (*Raphanus* sp.), and curly dock (*Rumex crispus*).

AGRICULTURE (178.29 ACRES)

A block of agricultural land is present in the northeastern corner of the City. This land is maintained and operated by T-Y Nursery, Inc., who uses it to grow a large variety of cultivated landscape plants for sale.

OPEN WATER (32.29 ACRES)

Open water is present within the City in its different water retention basins/reservoirs, as well as in Lago Santa Margarita. Many of these areas are perennially inundated. Except for Lago Santa Margarita, most of the reservoirs within the City are surrounded by native riparian and/or emergent vegetation.

DISTURBED/DEVELOPED

Disturbed areas encompass the remainder of the City and generally include unpaved areas where vegetation has usually been cleared, such as for dirt paths or future development, or where the land cover is not conducive to significant vegetation growth. Developed areas generally encompass all buildings, as well as all paved, impervious surfaces. Within City boundaries, these areas are generally areas where existing development is present (e.g., residential, commercial, recreational, industrial).

Wildlife

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species observed, expected, or not expected to occur within the City. The following discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the survey was conducted. Wildlife observations were incidentally made during vegetation mapping and were based on calls, songs, scat, tracks, burrows, and actual sightings of animals.



FISH

No fish were observed during the vegetation mapping. However, several hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the City, including the Arroyo Trabuco, Tijeras Creek, and reservoirs within City limits. It is suspected that certain reaches of these creeks are probably perennial due to urban runoff and treated wastewater discharge, but other areas do go dry. A small number of presumably perennial artificial basins were observed throughout the City, including one in the Arroyo Trabuco and several in the foothills of the Santa Ana Mountains in the northeast portion of the City. These water bodies likely contain a mixture of native and non-native fish species such as green sunfish (*Lepomis cyanellus*), goldfish (*Carassius auratus*), striped mullet (*Mugil cephalus*), and black crappie (*Pomoxis nigromaculatus*). Upper Trabuco Creek is stocked with rainbow trout (*Oncorhynchus mykiss*) by the CDFW, and Lago Santa Margarita is annually stocked by the Rancho Santa Margarita Landscape and Recreation Corporation (otherwise known as SAMLARC) with bass (*Micropterus* spp.), bluegill (*Lepomis macrochirus*), catfish (*Order siluriformes*), and mosquitofish (*Gambusia affinis*).

AMPHIBIANS

Two amphibians were detected during the vegetation mapping including western toad (*Anaxyrus boreas*) tadpoles in Tijeras Creek and an adult American bullfrog (*Lithobates catesbeianus*) in the small reservoir at the southern end of Robinson Ranch. Several hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the City, including the Arroyo Trabuco, Tijeras Creek, and reservoirs within City limits. It is suspected that certain reaches of these creeks are probably perennial due to urban runoff and treated wastewater discharge, but other areas do go dry. A small number of presumably perennial artificial basins were observed throughout the City, including one in the Arroyo Trabuco and several in the foothills of the Santa Ana Mountains in the northeast portion of the City. Commonly-occurring amphibians most likely to occur within City limits other than those already mentioned include Baja California treefrog (*Pseudacris hypochondriaca*), garden slender salamander (*Batrachoseps major major*), black-bellied slender salamander (*Batrachoseps nigriventis*), and potentially California treefrog (*Pseudacris cadaverina*).

REPTILES

Two reptilian species were detected during vegetating mapping including the Great Basin fence lizard (*Sceloporus occidentalis longipes*) and orange-throated whiptail (*Aspidoscelis hyperythra*). A variety of reptiles likely occur within the City due to its relatively large amounts of unfragmented open space, both within major creek systems and in terrestrial habitats. Commonly-occurring reptiles most likely to occur within City limits other than those already mentioned include alligator lizard (*Elgaria multicarinata*), western side-blotched lizard (*Uta stansburiana elegans*), San Diego gopher snake (*Pituophis catenifer annectens*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).



BIRDS

The City of Rancho Santa Margarita provides suitable foraging and nesting habitat for a variety of avian species. A total of 67 avian species were incidentally detected during vegetation mapping. The species observed most commonly during vegetation mapping included mallard (*Anas platyrhynchos*), red-tailed hawk (*Buteo jamaicensis*), American coot (*Fulica americana*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), red-crowned parrot (*Amazona viridigenalis*), Pacific-flopie flycatcher (*Empidonax difficilis*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), northern rough-winged swallow (*Stelgidopteryx serripennis*), oak titmouse (*Baeolophus inornatus*), house wren (*Troglodytes aedon*), Bewick's wren (*Thryomanes bewickii*), European starling (*Sturnus vulgaris*), cedar waxwing (*Bombycilla cedrorum*), yellow warbler (*Setophaga petechia*), Wilson's warbler (*Cardellina pusilla*), song sparrow (*Melospiza melodia*), California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), house finch (*Haemorhous mexicanus*), and lesser goldfinch (*Spinus psaltria*). The vegetation mapping was conducted during a time when spring migrants and summer residents are already present in southern California, and winter residents have nearly completely left. Some commonly-occurring winter residents that are present in the City but were not detected due to survey timing include American wigeon (*Anas americana*), hermit thrush (*Catharus guttatus*), yellow-rumped warbler (*Setophaga coronata*), and Lincoln's sparrow (*Melospiza lincolnii*). Canada geese (*Branta canadensis*) occur in the City, sometimes in large numbers, but are generally restricted to Lago Santa Margarita.

MAMMALS

Only three mammals were detected during vegetation mapping including the California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*). The City provides suitable habitat throughout its limits for a variety of mammalian species adapted to human presence and disturbance. However, most mammal species are nocturnal and are difficult to observe during a daytime field visit. Other commonly-occurring mammal species that have the potential to occur within the City, or that are known to occur within the City, include Virginia opossum (*Didelphis virginiana*), Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus* sp.), raccoon (*Procyon lotor*), mule deer (*Odocoileus hemionus*), bobcat (*Lynx rufus*), and mountain lion (*Puma concolor*).

Nesting Birds

Three nests were observed during vegetation mapping including a red-tailed hawk nest with chicks, a blue grosbeak (*Passerina caerulea*) nest of undetermined status, and a European starling nest with chicks. Vegetation within the City provides ample nesting opportunities for ground-, shrub-, and tree-nesting avian species throughout both native and non-native vegetation communities, including developed areas. The undeveloped habitat within the Arroyo Trabuco, Tijeras Canyon, and the foothills of the Santa Ana Mountains provide particularly good nesting habitat, especially for native bird species.



Migratory Corridors and Linkages

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet, inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

Historically, the land now encompassed within the City limits provided more or less unimpeded movement in all directions. Trabuco Canyon and Tijeras Canyon emerged out of the Santa Ana Mountains, with the Plano Trabuco a large shortgrass mesa, sandwiched above and in between them from the Santa Ana Mountains to the confluence of the two canyons at the southern City limits. Wildlife were capable of moving at-will throughout the area, including into and out of the foothills of the Santa Ana Mountains. With the development of what is now Rancho Santa Margarita, nearly all of the Plano Trabuco was removed and developed, with only a small undeveloped portion remaining on the southwestern edge of the City. The City of Rancho Santa Margarita is largely developed, with most of the land previously converted from open space areas to commercial, industrial, residential, and recreational uses.

The primary areas of remaining substantive open space include Chiquita Ridge, Trabuco Canyon, Tijeras Canyon, the bluffs encompassed within O'Neill Regional Park in the City's northwestern corner, and much of the area located between Antonio Parkway and the western boundary of Coto de Caza, south of La Promesa. Pockets of undeveloped space occur along the City's eastern boundary in the Robinson Ranch and Dove Canyon areas. Trabuco and Tijeras Canyons provide relatively unimpeded wildlife movement on a north-south basis between the Santa Ana Mountains and San Juan Creek, which ultimately flows to the Pacific Ocean. The open space west of Antonio Parkway provides a movement corridor for wildlife moving locally east and west, although wildlife would need to move through Coto de Caza or go south and around it to reach additional open space. SR-241 provides multiple wildlife undercrossings in this area. Areas to the south provide additional wilderness access into the southern Santa Ana Mountains.

There are four designated wildlife corridors under the NCCP/MSAA/HCP that either occur within City limits or are immediately outside of them and provide movement opportunities into or out of the City. These include the following:

1. The Arroyo Trabuco (previously mentioned), which provides movement opportunities between the Cleveland National Forest and Avery Parkway.
2. The Saddleback Meadows area, which provides a linkage between the Southern Subregion Planning Area and the abutting Central Subarea of the Orange County NCCP/HCP. Two 300-foot long pipes cross under El Toro Road.

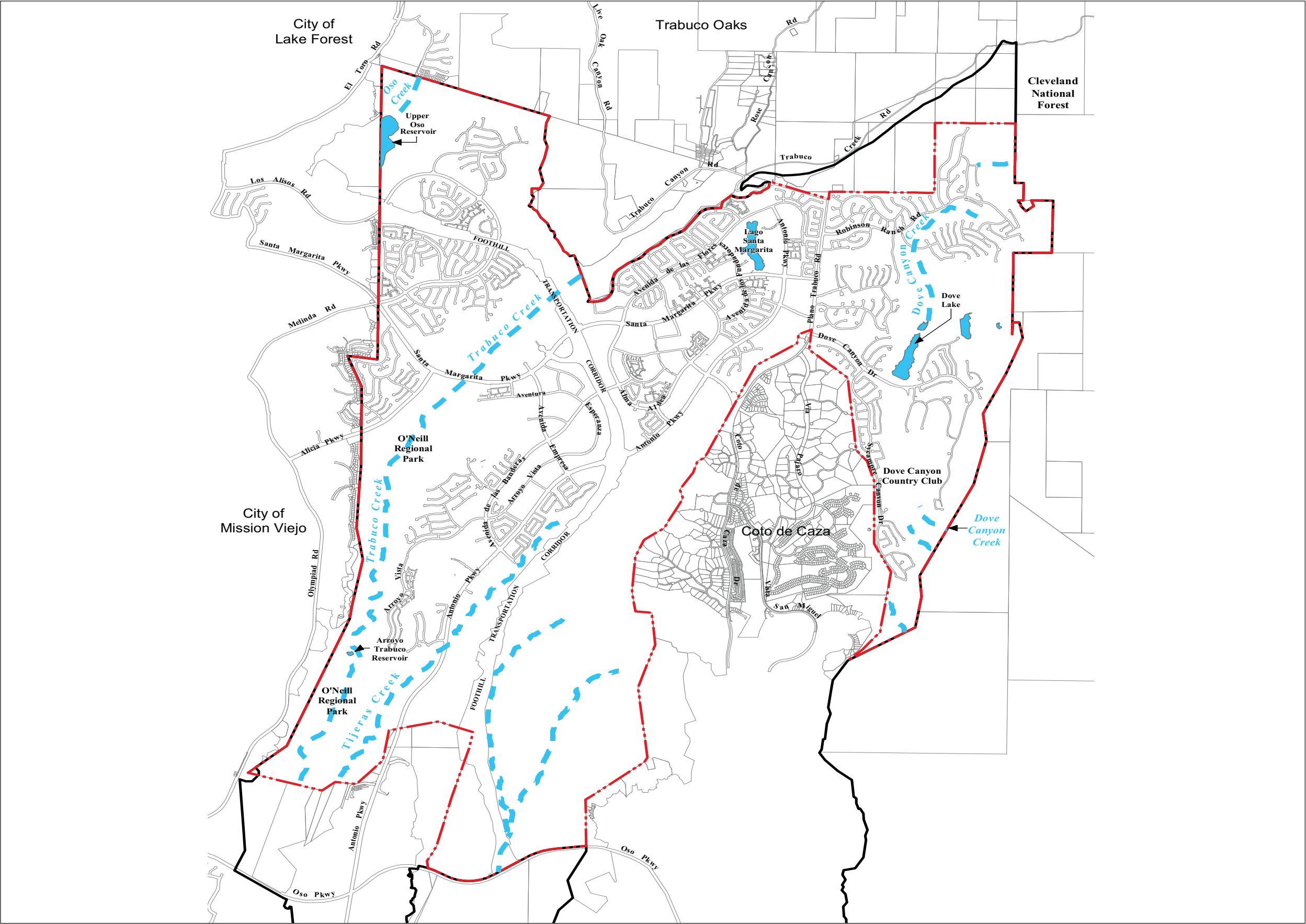


3. The area north of Oso Reservoir, which provides stepping stone habitat between the Southern Subregion and Central Subarea.
4. Live Oak Canyon, which historically has contained several habitat linkages and wildlife corridors providing movement opportunities into or out of the upper Arroyo Trabuco.

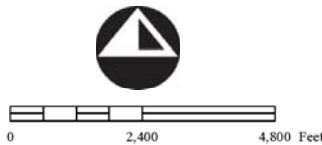
Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the Federal CWA and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the Fish and Game Code, and the RWQCB regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

The City contains at least five areas determined to be “waters of the U.S.” and/or “waters of the State:” Oso Creek, Trabuco Creek, Tijeras Creek, Dove Canyon Creek, and an unnamed creek flowing roughly parallel to the eastern side of SR-241 in the Chiquita Canyon Conservation Area; refer to [Exhibit 5.12-3, *Jurisdictional Areas and Reservoirs*](#). Oso Creek flows into the City limits at its northwestern corner and into Oso Reservoir. Trabuco and Tijeras Creeks converge just south of the southern City limits at the southern end of the Tijeras Creek Golf Club, where they serve as tributary to San Juan Creek and ultimately to the Pacific Ocean. Dove Canyon Creek flows through Dove Canyon out of the Santa Ana Mountains and into Dove Canyon Reservoir (within City limits), where it then continues to flow south and converge with Bell Canyon (outside the City limits), which again serves as tributary to San Juan Creek. The unnamed creek flows from the ridgeline abutting Coto de Caza, running roughly parallel and east of SR-241 through the Chiquita Canyon Conservation Area before it continues onto the Cañada Chiquita south of Oso Parkway and eventually serves as tributary to San Juan Creek. These creeks fall under the jurisdiction of the Corps, RWQCB, and CDFW. Additional jurisdictional drainages are located throughout the City, generally emerging from the Santa Ana Mountains or its surrounding foothills and serving as tributaries to the five aforementioned creeks. Lago Santa Margarita is an isolated feature with artificial water input and no natural inflow or outflow. Several additional flood control/water conservation reservoirs are located throughout the City, many of which receive water from natural waterways.



- LEGEND**
- Surface Water Resources
 - Flood Control / Water Conservation
 - City Boundary
 - Sphere of Influence



Sources: Orange County Local Area Formation Commission, 2013 and City of Rancho Santa Margarita, 2016.



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Special-Status Biological Resources

The CNDDDB was queried for reported locations of listed and special-status plant and wildlife species as well as special-status natural plant communities in the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano USGS 7.5-minute quadrangles. A search of published records of these species was conducted within these quadrangles using the CNDDDB Rarefind 5 online software. The CNPS Inventory of Rare and Endangered Vascular Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity of the City. In addition, the USFWS IPaC database provided a list of Federally-listed plants and wildlife, as well as a list of migratory bird species of concern, that may occur within City limits. The habitat assessment was used to assess the ability of the plant communities found on-site to provide suitable habitat for relevant special-status plant and wildlife species.

The literature search identified 33 special-status plant species, 73 special-status wildlife species, and seven special-status habitats as having the potential to occur within the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within or adjacent to the City limits based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in Table B-1, *Potentially Occurring Special-Status Biological Resources of Appendix C* and are discussed below.

SPECIAL-STATUS PLANTS

According to the CNDDDB and CNPS, 33 special-status plant species have been recorded in the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles; refer to [Appendix C](#). The City has large areas of native plant communities, generally concentrated within the Arroyo Trabuco and O'Neill Regional Park on the western side of the City, and Tijeras Canyon and the foothills of the Santa Ana Mountains on the eastern side of the City. Based on known recent distribution records, no special-status plant species are known to occur within City limits. However, 12 special-status plant species have been recorded in adjacent areas, have suitable habitat within City limits, and have a moderate or high potential to occur within the City: thread-leaved brodiaea (*Brodiaea filifolia*), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), southern tarplant (*Centromadia parryi* ssp. *australis*), many-stemmed dudleya (*Dudleya multicaulis*), sticky dudleya (*Dudleya viscida*), mesa horkelia (*Horkelia cuneate* var. *puberula*), California satintail (*Imperata brevifolia*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), chaparral nolina (*Nolina cismontana*), Allen's pentachaeta (*Pentachaeta aurea* ssp. *allenii*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), and Parry's tetracoccus (*Tetracoccus dioicus*). Thread-leaved brodiaea, southern tarplant, many-stemmed dudleya, and chaparral nolina have all been proposed for coverage under the NCCP/MSAA/HCP. The remaining 21 special-status plant species have a low potential to occur within City limits or are presumed absent due to a lack of suitable habitat.



SPECIAL-STATUS WILDLIFE

According to the CNDDDB and IPaC, 73 special-status wildlife species, including migratory birds of concern, have been reported in the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles; refer [Appendix C](#). Based on known distribution records and/or personal knowledge of the biologist, 13 special-status wildlife species are known to regularly occur and are considered to be present within the City of Rancho Santa Margarita. This means that they are reliably present on a daily and annual basis either year-round or seasonally (for avian migrants). This includes Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), red-crowned parrot, orange-throated whiptail, oak titmouse, Costa's hummingbird (*Calypte costae*), Cactus wren, white-tailed kite (*Elanus leucurus*), fox sparrow (*Passerella iliaca*), Nuttall's woodpecker, California gnatcatcher, Allen's hummingbird (*Selasphorus sasin*), and Riverside fairy shrimp (*Streptocephalus woottoni*). Cooper's hawk, orange-throated whiptail, Cactus wren, white-tailed kite, and California gnatcatcher have all been proposed for coverage under the NCCP/MSAA/HCP.

Based on habitat requirements for specific species and the availability and quality of habitats needed by each special-status wildlife species, it was determined that there is a moderate or high potential for an additional 23 special-status wildlife species to occur in suitable habitat within City limits. This includes species for which there is high-quality habitat within City limits, but their current presence within the City is unknown, species that are known to occur just outside City limits and thus may also occur within the City, and species that are recorded on an irregular basis within the City and may be present within City limits at a given time, but should not be considered a reliably occurring species on a daily or annual basis. This includes western grebe (*Aechmophorus occidentalis*), grasshopper sparrow (*Ammodramus savannarum*), arroyo toad (*Anaxyrus californicus*), pallid bat (*Antrozous pallidus*), golden eagle (*Aquila chrysaetos*), long-eared owl (*Asio otus*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), crotch bumble bee (*Bombus crotchii*), rosy boa (*Charina trivirgata*), northern harrier (*Circus cyaneus*), red-diamond rattlesnake (*Crotalus ruber*), western pond turtle (*Emys marmorata*), western mastiff bat (*Eumops perotis californicus*), yellow-breasted chat (*Icteria virens*), western red bat (*Lasiurus blossevillii*), Yuma myotis (*Myotis yumanensis*), San Diego desert woodrat (*Neotoma lepida intermedia*), coast horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), western spadefoot (*Spea hammondi*), black-chinned sparrow (*Spizella atrogularis*), two-striped garter snake (*Thamnophis hammondi*), and least Bell's vireo (*Vireo bellii pusillus*). Grasshopper sparrow, arroyo toad, long-eared owl, red-diamond rattlesnake, western pond turtle, yellow-breasted chat, coast horned lizard, coast patch-nosed snake, western spadefoot, and least Bell's vireo have all been proposed for coverage under the NCCP/MSAA/HCP.

The remaining 38 special-status wildlife species have a low potential to occur within City limits or are presumed absent due to the lack of suitable habitat. Brief species accounts are provided below for those wildlife species that are considered present within City limits.



Cooper's Hawk

Cooper's hawk is designated by the CDFW as a watch list species. This species is often seen in wooded urban areas and native woodland communities. Preferred nesting habitats include oak and riparian woodlands dominated by sycamores and willows. Suitable foraging habitat for this bird can be found throughout the entire City, and suitable nesting habitat can be found in the major riparian woodlands within the City, including in O'Neill Regional Park, Trabuco Canyon, and Tijeras Canyon. Cooper's hawks prey on small birds and rodents that live in woodland and occasionally scrub and chaparral communities. This species is well-adapted to urban environments. Cooper's hawk is known to be a year-round resident in the City and should be considered to be present throughout the City, particularly in undeveloped woodlands and in areas with high prey activity (such as residential backyard bird feeders). This species was detected during vegetation mapping.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow is designated by the CDFW as a watch list species. Its primary habitat consists of moderate to steep slopes covered in relatively open coastal sage scrub, with grasses and rocks interspersed throughout. It can also be found in chaparral or in canyons. Dense stands of sage scrub and chaparral are typically avoided. Rufous-crowned sparrow nests either on the ground, in a depression in the ground, or very low in bushes (up to 45 centimeters off the ground). In most cases, nests are built underneath bunchgrass or shrubs, though they can also be constructed under rock overhangs. This subspecies breeds from late February or early March until early September. Southern California rufous-crowned sparrow is known to be a year-round resident in the City and should be considered to be present in undeveloped coastal sage scrub throughout the City, such as on the slopes of Trabuco Canyon or in the foothills of the Santa Ana Mountains. This species was detected during vegetation mapping.

Red-Crowned Parrot

Red-crowned parrot is designated by the USFWS as a bird of conservation concern. In southern California it occurs only as feral populations. In these areas it typically occurs in riparian areas or urban areas with large trees, including eucalyptus (*Eucalyptus* spp.), western sycamore, coast live oak, and sweetgum (*Liquidambar styraciflua*). This species typically breeds between March and August, inhabiting existing cavities in trees. Red-crowned parrot is known to be a year-round resident in the City and should be considered present in suitable habitat, particularly along the Arroyo Trabuco; this species was detected during vegetation mapping.

Orange-Throated Whiptail

Orange-throated whiptail is designated by the CDFW as a species of special concern. It occurs in generally pristine open sage scrub or chaparral where loose soils and occasional rocky areas are found. California buckwheat, black sage, white sage, and chamise are typically co-dominants in occupied orange-throated Whiptail habitat. It breeds from May to July and is generally in brumation (a hibernation-like state) through



the winter. This species is present in suitable habitat within the City, such as in the Arroyo Trabuco and was detected during vegetation mapping.

Oak Titmouse

Oak titmouse is designated by the USFWS as a bird of conservation concern. It generally inhabits open oak woodlands (primarily coast live oaks in Orange County) or areas with adjacent woodlands. It is sometimes found in areas with no oaks, including juniper woodlands, open pine forests, and pinyon-juniper woodlands. Oak titmouse breeds from mid-March to May, generally preferring to inhabit natural cavities in trees. However, this species would still readily use existing cavities that have already been excavated by other species and, in some cases, may excavate their own cavities. Oak titmouse is known to be a year-round resident in Rancho Santa Margarita and should be considered present in oak woodlands within City limits as this species was detected during vegetation mapping.

Costa's Hummingbird

Costa's hummingbird is designated by the USFWS as a bird of conservation concern. While Costa's hummingbird can be found year-round primarily within the Santa Ana Mountains in Orange County, in the lowlands and along the coast, the species is most abundant during the summer. Along the California coast and coastal mountain ranges, this species typically uses coastal sage scrub and dry chaparral, as well as oak savannas and riparian woodlands for breeding. Nests are typically not built in coastal southern California until May. Costa's hummingbird is known to be a seasonal resident in the City during breeding season and may occur in the fall and winter as well along the City's northern foothill edges. It should be considered present within undeveloped habitat at least during the breeding season; this species was detected during vegetation mapping.

Coastal Cactus Wren

Cactus wren is designated by the CDFW as a species of special concern. It is a year-round resident of cactus patches and sage scrub from coastal southern California throughout the desert southwest into Texas and far south into Mexico. The coastal subspecies extends through San Diego and southern Orange Counties, where habitat loss has resulted in well-documented declines. This subspecies is found in areas with mature cholla (*Cylindropuntia* sp.) or prickly pear (*Opuntia* sp.) cactus patches with minimal shrub cover for nesting. Open ground in and around individual cacti appears to be an important habitat element for foraging. It nests almost exclusively in cacti but on rare occasions may nest in non-cactus shrubs. The cactus wren breeding period generally extends from early March to the end of September. Suitable habitat can be found in areas in the City that contain a mixture of coastal sage scrub and cactus scrub, such as in the Arroyo Trabuco. Coastal cactus wren is known to be a year-round resident in the City and should be considered to be present in areas of suitable cactus scrub or coastal sage scrub with prominent cactus patches.



White-Tailed Kite

White-tailed kite is designated by the CDFW as a fully protected species. It is a year-round resident of Orange County. Its nesting habitat includes low-elevation grasslands and agricultural, wetland, oak-woodland, and savannah habitats. While the plant species in the territory is relatively unimportant, the structure of the territory and the availability of prey (mice) are both very important. Incubation for white-tailed kites typically lasts 30 to 32 days, with another four to five weeks after hatching until the birds are ready to fledge. In the winter this species would roost communally. Locally this species is generally associated with O'Neill Regional Park and the Arroyo Trabuco, where nest-building has previously been observed. This species should be considered present in riparian habitat and woodlands within the City, primarily in the Arroyo Trabuco and Tijeras Canyon.

Fox Sparrow

Fox sparrow is designated by the USFWS as a bird of conservation concern. It only occurs in Orange County during the winter. It is composed of four subspecies, sometimes described as separate species: sooty, slate-colored, thick-billed, and red. Sooty fox sparrow is most common in Rancho Santa Margarita, although thick-billed fox sparrow has also been recorded within the City limits. Preferred wintering habitats include primarily tall, dense chaparral, as well as woodlands, willow patches, and weedy areas along streamsides. This species does not breed in southern California and is typically gone from Orange County between mid-April and late September. Fox sparrow is known to occur within City limits during the winter and should be considered present during this time period in suitable, undeveloped habitat throughout the City.

Nuttall's Woodpecker

Nuttall's woodpecker is designated by the USFWS as a bird of conservation concern. It is a year-round resident of Orange County, primarily inhabiting oak woodlands but also riparian woodlands in southern California where its primary competing woodpecker, the downy woodpecker (*Picoides pubescens*), is more limited in distribution than in northern California. It can also be found in residential areas. This species typically begins breeding in late March, extending into June or July. It excavates new cavities every year in soft wood of dead trunks or limbs; old, existing, or previously-used cavities are not reused. Nuttall's woodpecker is known to be a year-round resident within the City and should be considered to be present in oak woodlands and riparian habitat, primarily the Arroyo Trabuco, O'Neill Regional Park, and Tijeras Canyon, as well as in residential neighborhoods with native arboreal habitat. This species was detected during vegetation mapping.

Coastal California Gnatcatcher

Coastal California gnatcatcher is a Federally threatened subspecies of the California gnatcatcher and is designated by the CDFW as a California species of special concern. It is the only subspecies of California gnatcatcher in southern California and is a year-round resident. This species is strongly associated with coastal sage scrub, but in the nonbreeding season would expand its home range and utilize adjacent chaparral and riparian habitat, particularly to help with fledgling dispersal. It prefers communities



dominated by California sagebrush. It generally occurs below 750 feet in elevation along the coast and below 1,500 feet in inland areas. The general nesting season extends from the beginning of March through mid-August. Suitable habitat for California gnatcatcher is present in undisturbed coastal sage scrub, and this species should be considered to be present within City limits in areas such as the Arroyo Trabuco, Tijeras Canyon, and in the foothills of the Santa Ana Mountains. This species was detected during vegetation mapping.

Allen's Hummingbird

Allen's hummingbird is designated by the USFWS as a bird of conservation concern. It is a year-round resident of Orange County, where it can be found throughout the cismontane lowlands and less frequently in the mountains. This species, however, has only steadily increased its distribution over the last 15 years, originating as a resident Channel Islands subspecies (*Selasphorus sasin sedentarius*). This subspecies expanded onto the immediate mainland coast (Palos Verdes) and has since gradually expanded inland into Riverside and as far south as San Diego as a permanent breeding resident of the mainland. The *sedentarius* subspecies on the mainland is found primarily in urban and suburban habitats, including among other areas, parks and backyards. The breeding period of the mainland *sedentarius* subspecies can begin as early as late October and extends through mid-July, which is possible due to the year-round nectar from the ornamental and landscaped plantings that this group of birds frequents. Allen's hummingbirds are known to be year-round residents in the City and should be considered present throughout the City; this species was detected during vegetation mapping.

Riverside Fairy Shrimp

Riverside fairy shrimp has been designated by the USFWS as a Federally endangered species. This species is restricted to deep (greater than 12 inches) vernal pools, vernal pool-like ephemeral ponds, stock ponds, and other depressions with low dissolved solids and neutral pH. This species cannot survive in perennial water because the process of cysts being re-wetted during periodic rainfall is one of the factors that triggers its hatching. It prefers warm-water pools that remain filled for extended periods, typically filling by late fall and remaining inundated through May. Individual fairy shrimp may hatch from cysts, mature, and reproduce within eight weeks of pools being refilled. Cysts may accumulate over several years, waiting for sufficient water to build before hatching. Riverside fairy shrimp is known to occur in two vernal pool complexes within City limits, the first in the City's northwest corner on the bluffs above O'Neill Regional Park, and the second immediately southeast of the intersection of SR-241 and Antonio Parkway.

CRITICAL HABITAT

Under the Federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. "Critical Habitat" refers to habitat or a specific geographic area that contains the elements and features that are essential for the survival and recovery of the species. In the event that a project may result in take or in adverse effects to a species' designated Critical Habitat, the project proponent may be required to engage in suitable mitigation. However, consultation for impacts to Critical Habitat is only required when a project has a Federal nexus (i.e., occurs on



Federal land, is issued Federal permits [e.g., Corps Section 404 CWA permit], or receives any other Federal oversight or funding). If a project does not have a Federal nexus, Critical Habitat consultations are not required.

The City of Rancho Santa Margarita contains designated Critical Habitat for three Federally listed species: arroyo toad, California gnatcatcher, and Riverside fairy shrimp; refer to [Exhibit 5.12-4, *Critical Habitat*](#). A small sliver of upland habitat on the western slopes of the Arroyo Trabuco, south of SR-241, has been designated as Arroyo Toad Critical Habitat Subunit 10b, and a very small portion of Subunit 10a falls within City boundaries at Bell Canyon on the eastern end of the City, leading out of Dove Canyon and into the Audubon Starr Ranch Sanctuary; these subunits are both part of Unit 10, San Juan Creek Basin (76 FR 7245-7467). California Gnatcatcher Critical Habitat Unit 6 is present in small portions of the center of the City extending out of the north hills of Coto de Caza, as well as in the far northeastern corner of the City on the slopes of Trabuco Canyon north of Robinson Ranch (72 FR 72010-72213). While nearly the entire undeveloped portion of the City was previously designated as Critical Habitat for California gnatcatcher (65 FR 63680-63743), most of this area was excluded in the most recent ruling in 2007 due to conservation partnerships under the NCCP/MSAA/HCP. Riverside Fairy Shrimp Critical Habitat Units 2dB and 2e are both located within City limits, with 2dB located in the northwestern corner of the City in O'Neill Regional Park, and 2e southwest of the center of the City on the hillsides below the intersection of Antonio Parkway and the Foothill Transportation Corridor State Route 241 (SR-241) (77 FR 72069-72140).



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SPECIAL-STATUS PLANT COMMUNITIES

The CNDDDB lists seven special-status habitats as being identified within the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles including Canyon Live Oak Ravine Forest, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Mixed Riparian Forest, Southern Riparian Scrub, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. Southern Coast Live Oak Riparian Forest is present throughout the City on undeveloped lands, typically in hillside drainages or in creeks. Southern Mixed Riparian Forest is present in the lower half of the Arroyo Trabuco (within City limits) south of the Arroyo Trabuco Reservoir, as well as in all of Tijeras Creek and in a portion of Dove Canyon Creek. Southern Riparian Scrub is present in a series of unnamed creeks located between SR-241 and Coto de Caza in the Chiquita Canyon Conservation Area. Southern Sycamore Alder Riparian Woodland is located in the northern half of the Arroyo Trabuco (within City limits), north of the Arroyo Trabuco Reservoir.

BIOLOGICAL CONSTRAINTS

The City of Rancho Santa Margarita was developed as a series of Planned Communities (Rancho Santa Margarita, Rancho Trabuco, Robinson Ranch, and Dove Canyon). All were developed prior to the City's incorporation and nearly all new development within the City occurred prior to the 2002 General Plan. Virtually all of the remaining open space within City limits has been designated as Reserve Lands under the NCCP/MSAA/HCP; refer to [Exhibit 5.12-5, *Designated Reserve Lands*](#). The Northeast Future Planned Community, which is located outside of the City limits, immediately north of Robinson Ranch, has not been developed. While it is within the NCCP/MSAA/HCP boundaries, this area is not designated as part of the NCCP/MSAA/HCP Reserve, and likewise is not located on National Forest System Lands (the eastern boundary of the planned development shares the western boundary of the Cleveland National Forest).

In addition, there is the potential for future development within the Chiquita Ridge Open Space Area, roughly located south of Cañada Vista Park and north of Las Flores between Antonio Parkway and SR-241; refer to [Exhibit 5.12-6, *Chiquita Ridge*](#). The Chiquita Ridge is outside of designated Reserve Lands under the NCCP/MSAA/HCP. The Chiquita Ridge development is undergoing its own research and feasibility studies and has already undergone prescribed mitigation, as well as associated land transfers and preservation as part of a settlement between the City of Rancho Santa Margarita, the County of Orange, Rancho Mission Viejo Company, and the Endangered Habitats League (EHL). As part of this settlement, the City completed a Final Habitat Restoration Plan for the approximately 82.9-acre Upper Oso project located within O'Neill Regional Park. The 2013 Restoration Plan was developed in coordination with OC Parks Management Division, USFWS, EHL and Rancho Mission Viejo. The 82.9-acre site has received habitat enhancements and modifications and will continue to receive maintenance and monitoring until 2019; refer to [Exhibit 5.12-7, *Habitat Restoration Area*](#). The Upper Oso project mitigation site will remain conserved open space.

Potential constraints to the development of the Northeast Future Planned Community and Chiquita Ridge Open Space area include:

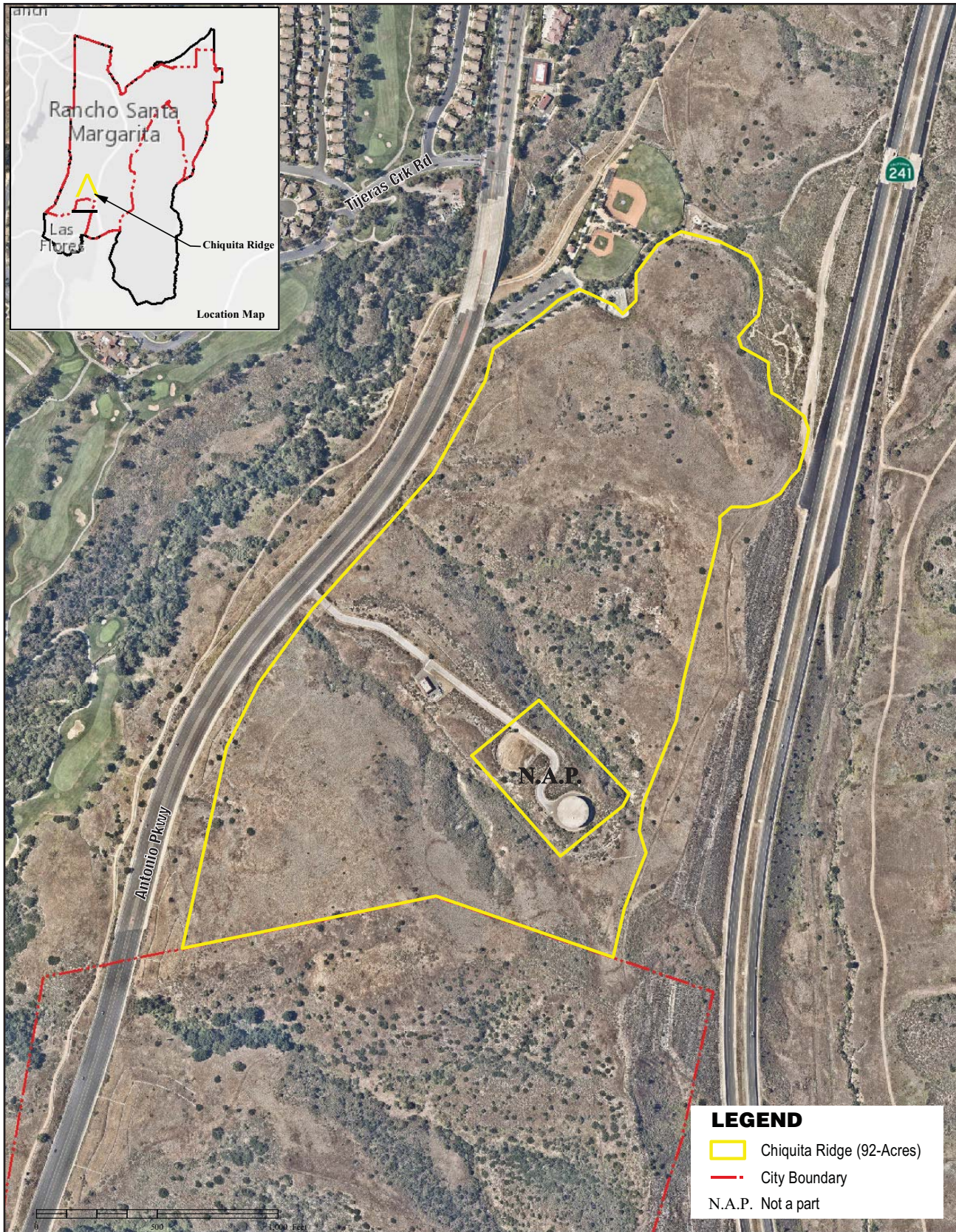


- Northeast Future Planned Community
 - Adjacent to designated Critical Habitat for arroyo toad and California gnatcatcher;
 - Adjacent to suitable habitat (i.e., chaparral habitat and coastal sage scrub) for several listed and/or sensitive species including but not limited to arroyo toad (Federally endangered), California gnatcatcher (Federally threatened), grasshopper sparrow (CA species of special concern), yellow warbler (CA species of special concern), Cooper's hawk (CA watch list), long-eared owl (CA species of special concern), orange-throated Whiptail (CA species of special concern), San Diego desert woodrat (CA species of special concern), coast horned lizard (CA species of special concern), and red-diamond rattlesnake (CA species of special concern); and
 - Known jurisdictional waterways (Trabuco Creek and tributaries).
- Chiquita Ridge Open Space Area
 - Suitable habitat for several listed and/or sensitive species including but not limited to California gnatcatcher (Federally threatened), grasshopper sparrow (CA species of special concern), orange-throated Whiptail (CA species of special concern), coastal cactus wren (CA species of special concern), coast horned lizard (CA species of special concern), and red-diamond rattlesnake (CA species of special concern);
 - Known jurisdictional waterways (tributary to Tijeras Creek); and,
 - Chiquita Ridge is a 92-acre property owned by the City that has been designated as open space; refer to Exhibit 5.12-6. Subject to the terms of the Settlement Agreement which transferred the property to City ownership, 55 acres of the property may be developed. However, if developed, the City is required to preserve and protect the habitat value of the remaining 37 preserved acres. The land use designation would need to be revised in order to develop the property.

Future development of these areas could potentially be limited due to their biological value and would require more detailed suitability assessments to determine impacts and appropriate mitigation. Because the City of Rancho Santa Margarita is not a participating landowner under the Orange County Southern Subregion NCCP/MSAA/HCP, the City would need to acquire appropriate take permits prior to development in these new areas, or other areas, if the development would impact protected species.



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Sources: NearMap, 2017 and City of Rancho Santa Margarita, 2017.



Sources: AEX 2010, Eagle Aerial 2014, and Upper Oso Habitat Restoration Plan Initial Study/Negative Declaration, 2013.





5.12.4 SIGNIFICANCE THRESHOLDS AND CRITERIA

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains the Initial Study Environmental Checklist, which includes questions relating to biological resources. The issues presented in the Initial Study Environmental Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Services;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
- Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

CEQA Guidelines Section 15065(a), Mandatory Findings of Significance, states that a project may have a significant effect on the environment if it would 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, reduce the number or restrict the range of an endangered, rare or threatened species ...*"

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State, or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.



CEQA Guidelines Section 15380, *Endangered, Rare or Threatened Species*, states that a lead agency can consider a non-listed species to be Rare, Threatened, or Endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare, Threatened, or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special-status species was considered according to the definitions for Rare, Threatened, and Endangered listed in CEQA Guidelines Section 15380.

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.12.5 PROJECT IMPACTS AND MITIGATION MEASURES

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE COULD HAVE A SUBSTANTIAL ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON ANY SPECIES IDENTIFIED AS A CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES IN LOCAL OR REGIONAL PLANS, POLICIES, OR REGULATIONS, OR BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE OR U.S. FISH AND WILDLIFE SERVICES.**

Impact Analysis: Future development associated with the General Plan Update would increase urbanization throughout the City with the potential to result in direct or indirect impacts to candidate, sensitive, or special-status species. Species of Special Concern and those placed on the CDFW Watch List and are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they are not afforded formal statutory protection. Species determined to have the potential to occur within the general vicinity are presented in [Section 5.12.3](#). The following analysis is limited to those species that, based on habitat requirements, are known to regularly occur within the City of Rancho Santa Margarita.

Plant Species

According to the CNDDDB and CNPS records, 33 special-status plant species have been recorded in the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles (refer to Appendix C of the Habitat Assessment). Based on known recent distribution records, no special-status plant species are known to occur within City limits. However, twelve (12) special-status plant species have been recorded in adjacent areas, have suitable habitat within City limits, and have a moderate or high potential to occur within the City. These include thread-leaved brodiaea, intermediate mariposa lily, southern tarplant, many-stemmed dudleya, sticky dudleya, mesa horkelia, California satintail, Robinson's pepper-grass, chaparral nolina, Allen's pentachaeta, white rabbit-tobacco, and Parry's tetracoccus. Thread-leaved brodiaea, southern tarplant, many-stemmed dudleya, and chaparral nolina have all been proposed for coverage under



the NCCP/MSAA/HCP. However, the City is not a Participating Landowner under the NCCP/MSSA/HCP and thus any development would require issuance of appropriate take permits in areas which support species protected under the NCCP/MSSA/HCP. The remaining twenty-one (21) special-status plant species have a low potential to occur within City limits or are presumed absent due to a lack of suitable habitat.

To address potential impacts to special-status plant species, future development would be subject to compliance with Mitigation Measure BIO-1. Mitigation Measure BIO-1 would require preparation of a Biological Resource Assessment which assesses existing resources, the potential impacts associated with site-specific development, and identifies mitigation measures to reduce potential impacts to a less than significant level.

The General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1) and reduce the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4), among others. Overall, compliance with Mitigation Measure BIO-1 would ensure impacts to candidate, sensitive, and special-status plant species are less than significant.

Wildlife Species

According to the CNDDDB and IPaC, seventy-three (73) special-status wildlife species, including migratory birds of concern, have been reported in the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles (refer to Appendix C of the Habitat Assessment). Based on known distribution records, thirteen (13) special-status wildlife species are known to regularly occur and are considered to be present within the City of Rancho Santa Margarita. This means that they are reliably present on a daily and annual basis either year-round or seasonally (for avian migrants). These species include Cooper's hawk, southern California rufous-crowned sparrow, red-crowned parrot, OTWH, oak titmouse, Costa's hummingbird, CACW, white-tailed kite, fox sparrow, Nuttall's woodpecker, CAGN, Allen's hummingbird, and Riverside fairy shrimp.

Based on habitat requirements for specific species and the availability and quality of habitats needed by each special-status wildlife species, it was determined that there is a moderate or high potential for an additional twenty-three (23) special-status wildlife species to occur in suitable habitat within City limits. This includes species for which there is high-quality habitat within City limits but their current presence within the City is unknown, species that are known to occur just outside City limits and thus may also occur within the City, and species that are recorded on an irregular basis within the City and may be present within City limits at a given time, but should not be considered to be a reliably occurring species on a daily or annual basis. This includes western grebe, grasshopper sparrow, arroyo toad, pallid bat, golden eagle, long-eared owl, coastal whiptail, crotch bumble bee, rosy boa, northern harrier, red-diamond rattlesnake, western pond turtle, western mastiff bat, yellow-breasted chat, western red bat, Yuma myotis, San Diego desert woodrat, coast horned lizard, coast patch-nosed snake, western spadefoot, black-chinned sparrow, two-striped garter snake, and least Bell's vireo.



Grasshopper sparrow, arroyo toad, long-eared owl, red-diamond rattlesnake, western pond turtle, yellow-breasted chat, coast horned lizard, coast patch-nosed snake, western spadefoot, and least Bell's vireo have all been proposed for coverage under the NCCP/MSSA/HCP. However, the City is not a Participating Landowner under the NCCP/MSSA/HCP. The remaining thirty-eight (38) special-status wildlife species have a low potential to occur within City limits or are presumed absent due to a lack of suitable habitat.

To address potential impacts to special-status wildlife species, future development would be subject to compliance with Mitigation Measure BIO-1. Mitigation Measure BIO-1 would require preparation of a Biological Resource Assessment which assesses existing resources, the potential impacts associated with site-specific development, and identifies mitigation measures to reduce potential impacts to a less than significant level. Additionally, the General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1) and reducing the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4), among others. All future development would be subject to compliance with the policies identified in the General Plan Update. Overall, compliance with Mitigation Measure BIO-1 would ensure impacts to candidate, sensitive, and special-status wildlife species are less than significant.

Plant Communities

The CNDDDB lists seven special-status habitats as being identified within the El Toro, Santiago Peak, Cañada Gobernadora, and San Juan Capistrano quadrangles: Canyon Live Oak Ravine Forest, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Mixed Riparian Forest, Southern Riparian Scrub, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. Southern Coast Live Oak Riparian Forest is present throughout the City on undeveloped lands, typically in hillside drainages or in creeks. Southern Mixed Riparian Forest is present in the lower half of the Arroyo Trabuco (within City limits) south of the Arroyo Trabuco Reservoir, as well as in all of Tijeras Creek and in a portion of Dove Canyon Creek. Southern Riparian Scrub is present in a series of unnamed creeks located between SR-241 and Coto de Caza in the Chiquita Canyon Conservation Area. Southern Sycamore Alder Riparian Woodland is located in the northern half of the Arroyo Trabuco (within City limits), north of the Arroyo Trabuco Reservoir.

To address impacts to special-status plant communities, future development would be subject to compliance with Mitigation Measure BIO-1. Mitigation Measure BIO-1 would require preparation of a Biological Resource Assessment which assesses existing resources, the potential impacts associated with site-specific development, and identifies mitigation measures to reduce potential impacts to a less than significant level. Additionally, the General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1) and reducing the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4), among others. Overall, compliance with Mitigation Measure



BIO-1 would ensure impacts to candidate, sensitive, and special-status plant communities are less than significant.

Proposed General Plan Update Goals and Policies:

CONSERVATION/OPEN SPACE ELEMENT

Goal 1: Protect and enhance the ecological and biological resources within and surrounding the community.

Policy 1.1: Preserve ecological and biological resources by maintaining these resources as open space.

Policy 1.2: Continue to preserve the coast live oak woodlands in the City by retaining the habitat as open space.

Policy 1.3: Protect and enhance the creeks and adjacent wetlands for their value in providing visual amenity, habitat for wildlife, and recreational opportunities.

Policy 1.4: Through land use planning, environmental review, and conditions placed on development projects, reduce the impact of urban development on important ecological and biological resources, including the beneficial uses of receiving waters.

Mitigation Measures:

BIO-1 Projects subject to California Environmental Quality Act (CEQA) review (meaning, non-exempt projects), and with the potential to reduce or eliminate habitat for native plant and wildlife species or sensitive habitats, as determined by the City of Rancho Santa Margarita's Development Services Department, shall provide a Biological Resources Assessment prepared by a City-approved qualified biologist for review and approval by the Development Services Department. The assessment shall include biological field survey(s) of the project site to characterize the extent and quality of habitat that would be impacted by development. Surveys shall be conducted by qualified biologists and/or botanists in accordance with California Department of Fish and Wildlife and/or United States Fish and Wildlife Services survey protocols for target species. If no sensitive species are observed during the field survey and the regulatory agencies agree with those findings, then no further mitigation will be required. If sensitive species or habitats are documented on the project site, the project applicant shall comply with the applicable requirements of the regulatory agencies and shall apply mitigation determined through the agency permitting process.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.



RIPARIAN OR SENSITIVE NATURAL COMMUNITIES

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE WOULD NOT HAVE A SUBSTANTIAL ADVERSE EFFECT ON ANY RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY IDENTIFIED IN LOCAL OR REGIONAL PLANS, POLICIES, REGULATIONS OR BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE OR U.S. FISH AND WILDLIFE SERVICE.**

Impact Analysis: As discussed, the City of Rancho Santa Margarita supports at least five areas determined to be “waters of the U.S.” and/or “waters of the State.” These include Oso Creek, Trabuco Creek, Tijeras Creek, Dove Canyon Creek, and an unnamed creek flowing roughly parallel to the eastern side of SR-241 in the Chiquita Canyon Conservation Area; refer to Exhibit 5.12-3, *Jurisdictional Areas and Reservoirs*, and Section 5.12.3, above. As a result, future development has the potential to directly and indirectly impact riparian habitat or other sensitive natural communities, if present.

Future development with potential to affect CDFW-jurisdictional riparian habitats would require a jurisdictional assessment to determine if: 1) the project site supports CDFW-protected wetlands, and 2) the project must initiate the CDFW permitting process. Pursuant to California Fish and Game Code 1600 et seq. and CWA Sections 401 and 404, the assessment is required to map and identify any wetland/ or riparian/riverine resources present, evaluate the plant species composition, provide a soils analysis (where appropriate), and include avoidance and mitigation measures to reduce impacts to these resources. Additionally, future development that may alter any water course or wetland, located either on-site or on any required off-site improvement areas are required to obtain applicable permits from the appropriate resources agencies.

In addition, the General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1), protect and enhance the creeks and adjacent wetlands for their value providing habitat for wildlife (Conservation/Open Space Element Policy 1.3), and reduce the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4). Overall, impacts to riparian habitat or other sensitive natural communities would be less than significant.

Proposed General Plan Update Goals and Policies:

CONSERVATION/OPEN SPACE ELEMENT

Goal 1: **Protect and enhance the ecological and biological resources within and surrounding the community.**

Policy 1.1: Preserve ecological and biological resources by maintaining these resources as open space.



Policy 1.3: Protect and enhance the creeks and adjacent wetlands for their value in providing visual amenity, habitat for wildlife, and recreational opportunities.

Policy 1.4: Through land use planning, environmental review, and conditions placed on development projects, reduce the impact of urban development on important ecological and biological resources, including the beneficial uses of receiving waters.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

FEDERALLY PROTECTED WETLANDS

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE WOULD NOT HAVE A SUBSTANTIAL ADVERSE EFFECT ON FEDERALLY PROTECTED WETLANDS AS DEFINED BY SECTION 404 OF THE CLEAN WATER ACT (INCLUDING, BUT NOT LIMITED TO, MARSH, VERNAL POOL, COASTAL, ETC.) THROUGH DIRECT REMOVAL, FILLING, HYDROLOGICAL INTERRUPTION, OR OTHER MEANS.**

Impact Analysis: As indicated in the response above, the City of Rancho Santa Margarita includes at least five areas determined to be “waters of the U.S.” and/or “waters of the State.” These include Oso Creek, Trabuco Creek, Tijeras Creek, Dove Canyon Creek, and an unnamed creek flowing roughly parallel to the eastern side of SR-241 in the Chiquita Canyon Conservation Area; refer to [Exhibit 5.12-3](#) and [Section 5.12.3](#) above.

Any future development with potential to impact to Federally protected wetlands would require Clean Water Act Section 404 Permit from the Corps prior to demolition, grading, or building permit approval. Any adverse effects to Federally protected wetlands would be fully mitigated through compliance with the Section 404 regulatory process, as the Corps ensures no net loss of riparian habitat and preservation of biological function and value of any onsite jurisdictional features.

All future development with potential to affect Federally protected wetlands would require a jurisdictional assessment to determine if: 1) the project site supports Federally protected wetlands, and; 2) the project must initiate the U.S. Army Corps of Engineers Section 404 process. The General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1), protect and enhance the creeks and adjacent wetlands for their value providing habitat for wildlife (Conservation/Open Space Element Policy 1.3), and reduce the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4). Thus, the General Plan Update would not result in significant impacts to Federally protected wetlands.



Proposed General Plan Update Goals and Policies:

CONSERVATION/OPEN SPACE ELEMENT

Goal 1: **Protect and enhance the ecological and biological resources within and surrounding the community.**

Policy 1.1: Preserve ecological and biological resources by maintaining these resources as open space.

Policy 1.3: Protect and enhance the creeks and adjacent wetlands for their value in providing visual amenity, habitat for wildlife, and recreational opportunities.

Policy 1.4: Through land use planning, environmental review, and conditions placed on development projects, reduce the impact of urban development on important ecological and biological resources, including the beneficial uses of receiving waters.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

WILDLIFE MOVEMENT CORRIDORS

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE COULD 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.**

Impact Analysis: Wildlife corridors functionally connect larger areas of open, usable habitat together. Currently, the City of Rancho Santa Margarita is mostly developed, with commercial, industrial, residential, and recreational uses. The primary areas of remaining substantive open space include Trabuco Canyon, Tijeras Canyon, the bluffs encompassed within O'Neill Regional Park in the City's northwestern corner, and much of the area located between Antonio Parkway and the western boundary of Coto de Caza, south of La Promesa; refer to Section 5.12.3. In addition, SR-241 provides multiple wildlife undercrossings and areas to the south provide additional wilderness access into the southern Santa Ana Mountains.

There are four designated wildlife corridors under the NCCP/MSAA/HCP that either occur within City limits or are immediately outside of them and provide movement opportunities into or out of the City. These include the following:

1. The Arroyo Trabuco (previously mentioned), providing movement opportunities between the Cleveland National Forest and Avery Parkway;



2. The Saddleback Meadows area, which provides a linkage between the Southern Subregion Planning Area and the abutting Central Subarea of the Orange County NCCP/HCP;
3. The area north of Oso Reservoir, which provides stepping stone habitat between the Southern Subregion and Central Subarea; and
4. Live Oak Canyon, which historically contained several habitat linkages and wildlife corridors providing movement opportunities into or out of the upper Arroyo Trabuco.

As discussed, the City of Rancho Santa Margarita is not a Participating Landowner under the NCCP/MSSA/HCP. To address potential impacts to designated wildlife corridors, future development would be subject to compliance with Mitigation Measure BIO-1. Mitigation Measure BIO-1 would require preparation of a Biological Resource Assessment which assesses existing resources (including wildlife corridors), the potential impacts associated with site-specific development, and identifies mitigation measures to reduce potential impacts to a less than significant level. In addition, the General Plan Update includes policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1) and reduce the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4). Overall, compliance with Mitigation Measure BIO-1 would ensure impacts to wildlife corridors are less than significant.

Proposed General Plan Update Goals and Policies:

CONSERVATION/OPEN SPACE ELEMENT

Goal 1: **Protect and enhance the ecological and biological resources within and surrounding the community.**

Policy 1.1: Preserve ecological and biological resources by maintaining these resources as open space.

Policy 1.4: Through land use planning, environmental review, and conditions placed on development projects, reduce the impact of urban development on important ecological and biological resources, including the beneficial uses of receiving waters.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.



LOCAL POLICY/ORDINANCE CONSISTENCY

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE WOULD NOT CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY OR ORDINANCE.**

Impact Analysis: The City's Tree City USA Ordinance seeks to establish a tree care law which encourages and supports the development and continuance of a tree maintenance program by the community associations within the City. The Tree City USA Ordinance addresses the maintenance and removal of all trees within public rights-of-way, parks and/or other public places. Pursuant to Municipal Code Chapter 7.04, *Tree City USA Designation*, any tree removed from public rights-of-way, parks, and/or other public places must be replaced with another tree of similar type. Implementation of The General Plan Update is not anticipated to conflict with the Tree City USA Ordinance. Future development activities associated with implementation of the General Plan Update would be reviewed for consistency with the Municipal Code, including the Tree City USA Ordinance.

To further protect City trees, the General Plan Update incorporates Land Use Element Policy 12.4 to encourage the preservation and maintenance of native and large trees within City parks and open spaces. Thus, the General Plan Update would not result in significant impacts with the City's Tree City USA Ordinance. Impacts would be less than significant in this regard.

Proposed General Plan Update Policies:

LAND USE ELEMENT

Goal 12: Provide a balance of high-quality active and passive public open spaces, a regional trail system, and recreation facilities based on community needs and the ability of the City to finance, construct, maintain, and operate facilities now and in the future.

Policy 12.4: Encourage native and large trees of various ages within parks and open spaces to be provided and maintained.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.



HABITAT CONSERVATION PLAN

- **IMPLEMENTATION OF THE GENERAL PLAN UPDATE COULD CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN.**

Impact Analysis: The NCCP/MSAA/HCP is primarily intended to protect and preserve coastal sage scrub and other natural communities that occur within the Reserve System, as well as associated habitats and species. As discussed above, the City of Rancho Santa Margarita is not a Participating Landlord in the NCCP/MSAA/HCP and therefore is not subject to take coverage/permits obtained under the NCCP/MSAA/HCP. Nonetheless, to ensure implementation of the General Plan Update does not impact implementation of the NCCP/MSAA/HCP, future development accommodated through implementation of the General Plan Update would be subject to conformance with Mitigation Measure BIO-1. Mitigation Measure BIO-1 would require preparation of a Biological Resource Assessment which assesses existing resources (including wildlife corridors), the potential impacts associated with site-specific development, and identifies mitigation measures to reduce potential impacts to a less than significant level. In addition, the General Plan Update includes several policies intended to preserve ecological and biological resources by maintaining these resources as open space (Conservation/Open Space Element Policy 1.1), protect and enhance the creeks and adjacent wetlands for their value providing habitat for wildlife (Conservation/Open Space Element Policy 1.3), and reduce the impact of urban development on important ecological and biological resources (Conservation/Open Space Element Policy 1.4). Overall, compliance with Mitigation Measure BIO-1 would ensure future development does not conflict with the NCCP/MSAA/HCP. Impacts would be less than significant in this regard.

Proposed General Plan Update Policies:

CONSERVATION/OPEN SPACE ELEMENT

Goal 1: Protect and enhance the ecological and biological resources within and surrounding the community.

Policy 1.1: Preserve ecological and biological resources by maintaining these resources as open space.

Policy 1.3: Protect and enhance the creeks and adjacent wetlands for their value in providing visual amenity, habitat for wildlife, and recreational opportunities.

Policy 1.4: Through land use planning, environmental review, and conditions placed on development projects, reduce the impact of urban development on important ecological and biological resources, including the beneficial uses of receiving waters.

Mitigation Measures: Refer to Mitigation Measure BIO-1.



Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.12.6 CUMULATIVE IMPACTS

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE GENERAL PLAN UPDATE AND CUMULATIVE DEVELOPMENT COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO BIOLOGICAL RESOURCES.**

Impact Analysis: As indicated above, despite the moderate extent of development within City limits, the City of Rancho Santa Margarita continues to support a wide and diverse array of vegetation, wildlife, and habitats. Project implementation would facilitate future development proposals and consequently increase urbanization in the City. The additional development supported by implementation of the General Plan Update could result in potential impacts to biological resources. Future development within the City would be reviewed to determine if individual assessments of potential project-specific impacts to biological resources, including impacts to candidate, sensitive, or special status species and their habitats would be required; refer to Mitigation Measure BIO-1. If necessary, project-specific mitigation would be recommended to reduce potential impacts to a less than significant level. Thus, implementation of the General Plan Update is not anticipated to result in cumulatively considerable impacts to biological resources following conformance with Mitigation Measure BIO-1 .

Proposed General Plan Update Goals and Policies: Refer to the General Plan Update goals and policies cited above.

Mitigation Measures: Refer to Mitigation Measure BIO-1.

Level of Significance After Mitigation: Less Than Significant Impact With Mitigation Incorporated.

5.12.7 SIGNIFICANT UNAVOIDABLE IMPACTS

Biological impacts associated with implementation of the General Plan Update would be less than significant with implementation of the identified mitigation measures. No significant unavoidable impacts to biological resources would occur as a result of the General Plan Update.

5.12.8 SOURCES CITED

City of Rancho Santa Margarita, *City of Rancho Santa Margarita Municipal Code*.

Guzy, G. S., and R. M. Anderson, *Memorandum: Supreme Court Ruling Concerning CWA Jurisdiction of Isolated Waters: U.S. Environmental Protection Agency and Army Corps of Engineers*, 2001.

Federal Register: Volume 67, Number 114, 50 Code of Federal Regulations [CFR] Part 17, June 13, 2002.



United States Environmental Protection Agency, *Section 404 of the Clean Water Act: How Wetlands are Defined and Identified*, <https://www.epa.gov/cwa-404/section-404-clean-water-act-how-wetlands-are-defined-and-identified>, accessed on April 10, 2018.



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