

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of a project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines.

Construction and operation of any of the Build Alternatives would result in direct and indirect impacts that could contribute to cumulative effects to the built and natural environment when combined with other related past, present, and reasonably foreseeable future actions.

2.4.2 Methodology

Cumulative impacts were identified by comparing the impacts of the proposed project and other past, current, or proposed actions in the area to establish whether, in the aggregate, they could result in cumulative environmental impacts. Both direct and indirect impacts are assessed. The cumulative effects analysis focuses on those issues

and resources that would be affected by the aggregation of stress factors on the environment and does not address in detail those topics that would not have additional environmental effects from the cumulative condition. The analysis provided in this section considered the effects of the other projects and the Build Alternatives in assessing whether a particular environmental parameter would experience cumulative adverse impacts. Specific geographic boundaries for cumulative effects are determined for each environmental topic analyzed and may vary accordingly.

Future actions anticipated to occur include further growth within the City and County. The growth would require continued expansion of supporting infrastructure such as roadways, commercial uses, public services, and utilities. The anticipated growth is reflected in the regionally adopted growth projections and is planned for in the City and County General Plans.

The following eight steps serve as guidelines for identifying and assessing cumulative impacts and are based on the *Caltrans Standard Environmental Reference – Cumulative Impacts* (Caltrans, April 2008).¹

- Identify the resources to consider in the cumulative impact analysis by gathering input from knowledgeable individuals and reliable information sources. This process is initiated during project scoping and continues throughout the CEQA analysis.
- Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
- Describe the current health and historical context of each resource.
- Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.
- Identify a set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.
- Assess cumulative impacts.
- Report the results of the cumulative impact analysis.
- Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

¹ <http://www.dot.ca.gov/ser/forms.htm>; accessed in June 2008.

2.4.3 Affected Environment

For the consideration of impacts associated with projections, the Orange County Projections-2006 (OCP-2006) (Center for Demographic Research [CDR], 2006) was used. The local General Plans are consistent with the OCP-2006 projections. In addition, there are two regional planning documents that influence the potential for cumulative impacts: the Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) and the SAMP. These regional planning programs also factored in growth and cumulative impacts to sensitive resources in the area. These planning documents were undertaken at a watershed level; therefore, they included areas beyond the City and adjacent unincorporated Orange County.

Not all projects would contribute to cumulative impacts for each topical area. For example, not all projects would have impacts on biological resources. Not all impacts associated with each cumulative project would contribute to a cumulative impact. Some of the impacts are very site-specific and would not compound the impacts associated with the proposed project. In other cases, short-term impacts would not contribute to cumulative impacts because the construction of the cumulative project and the road widening would not occur in the same time period or be proximate to each other.

It is important to note that a quantification of cumulative impacts is not feasible for some impact topics and would be speculative. In some cases, no environmental document has been prepared and impacts are unknown. In other instances, the impacts have not been quantified. Therefore, much of the cumulative evaluation is a qualitative judgment regarding the combined effects of the relationship among the projects included in the Resource Study Area (RSA) for each resource. In some cases, application of the identified project mitigation and/or minimization program may reduce the cumulative impacts as well as the project impact.

The cumulative analysis is limited to the resources that require avoidance, minimization, and mitigation measures to analyze whether the impact contribution to the resources, when considered with the proposed project and other cumulative projects, could be cumulatively considerable. In addition, temporary construction impacts of the project are not considered contributory to cumulative impacts, given the limited duration, localization, and small scale of these impacts as well as the avoidance and minimization measures applied to them. Therefore, the

cumulative analysis only considers potential cumulative long-term impacts of the proposed project and the other cumulative projects.

As discussed in Chapter 2 of this EIR, the proposed project would cause direct or indirect impacts to a number of resources in the human, physical, and natural environment; therefore, many of the resources discussed in the previous sections were considered in the analysis of cumulative impacts, including:

- **Community**—minor acquisition of land.
- **Visual/Aesthetics**—changes in views.
- **Cultural Resources**—discovery of unknown resources during construction.
- **Water Quality**—discharge of motor vehicles related pollutants.
- **Paleontology**—discovery of unknown resources during construction.
- **Climate Change**.
- **Biological Resources**—removal of minor amount of wetlands, impact to oak trees, removal of vegetation that has the potential to support nesting birds.

Those resources for which cumulative effects are not anticipated or for which the impacts were already analyzed in a cumulative context are briefly discussed below. Discussion of cumulative impacts to the resources listed above are provided later in Section 2.4.5.

- **Land Use.** It is anticipated that future development would be implemented in a manner that is consistent with adopted land use and resource plans. The evaluation of plan consistency is considered a project-related evaluation and is discussed in Section 2.1.1 of this EIR. The State, regional, and local plans reviewed for this evaluation provide a broader planning context for the proposed project.
- **Growth.** As discussed in Section 2.1.2, the SR-74 widening is proposed in a location where development has already occurred, and where additional development is planned for in the adopted land use plans of the local jurisdictions. The proposed project is meeting the purpose and need of the area by reducing existing and projected 2035 traffic congestion. The proposed project's contribution to cumulative growth impacts is less than significant.
- **Environmental Justice.** As discussed in Section 2.1.3 of this EIR, no low-income and/or minority populations are located within the study area or immediate vicinity. The effects of other transportation and public infrastructure projects on low income and/or minority populations would be assessed as part of

the environmental review of those projects. Based on the census data reviewed for the proposed project, it would appear that any adverse effects on these populations would be offset by beneficial effects of the projects in terms of improved mobility or other public services.

- **Utilities/Emergency Services.** As discussed in Section 2.1.4 of this EIR, two new Capistrano Valley Water District (CVWD) water lines are proposed on the north side of SR-74. The addition is needed by the City, separate from the proposed project. However, it is anticipated that these water lines will be installed within the existing right-of-way and at the time of construction as not to cause additional ground disturbance within the project limits. A separate IS (Proposed MND) was signed on December 24, 2007, for this project, and all avoidance and minimization measures have been addressed as part of that document. Therefore, the proposed project would not result in adverse effects to utilities and emergency services, except for short-term effects during construction.
- **Hydrology and Floodplains.** As discussed in Section 2.2.1 of this EIR, the proposed project would not encroach on floodplains and would construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and replace an existing trapezoidal channel with a reinforced concrete box culvert.
- **Traffic and Transportation.** As discussed in Section 2.1.5 of this EIR, the proposed project would not result in adverse effects to traffic circulation in the study area, except for short-term effects during construction. The proposed project would have a beneficial effect by improving regional and local mobility. The analysis of future traffic conditions in the 2035 design year is a cumulative analysis in that it considers traffic generated by future planned land uses and the effect of future planned transportation improvements.
- **Geology/Soils/Seismic/Topography.** As discussed in Section 2.2.3 of this EIR, any adverse effects of the proposed project to geology, soils, etc., is localized and limited to the grading limits of the project. While other projects would impact the geology at their project sites, the impacts would be localized and not impact regional geology; therefore, impacts of other projects are not considered important cumulative impacts.
- **Hazardous Waste and Materials.** As discussed in Section 2.2.5 of this EIR, implementation of the proposed project would not result in a substantial permanent adverse impact related to hazardous waste and materials. Future land use and transportation projects would comply with the City and County Hazardous Waste Management Plan and the General Plan policies related to

hazardous materials, which would ensure that there would be no adverse hazardous material impacts resulting from future development in the City and County.

- **Air Quality.** The analysis of air quality provided in Section 2.2.6 of this EIR is a cumulative analysis in that it considers the emissions of traffic generated by future planned land uses and the effects of other future planned transportation improvements.
- **Energy.** When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts. This would be the case for other projects considered in this cumulative impacts analysis.

2.4.3.1 Orange County Projections-2006

One component of the cumulative analysis is the growth projected in the OCP-2006. The CDR at California State University, Fullerton (CSUF) developed the OCP-2006 for incorporation into SCAG's growth forecast for the 2004 and 2008 RTP and the South Coast Air Quality Management District (SCAQMD) AQMP (SCAG 2004 and 2008; SCAQMD 2007). These projections generally reflect the growth anticipated by the local General Plans for the various Orange County jurisdictions. These projections are used as part of the cumulative analysis because they are the basis for the evaluation of long-term growth and are incorporated into the traffic modeling effort which, in turn, is used for the noise and air quality analyses.

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

The County of Orange has prepared the Southern Subregion NCCP/MSAA/HCP, Draft Implementation Agreement (IA), and the associated Draft EIR/EIS. The Draft NCCP/MSAA/HCP sets forth a proposed Conservation Strategy to be implemented by the County in cooperation with State and federal agencies and participating landowners in southern Orange County. The proposed Conservation Strategy focuses on long-term protection and management of multiple natural communities that provide habitat essential to the survival of a broad array of wildlife and plant species. The NCCP/MSAA/HCP was approved by the Board of Supervisors in November 2006. USFWS issued a permit in January 2007. According to CDFG, the final plan does not meet the NCCP standards, so any State-listed species take would be permitted under the California Endangered Species Act. The plan encompasses 91,000 ac, with 57,000 ac of natural habitat, including coastal sage scrub, chaparral, grassland, riparian, and oak woodlands. State-listed species covered by the plan

include least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and thread-leaved brodiaea (*Brodiaea filifolia*).

2.4.3.3 Special Area Management Plan (SAMP)

A SAMP is a voluntary watershed-level planning and permitting process that involves local landowners and public agencies that seek permit coverage under Section 404 of the federal Clean Water Act (CWA) for future actions that affect jurisdictional Waters of the United States (U.S.). The purpose of a SAMP is to provide for reasonable economic development, protection, and long-term management of sensitive aquatic resources (biological and hydrological). The ACOE has prepared a SAMP for the San Juan Creek and Western San Mateo Creek watershed, which covers permits for drainage activities within the BSA for this project. The SAMP study area includes the 22,815 ac RMV Ranch Plan area, which is identified as a cumulative project discussed below.

ACOE has prepared an EIS (November 2005) for the San Juan Creek and Western San Mateo Creek watersheds SAMP. The SAMP was prepared as part of two other major planning and regulatory components: (1) The RMV Ranch Plan FEIR 589 and (2) the NCCP/MSAA/HCP and its associated EIR/EIS.

2.4.3.4 Cumulative Land Development Projects

The proposed project traverses through the City. The identification of cumulative impacts was based upon a search of projects within the City, as well as areas in the adjacent areas of unincorporated Orange County. This geographic area is considered appropriate because it would capture the key projects that have the potential of contributing similar impacts on resources affected by the proposed project. A list of past, present, and reasonably foreseeable future development projects is provided in Table 2.4-1. Table 2.4-2 identifies roadway projects.

Table 2.4-1 Cumulative Development Projects

Project Title	Project Description	Lead Agency	Project Status
CUSD Offices	Construction of government offices (125,000 gross square feet) at the southerly terminus of Valle Road from San Juan Creek Road.	CUSD	Complete
Pacifica San Juan (SunCal)	Surrounding McCracken Hill and extending south to Camino Las Ramblas. Residential. 411 single-family and multifamily units.	San Juan Capistrano	Under construction
San Juan Meadows	La Novia Avenue. Residential. 196 single-family detached units, 79 single-family attached units, and 165 multifamily units.	San Juan Capistrano	Approved; not constructed
Serra Plaza	Del Obispo Street at Paseo Adelanto. Offices. 45,500 gross square feet.	San Juan Capistrano	Complete
Whispering Hills Estates Planned Community	Single-family dwelling units on the eastern edge of the City by La Pata Avenue.	San Juan Capistrano	Under construction
San Juan Hills High School	West of La Pata Road (Antonio Parkway) and north of San Juan Creek Road. Public high school. 2,000 students.	CUSD	Complete
Villa Montana Apartment Homes	10 ac of the Whispering Hills Estates site. 163-unit apartment development.	San Juan Capistrano	Under review
Junipero Serra Catholic High School	Junipero Serra Road and Camino Capistrano. Private high school. 2,200 students.	San Juan Capistrano	Complete
Honeyman Ranch: Rancho Madrina	Rancho Viejo Road. Residential estate homes. 119 single-family detached units.	San Juan Capistrano	Under construction
Ortega Ranch Offices	Rancho Viejo Road and Ortega Highway. 11-building office complex. 151,272 gross square feet.	San Juan Capistrano	Complete
Mammoth Offices	Rancho Viejo Road at Via Escolar. 2-building office complex. 103,832 gross square feet.	San Juan Capistrano	Complete
Ortega Animal Hospital	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Veterinary clinic and animal boarding. 7,767 gross square feet.	San Juan Capistrano	Complete
Reising Law Offices	Ortega Highway between Rancho Viejo Road and La Novia Avenue. Law offices. 5,963 gross square feet.	San Juan Capistrano	Complete
Rancho Viejo Office Park	Rancho Viejo Road north of Spotted Bull Lane (east side). 47 percent medical office, 53 percent commercial office. 67,720 gross square feet.	San Juan Capistrano	Under review
Valle Ranch	South terminus of Valle Road. Offices. 44,400 gross square feet.	San Juan Capistrano	Complete

Table 2.4-1 Cumulative Development Projects

Project Title	Project Description	Lead Agency	Project Status
Belladonna Estates	Del Obispo Street. Residential custom lots (31).	San Juan Capistrano	Approved; not constructed
St. Margaret's Episcopal School Master Plan	Ortega Highway and La Novia Avenue. Church: 18,455 gross square feet. Performing arts center: 450 seats. Private school: 151 students.	San Juan Capistrano	Under review
M&M Petroleum	Ortega Highway and I-5 northbound on-ramp. Service station: 9 pumps. Convenience store: 5,940 gross square feet. Auto wash.	San Juan Capistrano	Under construction
Rancho Mission Viejo Plan	RMV Planning Area (The Ranch Plan project) is a 22,815 ac property immediately east of the Cities of Mission Viejo and San Juan Capistrano in unincorporated Orange County. 14,000 dwelling units and 5.2 million square feet of retail and business uses on 5,842 gross acres; golf course uses on 25 gross acres, and open space on 16,942 ac Widening SR-74 from 2 lanes to 4 lanes within Planning Area 1.	County of Orange	Approved project; not constructed
Prima Deshecha Landfill Expansion	Increase disturbance area from 800 to 1,078 ac for landslide remediation features; redesign desilting system; supplement water supply in the Prima Deshecha Cañada stream channel; modify excavation- phasing limits for landslide remediation.	County of Orange	Approved June 2007 by County
San Juan Capistrano Ortega Highway Pipeline Project	Construction of approximately 5,287 linear feet of 12-inch diameter potable water main pipeline within the Ortega Highway right-of-way.	City of San Juan Capistrano	Initial Study/Negative Declaration approved 12/24/07

Sources: City of San Juan Capistrano, 2008; County of Orange, 2008.

ac = acre

CUSD = Capistrano Unified School District

I-5 = Interstate 5

RMV = Rancho Mission Viejo

SR-74 = State Route 74

Table 2.4-2 Cumulative Road Projects

The Department	Route	Post Mile	Location	Description	Lead Agency	Project Status
0G940	5	1.2 to 1.7	El Camino Real to Avenue Ramona	Sound walls (approximately 660 ft [201 m] long) are proposed along southbound I-5 from El Camino Real to Avenue Ramona in San Clemente.	The Department	PA/ED approved in 2004; construction anticipated to begin in 2010
0E570	5	8.58/9.35	I-5/Camino Capistrano Interchange Improvement Project	Install auxiliary lane and widen the I-5/Camino Capistrano southbound off-ramp. Widen Camino Capistrano in the vicinity of the ramp intersection in San Juan Capistrano.	OCTA	Final design to be determined; PA/ED approved
0E310	74	9.36/9.88	I-5/Ortega Highway Interchange Project	Interchange improvements, including reconfiguring Del Obispo Street intersection and widening Diamond interchange; relocated Del Obispo Street intersection and single Cloverleaf; and providing double Cloverleaf Interchange	The Department	Under review
0G630	74	5.2/13.1	Middle Ortega Safety Project	Restore eroded and damaged shoulder; replace all existing traffic stripes with inverted thermoplastic traffic strips; and, where conditions allow, create a 1 ft soft barrier on SR-74 from Postmile 5.2 to 13.1. All work would be within the existing State right-of-way.	The Department	PA/ED was approved in 2006; construction is complete
0F510	5	8.63	San Juan Creek Scour Project	Repair of streambed scouring that is exposing and endangering existing I-5 support columns.	The Department	Construction scheduled for September 2007
04321	74	13.30/16.28	Upper Ortega Highway	Widening of Ortega Highway (SR-74) from Trabuco Road to Orange/Riverside County line. Widen the roadway for safety purposes along portions of the highway in the Cleveland National Forest.	The Department	PA/ED was approved in 2005; currently in construction
N/A	74	2.4	SR-74 and Antonio/La Pata	SR-74/Antonio Pkwy/La Pata Avenue Intersection Improvements.	County of Orange	In construction

ft = foot

I-5 = Interstate 5

m = meter

N/A = not applicable

OCTA = Orange County Transit Authority

PA/ED = Project Approval/Environmental Document

Pkwy = Parkway

SR-74 = State Route 74/Ortega Highway

2.4.4 Environmental Consequences

2.4.4.1 Community

The RSA for community impacts is SR-74 between I-5 and La Pata Avenue and includes any project that uses this segment of SR-74. The RSA includes Whispering Hills Estates (including Villa Montana Apartment Homes), San Juan Hills High School, Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Upper Ortega Highway project, and SR-74 and the Antonio/La Pata project.

The City of San Juan Capistrano was incorporated in 1961 and experienced a substantial amount of development between 1983 and 1995. The City has experienced a substantial increase in population over the past three decades; however, there has only been a gradual increase since 1995. The population has increased almost tenfold since 1970, but has only increased 2 percent annually (at most) since 1995. The Orange County Facts and Figures anticipate this lower growth rate through 2035. These numbers reflect the fact that much of the City is developed.

No Build Alternative

The No Build Alternative would involve construction and improvement of the projects listed in Tables 2.4-1 and 2.4-2 without the proposed project and constitutes the future baseline conditions.

Build Alternatives 1 and 2

Neither of the Build Alternatives would affect population/housing figures for the area in relation to growth, composition, or demographics. Since the Build Alternatives do not displace any businesses and no loss of employment, loss of tax revenue, or reduction in income level is expected, the Build Alternatives would not have a substantial impact on tax revenue. Improvement in traffic conditions is not expected to result in a decrease in property values, since there would be no change in the remaining land uses within the study area and its surroundings. Additionally, because the project would result in sliver acquisitions only and neither of the Build Alternatives would result in any residential or nonresidential displacements, the amount of tax revenue lost from the small number of partial acquisitions would not substantially alter the tax base. Property owners would be compensated with fair-market value for property acquisitions.

Build Alternative 1 would necessitate the removal of 1,056 ft of sidewalk on the north side of SR-74 from Calle Entradero and Via Cordova. Based on the subjective human perception of this resource, removal of the sidewalk in this area is a potentially significant impact to community character. However, under both Alternatives 1 and 2, a new sidewalk would be constructed east of Avenida Siega and would connect to the County sidewalk system to provide continuity. This would be a beneficial effect of the project.

Build Alternatives 1 and 2 would not have an impact on community cohesion since SR-74 is an existing highway traversing the study area. However, Build Alternatives 1 and 2 propose to widen the existing SR-74, moving the road closer to residences adjacent to the highway. Therefore, based on the subjective human perception of community character, the widening of SR-74 in this area is a potentially significant impact.

The projects included in this cumulative impacts analysis would mitigate their own impacts to community resources. The proposed project's contribution to these impacts would be minimal; therefore, it would not result in a cumulative community impact.

2.4.4.2 Visual/Aesthetics

The RSA for visual and aesthetics is the SR-74 study area and includes the Ortega Ranch offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project. Historically, visual resources in the cumulative study area have been characterized by the conversion of agricultural and rural uses followed by residential development. As mentioned previously, this area experienced a substantial amount of development between 1983 and 1995. Currently, the health of this resource continues to be a semi-rural/urban setting with no vacant land uses. Low-density land uses are mixed with meandering sidewalk and an equestrian trail on the north side of SR-74. Ornamental vegetation is present on the north side of SR-74, with native and nonnative vegetation interspersed. Stands of oak trees are present on the south side of SR-74. There are limited background views and no distant views along SR-74 within the project limits due to large trees. The current and reasonably foreseeable future actions or projects that may affect this resource are the projects identified above as well as continued development and open space preservation in accordance with adopted City and County General Plans and the NCCP/MSAA/HCP and SAMP.

No Build Alternative

The No Build Alternative would not change the visual setting and would not create visual impacts in the RSA. Although the RMV Ranch Plan would change the visual character in the RSA, the effect would not be considered cumulatively significant, as it will minimize and mitigate its own visual impacts. Therefore, the projects within this RSA, without the proposed project, would not have a significant visual impact, as they are not adding features that would adversely affect the visual character of the RSA.

Build Alternatives 1 and 2

The Build Alternatives would have an effect on visual/aesthetics for travelers, residents, and pedestrians, as it adds noise barriers and retaining walls to the existing viewshed. The Build Alternatives have incorporated minimization and mitigation measures to address potential project-related aesthetic impacts. This is accomplished through the use of landscaping, roadway alignment, wall treatments, and placing utilities underground. Although impacts would be considered significant for Key Views 1, 4 and 5, even with implementation of these measures, the Build Alternatives are not expected to contribute to cumulative aesthetic impacts, as the elements of the Build Alternatives are minor in comparison to SR-74 as a corridor.

The effects of the cumulative transportation and development projects listed above include impacts to the immediate study area. When evaluating cumulative aesthetic impacts, a number of factors must be considered. In order for a cumulative aesthetic impact to occur, the proposed elements of the cumulative projects would need to be seen together or in proximity to each other. If the projects were not in proximity to each other, the viewer would not perceive them in the same scene. Although the RMV Ranch Plan, St. Margaret's Episcopal School Master Plan, the Middle Ortega Highway Safety project, and SR-74 and the Antonio/La Pata project are within the same scene of the proposed project, these projects will minimize and mitigate their own impacts and will thus be considered a less than significant cumulative impact. Additionally, the proposed project traverses a developed portion of SR-74, and its contribution to cumulative visual impacts, when considered in conjunction with the other projects mentioned above, is considered less than significant.

2.4.4.3 Cultural Resources

The RSA for cultural resources is the proposed project's area of potential effects (APE), which encompasses the existing paved roadway and the maximum limit of any potential disturbances that may result from construction activities. The RSA

includes the Ortega Ranch offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

Historically, the RSA contained farmstead homes from the early era of agricultural development that followed the introduction of irrigation to the area. Currently, there are three resources located in the RSA, the Hankey-Rowse House, Errecarte House, and the Manriquez Adobe archaeological site. The Hankey-Rowse House is an example of one of the last remaining farmstead homes from the early era of agricultural development that followed the introduction of irrigation to the area. No surface manifestations of the Manriquez Adobe site were identified during the field survey. However, archival research suggested that information-bearing archaeological deposits may have survived.

No Build Alternative

The RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project, without the proposed project, have a potential to encounter sensitive cultural resources. Standard conditions of approval and mitigation measures required for these projects would avoid and minimize potential impacts.

Build Alternatives 1 and 2

The site-specific nature of cultural resources reduces the potential for cumulative impacts. A determination of No Historic Properties Affected has been made for the Hankey-Rowse house and the Errecarte House. For the Manriquez Adobe site, it was determined that since portions of the site within the proposed ADI are not expected to contain information-bearing deposits and, therefore, are noncontributing elements to the larger property, the project's finding is No Adverse Effect with Standard Conditions (Environmentally Sensitive Area [ESA]). Through the establishment of an ESA Action Plan, potentially significant subsurface deposits would not be impacted. Additionally, the proposed project includes minimization measures to address unknown resources discovered during construction activities.

None of the projects in the RSA would directly or indirectly affect any of the cultural resources related to the proposed project, and the proposed project would not have a direct or indirect effect on cultural or historic resources related to the projects listed above. Standard conditions of approval and avoidance and minimization measures required for each of the cumulative projects would minimize impacts associated with unknown resources discovered during construction. With inclusion of the avoidance

and minimization measures identified, the proposed project's contribution to cumulative cultural resource impacts, when considered in conjunction with the projects within the RSA, is considered less than significant.

2.4.4.4 Paleontological Resources

The RSA for paleontological resources is San Juan Canyon and includes all projects listed in Tables 2.4-1 and 2.4-2. The RSA contains Quaternary alluvium and colluvium formations, Pleistocene nonmarine terrace deposits, Upper Miocene Capistrano, and Miocene Monterey formations. All of these geologic units with the exception of the Quaternary Alluvium and colluvium have a high potential for containing paleontological resources.

No Build Alternative

Because the development projects within the RSA (listed in Tables 2.4-1 and 2.4-2) contain Quaternary alluvium and colluvium formations, Pleistocene nonmarine terrace deposits, Upper Miocene Capistrano, and Miocene Monterey formations, it is likely that these projects would affect their paleontological resources. Standard conditions of approval and mitigation measures required for each of the cumulative projects would minimize impacts, and no permanent impacts to nonrenewable paleontological resources would be anticipated as a result of the No Build Alternative.

Build Alternatives 1 and 2

With the implementation of the PMP, permanent impacts to paleontological resources would be minimized to a level that is considered less than significant. In addition, as long as mitigation measures are developed and implemented, to collect paleontological resources during grading, adverse impacts to nonrenewable paleontological resources would not be anticipated.

As a result, the proposed project's contribution to cumulative paleontological resources, considered in conjunction with projects in the RSA, are considered less than significant. Although the potential to encounter paleontological resources is considered high, standard conditions for monitoring and resource recovery pertaining to paleontological resources that may be unearthed during construction of any of the cumulative projects would minimize potential cumulative impacts to a level that is considered less than significant.

2.4.4.5 Water Quality

The RSA for water quality includes the San Juan Creek watershed and includes all the projects listed in Tables 2.4-1 and 2.4-2. Currently, San Juan Creek has a drainage area of approximately 176 square miles. The creek contains six reaches and originates in the Santa Ana Mountains of the Cleveland National Forest; it flows approximately 6 miles to the Pacific Ocean. The proposed project is located within Reach 5 of San Juan Creek. The surrounding area within the project limits consists primarily of developed land with extensive areas of impervious surface and has few remaining natural drainage features. San Juan Creek has been documented as having poor surface water quality and is primarily influenced by nonpoint sources of nonstorm water runoff from urban and residential developments. Contaminants affecting the watershed include various vehicle-related pollutants such as oil, grease, heavy metals, and other petroleum products from roadways. Other pollutants that also affect the watershed include illicit dumping, pesticides, herbicides, and fertilizers from parks, residential homes, and golf courses. Contaminated runoff from irrigated agricultural lands in the watershed also contributes to the poor surface water quality in San Juan Creek. Currently, wastewater treatment facilities do not contribute pollutants to the watershed because all effluents from these facilities are discharged directly into the Pacific Ocean. The State Water Resources Control Board (SWRCB) designated the lower portion of San Juan Creek, including the creek mouth, as impaired for bacteriological indicators under Section 303(d) of the CWA.

Groundwater in the San Juan Creek watershed exists unconfined in a generally narrow, shallow, alluvium-filled valley in the San Juan Canyon area and its tributaries. Groundwater in the San Juan Basin contains high levels of dissolved solids and salt. Local water agencies tend to favor the use of imported water for domestic needs, with pumped groundwater as the supplemental source.

No Build Alternative

The development and transportation projects within the RSA, without the proposed project, would not have a cumulative impact since each project is required to incorporate structural and maintenance best management practices (BMPs) consistent with State and/or local Drainage Area Management Plan (DAMP) requirements to reduce potential construction and operational water quality impacts. Therefore, the quality of runoff from these projects would remain the same, and no cumulative impact to water quality would result.

Build Alternatives 1 and 2

Each of the cumulative projects would be required to incorporate structural and maintenance BMPs that would reduce their cumulative operational impact to water quality. Therefore, even if projects are being implemented simultaneously, sufficient measures would be in place to minimize construction-related erosion and siltation. During construction, Build Alternatives 1 and 2 would require approximately 4.54 ac of soil disturbance. Erosion and siltation in the drainage area may temporarily increase during project construction. The amount of sediments entering the San Juan Creek watershed in the project area is expected to be minimal with implementation of the SWPPP and temporary construction site BMPs (Department Storm Water Quality Handbooks, Construction Site Best Management Practices Manual, March 2003).

Dewatering discharge could adversely impact surface water quality if the effluent is rich in sediment or contaminated with chemicals. Dewatering is not anticipated as part of the proposed project. However, if dewatering is required for the project, it would only be temporary from construction activities and would comply with the Department's National Pollution Discharge Elimination System (NPDES) permit. If construction-related dewatering is required, the project would be subject to the *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region except for San Diego Bay* (Order No. 2001-96, NPDES No. CAG919002) or any subsequent permit/order at time of construction. The Regional Water Quality Control Board (RWQCB) also has waste discharge requirements for this type of activity to ensure that the discharge of this activity does not adversely impact the receiving water. Therefore, the proposed project would only minimally contribute to the temporary cumulative (negative) effect on the water quality of the San Juan Creek watershed.

The proposed project could result in a contribution to the regional (or cumulative) effect of the impacts to hydrologic function, water quality, and erosion/sedimentation potential downstream of the RSA in San Juan Creek's main channel. Indirect impacts can affect low-quality wetlands (atypical) and riparian habitat through changes in velocity, inundation, or water quality. However, with application of the BMPs mentioned in the SWPPP, the proposed project would only minimally contribute to the cumulative (negative) effect on the water quality and hydraulic function of the San Juan Creek watershed.

2.4.4.6 Noise

Because the proposed project is a highway improvement associated with traffic noise, the RSA for noise analysis includes the reasonably foreseeable actions along SR-74 within the project segment, including future roadways in south Orange County and MPAH additions such as La Pata Avenue and a southward extension of SR-241 along the recently adopted alignment. Noise is localized and decreases rapidly with geographic distance. The traffic projections used in the noise analysis conducted for the proposed project took into consideration growth in the project area, including the developments identified in Tables 2.4-1 and 2.4-2 and thus the potential cumulative effect of the proposed project.

Existing land uses in the vicinity of the project area include single-family residential and recreational uses. The majority of the sensitive receptor locations in the project vicinity include low-density residential uses. The primary source of noise in the project area is traffic on SR-74.

No Build Alternative

The No Build Alternative would result in increased noise levels at many of the same receptors under the future projected 2035 traffic conditions. The increases at these receptors are approximately 1 to 2 dBA from existing conditions and there would not be a significant noise increase. Therefore, the noise increase under the No Build Alternative is considered less than significant.

Build Alternatives 1 and 2

The noise analysis is based on the traffic data provided in the Traffic Impact Analysis for this project. Potentially significant noise increases (Receptor No. 31 K5) were reduced to below a level of significance with implementation of the Department's standard specifications and interior noise mitigation. The traffic projections included growth that is consistent with the project identified in Tables 2.4-1 and 2.4-2 and development of the City and County General Plans predicted in the project vicinity through 2035. Therefore, project impacts include the cumulative projects through 2035. The proposed project would not generate groundborne vibration impacts and therefore would not contribute to cumulative groundborne vibration.

Like the proposed project, future projects along SR-74 within the RSA (i.e., RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project) would be required to analyze noise impacts and identify appropriate

avoidance, minimization, and/or mitigation measures to protect sensitive receptors to see if they are reasonable and feasible and would be implemented as required.

The proposed project's contribution to cumulative roadway noise impacts, in consideration of cumulative development within the RSA, is considered less than significant.

Like the proposed project, future State transportation projects along SR-74 (i.e., Middle Ortega Safety project and SR-74 and the Antonio/La Pata project) within the study area would be required to comply with Caltrans Standard Specifications, Section 7-1.01I, "Sound Control Requirements," and Caltrans Standard Provisions, S5-310, during construction activities. Local roadways and future development projects would comply with the appropriate local noise ordinance. The proposed project's contribution to cumulative construction noise effects, in consideration of other projects within the RSA (primarily the RMV Ranch Plan, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project), is considered less than significant.

2.4.4.7 Biology

Natural Communities

The RSA for Natural Communities includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

The RMV Ranch Plan would impact 2,413.6 ac of grassland, 2,024.8 ac of coastal sage scrub, 89.51 ac of ACOE jurisdiction, 195.55 of CDFG jurisdiction riparian and wetland areas, 95.8 ac of woodland, 127.1 ac of forest, and 711.8 ac of chaparral. Impacts to riparian and wetland areas are addressed below. With implementation of avoidance, minimization, and/or mitigation measures, as well as its Conservation Strategy in relation to the NCCP/HCP, impacts to natural communities as a result of the RMV Ranch Plan will be reduced to a level below significance.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of coastal sage scrub, southern needlegrass, and riparian resources. Consultations

and mitigation plans developed with the USFWS and CDFG would reduce impacts considered to be less than significant.

Therefore, the RMV Ranch Plan and the Prima Deshecha Landfill Expansion projects will not have a cumulative impact on Natural Communities.

Build Alternatives 1 and 2

The Lower SR-74 Widening project would not result in any impacts related to natural communities; therefore, the project would not contribute to cumulative impacts to natural communities.

Since SR-74 is an existing roadway and no median barriers are proposed, the proposed project would not result in further habitat fragmentation or wildlife movement beyond existing conditions. The additional roadway area (limited to one lane in each direction) may incrementally limit wildlife movement across the roadway or increase road kill (particularly of smaller animals); therefore, the proposed project's contribution to the regional (or cumulative) effect of habitat fragmentation or wildlife movement, when considered in light of the project impacts and open space preservation within the RSA, is considered less than significant.

Wetlands

The RSA for wetlands includes the San Juan Creek watershed. From a biological perspective, this geographic area is considered appropriate because: (1) effects to water quality downstream may be compounded; (2) the presence of riparian vegetation in the BSA; and (3) the presence of CDFG and ACOE jurisdictional areas. The closest project to the RSA includes improvements to SR-74, just east of the RSA, in RMV Planning Area 1. However, the other development and transportation projects in Tables 2.4-1 and 2.4-2 are also included in the RSA.

The RSA occurs within the SAMP and NCCP/MSAA/HCP study areas for southern Orange County. Compliance with these regional efforts would help to ensure that any regional losses of sensitive plant and/or animal species by future development covered by the SAMP and NCCP/MSAA/HCP are not substantial.

Historically, the RSA was mainly agricultural. Currently, the northern side of SR-74 contains disturbed conditions typical of roadside shoulders, and the southern side of SR-74 contains landscaped areas within City right-of-way. The surrounding areas are primarily low-density residential and rural. The project area and areas adjacent to SR-74 are highly disturbed, and vegetated areas are comprised primarily of nonnative

and invasive species, with scattered ornamental and occasional native species. Three potential jurisdictional features (Features A, B, and C) were identified within the study area during a delineation of wetlands and other jurisdictional waters within the study area. There are also potential jurisdictional nonwetland waters of the United States subject to ACOE jurisdiction totaling 0.057 ac. Of this area, 0.035 ac is potential wetland waters of the United States, and 0.022 ac is potential nonwetland waters of the United States. Potentially jurisdictional portions of Feature A are approximately 113 ft long. The project area contains also 0.087 ac of streambed potentially subject to CDFG jurisdiction.

No Build Alternative

Many of the development and transportation projects in the RSA do not have impacts to wetlands. However, the RMV Ranch Plan (which includes the Upper SR-74 Widening) would impact 89.51 ac of ACOE jurisdiction and 195.55 ac of CDFG jurisdiction, including both temporary and permanent impacts. Additionally, San Juan Meadows and Junipero Serra Catholic High School would also result in permanent impacts to wetlands. Mitigation programs required by Section 404 Permits and 1602 Streambed Alteration Agreements would reduce the cumulative wetland impacts of these projects as well as the proposed project.

Build Alternatives 1 and 2

The proposed project would directly and permanently affect 0.056 ac of potential jurisdictional waters subject to ACOE jurisdiction. Approximately 0.021 ac of nonwetland waters of the United States would be directly and permanently impacted by the proposed project. Approximately 0.035 ac of wetland waters of the United States would be directly and permanently impacted by the proposed project.

Build Alternatives 1 and 2 would directly and permanently affect 0.085 ac of streambed potentially subject to CDFG jurisdiction. This area is not considered a riparian area due to the isolated nature of the single willow tree located within this feature. The area does not function as riparian habitat.

The impacts to low-quality habitat of atypical wetlands would occur during construction. Application of the BMPs in the SWPPP would minimize potential effects on wetlands (atypical wetlands) in the region.

The proposed project could result in a minimal contribution to the regional (or cumulative) effect of impacts to wetland areas. With the mitigation for wetlands identified in Section 2.3.2.4, the Build Alternatives would result in no net loss to

existing wetlands. Given the limited acreage of wetlands impacted and the mitigation identified, the Build Alternatives' contribution to cumulative wetland impacts, in consideration of the projects within the RSA, would be reduced to less than significant.

Plant Species

The RSA for Plant Species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

Many of the development and transportation projects in the RSA have limited to no impacts to plant species. However, the RMV Ranch Plan would significantly impact a variety of plant species, including the southern tarplant, many-stemmed dudleya, mud nama, Catalina mariposa lily, vernal barley, and small-flowered Microseris. However, these impacts will not have a significant cumulative effect on the RSA without the proposed project since the RMV Ranch Plan is setting aside a substantial amount of open space (RMV open space) to mitigate impacts to a less than significant level.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of many plant species, including plants associated with riparian vegetation. Mitigation plans would reduce impacts and are considered to be less than significant.

Build Alternatives 1 and 2

Eight coast live oak trees may be impacted by ground disturbance activities within the dripline of the trees associated with roadway widening. Two of these coast live oak trees are anticipated to require removal. However, with implementation of the avoidance measures outlined in Section 2.3.3.5, permanent oak tree impacts are considered less than significant with mitigation incorporated. Since the RMV Ranch Plan and the Prima Deshecha Landfill Expansion projects are mitigating their own impacts and since the proposed project has a less than significant impact on plant species, the cumulative impact to plant species is considered less than significant with mitigation incorporated.

Threatened and Endangered Species

The RSA for T/E species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

Many of the development and transportation projects in the RSA have limited to no impacts to T/E Species. However, the RMV Ranch Plan would impact a variety of T/E species, including the thread-leaved brodiaea, San Diego ferry shrimp, Riverside ferry shrimp, arroyo toad, California gnatcatcher, least Bell's vireo, Swainson's hawk, and the American Peregrine falcon. However, these impacts will not have a significant cumulative effect on the RSA without the proposed project since the RMV Ranch Plan will avoid, minimize, and mitigate its own impacts.

Additionally, the Prima Deshecha Landfill Expansion would result in the removal of coastal sage scrub, riparian resources, and potentially impact special-status habitats and special-status species. Vegetation removal and habitat disturbance of landfilling uses could affect nesting sites for listed bird species and raptors, as well as dens for coyotes, bobcats, and mountain lions. Consultations and mitigation plans developed with the USFWS and CDFG would reduce impacts, which are considered to be less than significant.

Build Alternatives 1 and 2

There are no Threatened and/or Endangered Species (T/E) within the BSA for the proposed project. As the project does not affect Threatened or Endangered Species, it would not contribute to cumulative losses to sensitive species.

Invasive Species

The RSA for Invasive Species includes the projects listed in Tables 2.4-1 and 2.4-2 located along SR-74. Projects included within the RSA are Ortega Ranch Offices, Ortega Animal Hospital, Reising Law Offices, St. Margaret's Episcopal School Master Plan, M&M Petroleum, RMV Plan, Prima Deshecha Landfill Expansion, I-5/Ortega Highway Interchange project, Middle Ortega Safety project, and SR-74 and the Antonio/La Pata project.

No Build Alternative

In the RSA, the RMV Plan would result in potentially significant impacts from invasive exotic species. However, this project plans to ensure the long-term protection of habitat values through a Conservation Strategy that addresses the elements of the NCCP/HCP strategy. The RMV Plan intends to mitigate impacts that cannot be avoided or minimized to below a level of significance. Therefore, the RMV Plan would not have a cumulative impact on Invasive Species.

The other projects within the RSA would use avoidance and minimization measures to ensure a less significant impact to Invasive Species and therefore would not contribute to a cumulative impact.

Build Alternatives 1 and 2

The Build Alternatives provide the benefit of removal of existing Invasive Species within the study area to the extent practicable. The introduction of invasive plant species may degrade sensitive habitat. With implementation of the avoidance, minimization, and/or mitigation measures for invasive species discussed in Section 2.3, the proposed project's contribution to cumulative Invasive Species impacts, in consideration of the projects with the projects in the RSA, would be a minimal contribution to the regional (or cumulative) risk of the introduction and spread of invasive plant material and has been reduced to less than significant.. No invasive species would be planted in the BSA upon completion of project work, in accordance with Executive Order 13112, "Invasive Species."

2.4.5 Avoidance, Minimization, and/or Mitigation Measures

2.4.5.1 No Build Alternative

The No Build Alternative may result in cumulative impacts. Avoidance, minimization, and/or mitigation measures outlined in the respective documents for the projects listed in Tables 2.4-1 and 2.4-2 would address potential cumulative impacts of the No Build Alternative.

2.4.5.2 Build Alternatives 1 and 2

The Build Alternatives could result in cumulative impacts to community character and visual and aesthetics within the project area. Avoidance, minimization, and/or mitigation measures outlined in Chapter 2.0 would address potential cumulative impacts of the Build Alternatives. No additional measures, beyond those

identified in Chapter 2, have been identified to address cumulative impacts of the Build Alternatives.

2.4.6 Level of Significance

With implementation of avoidance, minimization, and/or mitigation measures outlined in the respective documents for the projects listed in Tables 2.4-1 and 2.4-2, the No Build Alternatives contribution to cumulative impacts may be reduced to less than significant.

Avoidance, minimization, and/or mitigation measures outlined throughout Chapter 2, the Build Alternatives' contribution to cumulative impacts, when considered in light of the project within each respective topical RSA, would be reduced to less than significant.