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California Department of Fish and Game, "CDFG Take Authorizations" (2007).

Dudek, "CDFG Streambed Projects" (2008).

URS, "Supporting Data for Cumulative Agricultural Resources Discussion" (December 2008).

U.S. Department of Defense, Army Corps of Engineers, "Corps 404 Permits" (2008).

U.S. Fish and Wildlife Service, "Federal Biological Opinions, Santa Clara Watershed" (2007).

6.1 INTRODUCTION

This section analyzes the environmental effects of the proposed Project in conjunction with past, present, and probable or reasonably foreseeable future projects causing related impacts; and examines reasonable and feasible options for mitigating or avoiding the Project's contribution to any significant cumulative effects. **Subsection 6.2** outlines the regulatory context for this analysis under both NEPA and CEQA. **Subsection 6.3** explains the methodology for the cumulative Project analysis presented in this EIS/EIR, including the basis for utilizing a combination of the list and plan approaches. **Subsection 6.4** identifies the geographic study areas for the analysis and lists the projects that were considered in the analysis. **Subsection 6.5** includes discussions of potential cumulative impacts in each resource category that is evaluated in this EIS/EIR.

The primary intent of the cumulative impacts analysis is to summarize the environmental effects of the relevant projects and examine the "reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects." (Cal. Code Regs., tit. 14, § 15130, subd. (b)(5).) In some cases, the impact from a single project may not be significant, but when combined with other projects the cumulative impact may be significant.

6.2 REGULATORY SETTING

6.2.1 NEPA Regulations

NEPA regulations define "cumulative impact" as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency ([f]ederal or non-[f]ederal) or person undertakes such other actions." (40 C.F.R. § 1508.7.) NEPA considers that "[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time." (40 C.F.R. § 1508.7.) "Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern." (Council on Environmental Quality (CEQ), Considering Cumulative Effects Under the National Environmental Policy Act (January 1997), p. vi ("CEQ Cumulative Handbook").)

The extent of the NEPA cumulative effects analysis varies depending on the nature of the resources affected and the duration of the potential impacts, and is guided by the overarching principle of reasonableness. In its handbook on cumulative effects, the CEQ states that "it is not practical to analyze the cumulative effects of an action on the universe;" and that in order to be useful to decision makers and the public, the analysis must be limited to effects that can be meaningfully evaluated. (CEQ Cumulative Handbook, *supra*, p. 8.) The CEQ Cumulative Handbook suggests that the geographic boundaries for the cumulative effects analysis are ordinarily on the scale of human communities, landscapes, watersheds, or airsheds, but that the appropriate boundary depends on the accumulation characteristics of the effects being analyzed as well as an evaluation of the management and regulatory interests of the involved agencies. (CEQ Cumulative Handbook, *supra*, pp. 12, 16.)

6.2.2 CEQA Guidelines

Under CEQA, "cumulative impacts" are "two or more individual effects [from a single project or multiple projects] which, when considered together, are considerable or which compound or increase other environmental impacts." (Cal. Code Regs., tit. 14, § 15355.) CEQA requires that an EIR "discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable," that is, when a project's incremental effects are significant in the context of the effects of past, present, and probable future projects. (Cal. Code Regs., tit. 14, §§ 15065, subd. (a)(3); 15130, subd. (a).) An EIR's discussion of cumulative impacts "shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." (Cal. Code Regs., tit. 14, § 15130, subd. (b).) Overall, "[t]he discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact." (Cal. Code Regs., tit. 14, § 15130, subd. (b).) The EIR's cumulative impacts are to be prepared in the light of what is reasonably feasible. (Cal. Code Regs., tit. 14, § 15151.)

There are two basic methods for analyzing cumulative impacts in an EIR: the "list" method and the "summary of projections"/plan method. The list method is based on a list of past, present, and probable future projects producing related cumulative impacts. The summary of projections or "plan" method is based on projections from an adopted general plan, air quality plan, or other planning document. Where the list method is utilized, the contents of the list are dictated by the nature of the environmental resources being examined, as well as the location and type of project considered for inclusion in the list. (Cal. Code Regs., tit. 14, § 15130, subd. (b)(2).) The geographic scope of the area used for this cumulative effect analysis is defined and explained below. (Cal. Code Regs., tit. 14, § 15130, subd. (b)(3).)

6.3 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

This EIS/EIR utilizes the list method to analyze potential cumulative impacts in most resource categories. However, the discussion of the cumulative impacts related to agricultural resources, air quality, noise, traffic, and water resources utilize the plan method due to the regional nature of agricultural land conversion, air quality impacts, traffic impacts (and noise impacts related to cumulative traffic), and water supply and demand planning.

6.3.1 List Method

The preparation of this cumulative impacts analysis included the consideration of approximately 150 city and county land development projects (information obtained from the city of Santa Clarita, city of Fillmore, city of Santa Paula, Los Angeles County, and Ventura County) and Caltrans highway projects; 228 Corps (section 404 permit) projects; 24 USFWS ESA biological opinions from the Santa Clara River watershed; more than 500 CDFG stream alteration permit projects; and 48 CDFG CESA take authorizations. Complete lists of the Corps, USFWS, and CDFG projects are found in **Appendix 6.0** of this EIS/EIR, and the other project lists are consolidated in the text as discussed below.

The Corps and CDFG projects that were reviewed (both waters/stream related and species-related) included projects throughout the Santa Clara River watershed, providing a broader scope of analysis than

the already expansive geographic scope utilized for local land use development, infrastructure, and highway projects as discussed in **Subsection 6.4**, below. These federal and state permits, authorizations, and biological opinions are discussed in a consolidated, tabular, and graphic manner to reflect overall watershed development patterns in **Subsections 6.4.1.6** to **6.4.1.8**, below.

For local land development, infrastructure, and highway projects (projects of the type more common to cumulative impacts analyses generally), the approach to cumulative impacts analysis was dictated by: (1) the magnitude of the proposed Project; and (2) the proximity of cumulative projects to the proposed Project. The Project area covers nearly 13,000 acres. Small- to moderate-sized projects would not have impacts that are similar in magnitude to the proposed Project, and thus, those projects were discussed in a consolidated manner. Similarly, projects located far away from the proposed Project site would generally be unlikely to have impacts that would cumulate with those of the proposed Project.

In order to present a reasonable cumulative impacts analysis in this EIS/EIR, the local development, infrastructure, and highway projects lists were reduced and consolidated according to the following parameters: (1) projects outside the geographic scope (described in **Subsection 6.4**, below), with the exception of a few large projects, were excluded from further analysis due to their distance from the proposed Project; (2) projects more than five miles away from the Project area (but within the roughly 10-mile geographic scope) and/or smaller-scale projects were analyzed in a consolidated manner, and were grouped by local jurisdiction (note that due to the approximately 13,000-acre size of the Project area, "smaller-scale" projects in this context include projects roughly 700 acres and smaller); and (3) large projects within five miles of the Project area were reviewed individually (see **Subsection 6.4.2**, below) and were identified on a map for ease of reference (**Figure 6.0-1**). Projects selected for individual review were also included in the consolidated analyses, to reflect overall development patterns in the geographic study area.

The consolidated analysis is provided in **Subsection 6.4.1**, below. The consolidated projects are grouped according to the following jurisdictions: city of Santa Clarita; unincorporated areas of Los Angeles County; city of Fillmore (Ventura County); city of Santa Paula (Ventura County); Corps (section 404 permit); USFWS biological opinions; CDFG (streambed); and CDFG (take authorizations).

6.3.2 Plan Approach

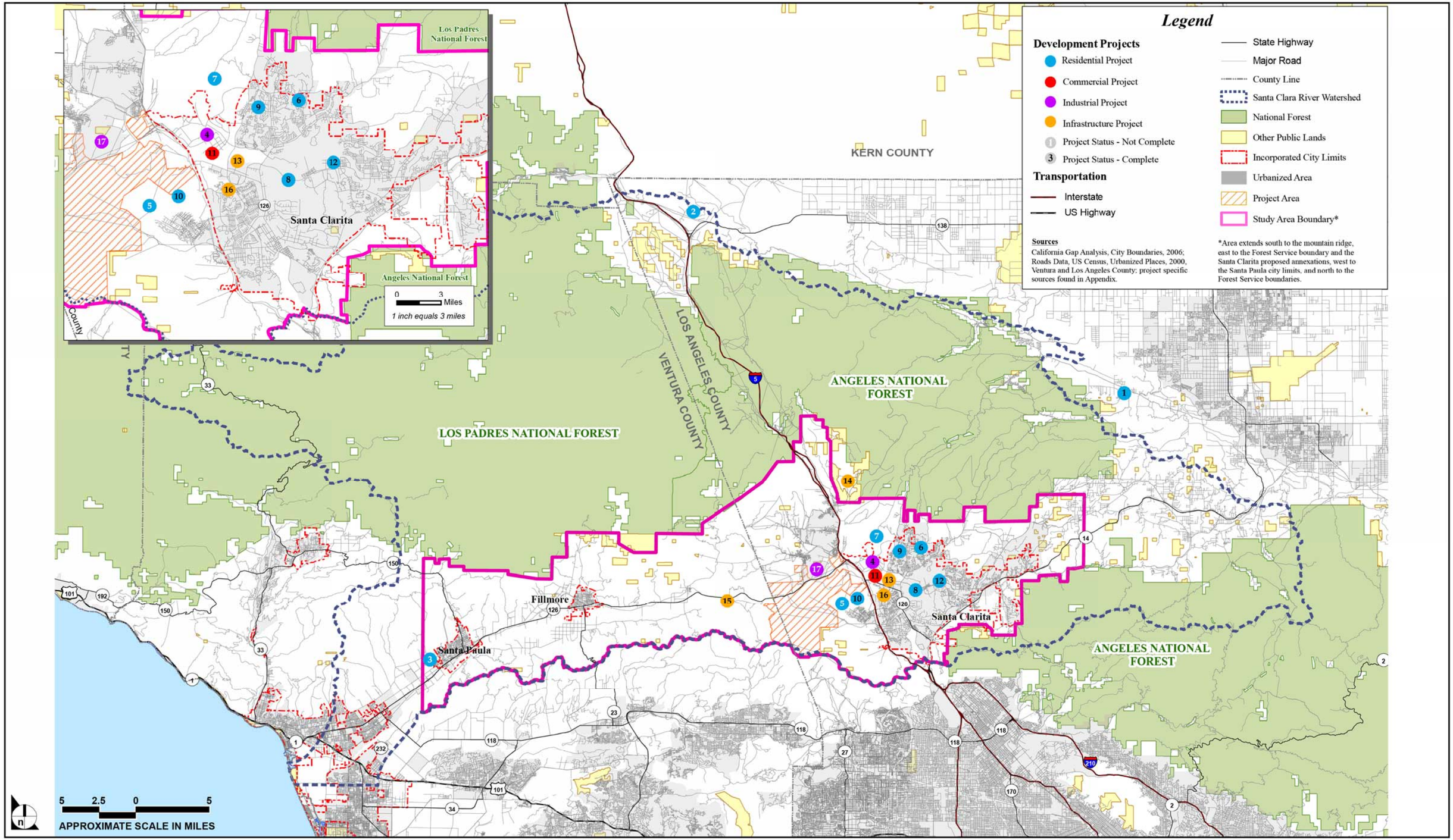
The Plan approach was used for five resource areas. In **Subsection 6.5.4**, below, cumulative water resources are analyzed under a build-out scenario within the CLWA service area by the year 2030, as set forth in the 2005 UWMP. As discussed in **Subsection 6.5.7**, below, potential cumulative air quality impacts were analyzed according to the SCAQMD standards, including analysis of consistency with the AQMP and additional analysis as recommended by SCAQMD's CEQA Air Quality Handbook. With respect to traffic, as discussed in **Subsection 6.5.8**, below, long-range traffic forecasts for the cumulative impact analysis were produced using traffic modeling in both Los Angeles County and Ventura County (the SCVCTM and VCTM). The same cumulative traffic models were used to evaluate cumulative noise impacts in **Subsection 6.5.9**, below, because traffic noise forms the largest component of those cumulative noise impacts. Cumulative agricultural resources impacts were analyzed in **Subsection 6.5.12**, below, in the context of historical agricultural land conversion in Los Angeles and Ventura Counties.

6.4 CUMULATIVE IMPACT ANALYSIS STUDY AREA

For this EIS/EIR, the geographic scope of the cumulative impacts analysis for most resource areas is shown on **Figure 6.0-1**.[1] Under the CEQA Guidelines (Cal. Code Regs., tit. 14, § 15130, subd. (b)(3)), the lead agency should provide a reasonable explanation of the geographic limitation used in the cumulative impacts analysis. For each resource area, the analysis determined the area that would be affected by the action, the resources within that area that could be affected by the proposed Project, and determined the reasonable geographic area occupied by those resources outside of the project impact zone that should be considered for cumulative impact purposes. Some of the Project's effects are localized or site-specific in nature and do not contribute to cumulative impacts (*e.g.*, geologic hazards). Other effects of the proposed Project potentially contribute to cumulative impact conditions, including impacts to air quality, biological resources, wetlands, hydrology, traffic, groundwater quality and supply, surface water quality, land use, and visual resources. The geographic scope used to generate the list of past, present, and probable future projects is based on the characteristics of these various resource areas and concepts of reasonableness. For example, the list includes large land development projects within a 10-mile radius of the Project site, which would have the most potential to result in impacts that could compound or increase impacts in conjunction with the proposed Project. The list also includes other large projects located along the Santa Clara River that may be farther than 20 miles from the Project site, but that the lead agencies determined should be included because of the potential cumulative impacts to the Santa Clara River and associated biological resources within the respective jurisdictions of CDFG and the Corps.

In general, the cumulative project study area's northern extent is defined by the Los Padres National Forest, the eastern boundary is defined by pending annexations to the city of Santa Clarita along SR-14, the southern boundary is defined by the ridge line of the Santa Susana Mountains, and the western boundary encompasses all pending annexations to the city of Santa Paula, located in Ventura County. The Los Padres National Forest boundary was used as the northerly boundary because the national forest area is adjacent to the cumulative study area, and the national forest includes more than one million acres of land (Los Padres National Forest website, http://www.fs.fed.us/r5/lospadres/ (2008)), which will largely remain undeveloped, thus resulting in few cumulative impacts as compared to the urbanizing private land areas. The ridgeline of the Santa Susana Mountains was selected as the southern boundary because it is the watershed boundary and is located within the Santa Susana Mountains, which have high elevation areas that remain largely undeveloped and cover approximately 100 square miles. The western and eastern boundaries were selected based on development projects within a 10-mile radius, which is reasonable based on the characteristics of the majority of resource areas and the potential for related projects to result in impacts that could compound or increase impacts in conjunction with the proposed Project .

[1] This scope was used for analysis of the following resource categories: Hydrology, Geomorphology, Water Quality, Cultural Resources, Paleontological Resources, Geology, Land Use, Visual Resources, Parks and Recreation, Hazards and Hazardous Materials, Public Services, Socioeconomics and Environmental Justice, and Solid Waste.



SOURCE: URS – February 2008

FIGURE 6.0-1

Cumulative Individual Project Location Map

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For a few resource categories, this section analyzes a broader geographic area. Thus, for analysis of jurisdictional waters and biological impacts, a review of cumulative impacts within the Santa Clara River watershed was utilized, including a review of Corps section 404 permits, CDFG section 1603 and 2081 Permits, and USFWS section 7 and 10a Permits. This review included, but was not limited to, the subset geographic area used for the analysis of the remainder of the cumulative analysis. This analysis thus included data from a watershed perspective. (See, *e.g.*, Santa Clara River Watershed Study (Dudek 2008), included in **Appendix 4.5** of this EIS/EIR.)

The review for this cumulative section also generally reviewed major NCCP and HCPs for other areas of Southern California, including Kern, Riverside, Orange, and San Diego Counties, but found those areas to be so geographically distant (*e.g.*, greater than 25-30 miles) from the Project area so as to not be reasonable or meaningful for inclusion in this analysis. (See **Subsection 6.4.1.9** below.)

For resource categories that are analyzed using the Plan Approach described in **Subsection 6.3.2**, the geographic scope of analysis is the same as that of the applicable plan. Thus, the geographic scope of analysis for Water Resources is the CLWA service area, plus active pending General Plan Amendment requests. The geographic scope of analysis for Air Quality is the South Coast Air Basin. The geographic scope of analysis for Traffic and Noise is detailed in **Subsection 6.5.8.2.1**, and generally extends to the west into Ventura County, east into the Santa Clarita Valley, with the north and south boundaries encompassing the existing and future urbanized areas of Valencia, Castaic, Santa Clarita, and the northern San Fernando Valley. Finally, the agricultural land cumulative impact analysis utilized data from a geographic area comprised of Ventura and Los Angeles Counties in their entirety. Of course, most of the agricultural land at issue is in the non-incorporated portions of those counties.

The geographic study areas utilized in this cumulative impacts analysis are more comprehensive than the study area currently being used by the City of Santa Clarita and Los Angeles County to create a General Plan document and EIR for the entire Santa Clarita Valley Planning Area, called "One Valley, One Vision" or "OVOV". Although this EIS/EIR cannot rely on the City and County's joint OVOV effort as it has not yet been finalized and adopted, it is worth noting that the OVOV planning effort will cover the City, including its four communities: Canyon Country, Newhall, Saugus and Valencia, as well as County communities of Agua Dulce, Castaic, Newhall Ranch, Stevenson Ranch, and Val Verde. (OVOV Notice of Preparation, July 2008.)

6.4.1 Consolidated Projects

6.4.1.1 City of Santa Clarita Consolidated Projects

Table 6.0-1 contains the city of Santa Clarita consolidated projects analysis. As discussed in **Subsection 6.3.1**, above, projects more than five miles away from the Project area and/or smaller-scale projects (less than 700 acres) were analyzed in a consolidated manner, and were grouped by local jurisdiction. **Table 6.0-1** also includes the projects selected for individual review, which are discussed further in **Subsection 6.4.2**, below.

Table 6.0-1
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Units	Commercial/ Industrial (sf)	Acres[1]	Status
Residential/Mixed Use Projects					
Golden Valley Ranch (TR 52414)	Newly annexed area southeast of SR-14 and north of Placerita Canyon Road; eight miles east of the proposed Project.	498	618,759	1,259 (974 open space)	Approved 2002; Under Construction
Whittaker Bermite / Porta Bella Project (TR 51599)	Map ID #8 - West of Golden Valley Road, south of Soledad Canyon Road, and east of San Fernando Road; three miles east of the proposed Project.	2,911	609,832	996 (407 open space)	On Hold Pending Remediation Activities
River Park (TR 53425)	Map ID #12 - Located at the eastern terminus of Newhall Ranch Road, east of Bouquet Canyon Road, and north of Soledad Canyon Road and the Santa Clara River; four miles east of the proposed Project.	1,089	16,000	695	Under Construction
North Valencia Specific Plan No. II (MC 04-205)	Two miles east of the Newhall Ranch Specific Plan along the east side of San Francisquito Creek, north of Newhall Ranch Road, south of Decoro Drive, east of Rye Canyon Road, and west of McBean Parkway; two miles east of the proposed Project.	1,900	210,000	596	Approved 2000; Near Build-out
Keystone / Synergy Project (TR 60258)	South of Bouquet Canyon Road, adjacent to the RiverPark project; five miles east of the proposed Project.	499	30,476	246 (137 open space)	Approved 2006
Stonecrest Annexation	Annexation of existing developed area on the far east side of the City of Santa Clarita, north of Soledad Canyon Road, and east of Shadow Pines Boulevard; 10 miles east of the proposed Project; no new construction.	631	0	427	Annexed 2006; Existing Development
Downtown Newhall Specific Plan	Redevelopment of downtown Newhall area (along San Fernando Road), 3 miles southeast of the proposed Project.	1,092	1,017,000	320	Approved
North Newhall Specific Plan	Redevelopment along San Fernando Road in Newhall, 3 miles southeast of the proposed Project.	673	660,500 (Comm.) 261,000 (Elem. School)	213	Pending

Table 6.0-1
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Units	Commercial/ Industrial (sf)	Acres[1]	Status
Lyons Ranch (TR 53653)	West of I-5 and south of Pico Canyon Road; two miles east of the proposed Project.	186	800	235	Approved
Stetson Ranch (TR 49621)	East of Sand Canyon Road at the northern terminus of Gary and Marilyn Drives; nine miles east of the proposed Project.	265	0	176	Approved
Sand Canyon Joint Venture (TT 53255, 53074)	The northeast corner of Soledad Canyon Road and Sand Canyon Road; nine miles east of the proposed Project.	87	110,000	89	Approved
DR Horton (TR 48892)	Northeast corner of Sierra Highway and Golden Valley Road; six miles east of the proposed Project.	148	0	61	Approved
Centex Homes (TR 61811)	Located north of Golden Valley Road, west of Sierra Highway; six miles east of the proposed Project.	52	0	14	Under Construction
Soledad Village Project (MC 04-444)	North of Soledad Canyon Road, south of Santa Clara River, approximately one mile east of Bouquet Canyon Road; six miles east of the proposed Project.	407	8,000	30	Approved 2006
Friendly Valley Association 11 (TR 52385)	Generally located north of Sierra Highway and east of Via Princessa; six miles east of the proposed Project.	43	0	22	Proposed
Valle de Oro (TR 53419)	Located at the northwest corner of Sierra Highway and Golden Valley Road; six miles east of the proposed Project.	111	0	21	Completed
Soledad Circle Estates	South of Soledad Canyon Road at Penlon Court, four miles east of the proposed Project.	147	0	20	Pending
Flying Tiger (TR 259166)	North of Via Princessa and east of Sierra Highway; seven miles east of the proposed Project.	200	0	13	Approved
Total Santa Clarita Residential/Mixed Use		**10,939**	**3,542,367**	**5,433**	

Table 6.0-1
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Units	Commercial/ Industrial (sf)	Acres[1]	Status
Commercial/Industrial Projects					
Rye Canyon Business Park (TR 23916, 51826)	At the northeast corner of Rye Canyon Road and Newhall Ranch Road; two miles northeast of the proposed Project.	0	4,400,000	376	Under Construction
Gate King (TR 50283)	Southern Santa Clarita, west of SR-14 and Sierra Highway, south of San Fernando Road; six miles southeast of the proposed Project.	0	4,200,000	682	Approved
Centre Pointe Business Park (TR 42670)	South of Soledad Canyon road, east of Bouquet Canyon Road, west of Golden Valley Road; five miles east of the proposed Project.	0	2,300,000	45	Near Build-out
North Valencia Specific Plan No. I	Map ID #11 - South of Newhall Ranch Road, north of Magic Mountain Parkway, east of Rye Canyon Road, west of Bouquet Canyon Road; one-half mile east of the proposed Project.	2,000	803,000	707 (365 open space)	Near Build-out
Valencia Town Center Expansion	Northeast corner of Valencia Boulevard and McBean Parkway; two miles east of the proposed Project.	0	491,860	10	Proposed
Bridgeport Market Place	Northeast corner of McBean Parkway and Newhall Ranch Road, two miles east of the proposed Project.	0	160,000	32	Under Construction
Henry Mayo Newhall Memorial Master Plan (MC 04-325)	23845 West McBean Parkway; two miles east of the proposed Project.	0	600,000	21	Proposed
Tourney North	Magic Mountain Parkway west of The Old Road and I-5; one mile east of the proposed Project.	0	450,000	100	Under Construction
Tourney South	Wayne Mills Place east of I-5; one mile east of the proposed Project.	0	165,000	12	Under Construction
Aspen Investment Company (MC 02-273)	North of Soledad Canyon Road and west of Valley Center Drive; six miles east of the proposed Project.	0	109,000	6	Proposed

Table 6.0-1
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Units	Commercial/ Industrial (sf)	Acres[1]	Status
Chinque Terra Office Park	On Sierra Highway between Dockweiler Drive and San Fernando Road, 4 miles southeast of the proposed Project.	0	90,900	6	Pending
Rice Self Storage (MC 02-231)	Southwest corner of Seco Canyon Road and Copperhill Drive; three miles north east of the proposed Project.	0	84,000	3	Completed
Facey Medical Building	26357 McBean Parkway; two miles east of the proposed Project.	0	79,000	4	Completed
HH Seco II LLC (MC 01-317)	Southwest corner of Seco Canyon Road and Copperhill Drive; three miles northeast of the proposed Project.	0	40,000	2	Completed
VTC Square	Northwest corner of McBean Parkway and Valencia Boulevard, two miles east of the proposed Project.	10	37,000	1	Pending
Rodgers Development Master Case 02-232	Northeast corner of Bouquet Canyon Road and Plum Canyon Road; seven miles northeast of the proposed Project.	0	34,000	4	Completed
Total Santa Clarita Commercial/ Industrial		**2,010**	**14,043,760**	**2,011**	
Institutional Projects					
College of the Canyons Expansion	South of Valencia Boulevard and west of Rockwell Canyon Road, 1.5 miles east of the proposed Project.	n/a	180,000	5	Pending
Master's College Master Plan and TM 66503	21726 Placerita Canyon Road; two miles east of the proposed Project.	54	0	95	Pending
UCLA Film Archives	North of McBean Parkway and west of Rockwell Canyon Road, three miles northeast of the proposed Project.	n/a	368,730	65	Pending
Total Santa Clarita Institutional		**54**	**548,730**	**165**	

Table 6.0-1
City of Santa Clarita Consolidated Projects (Includes Individually Reviewed Projects)

Name	Location	Units	Commercial/ Industrial (sf)	Acres[1]	Status
Infrastructure Projects					
Sand Canyon Road Bridge Widening	Tentative Tract Map No. 52004 filed with City of Santa Clarita, Robinson Ranch Golf Course project. Crosses the Santa Clara River six miles upstream of the Project area where riverbed is dry. Two new lanes are proposed for an existing bridge.	n/a	n/a	n/a	Approved
Wiley Canyon Road/Via Princessa Bridge (South fork)	1,100-foot bridge, crosses South Fork of Santa Clara River near city of Santa Clarita; five miles east of the proposed Project.	n/a	n/a	n/a	Permitted
Saugus Water Reclamation Plant	Near Bouquet Canyon Road, discharges to Santa Clara River; three miles east of the proposed Project.	n/a	n/a	n/a	Completed
City of Santa Clarita General Plan Circulation Element Amendment, all watercourses	City of Santa Clarita.	n/a	n/a	n/a	City General Plan Circulation Element
Total Santa Clarita Infrastructure		**n/a**	**n/a**	**n/a**	
Total Santa Clarita		**13,003**	**18,134,857**	**7,609**	(includes at least 1,883 acres of open space)

[1] Open space acreage information was not available for all projects, but is provided where available.

Source: City of Santa Clarita.

6.4.1.2 Unincorporated Los Angeles County Consolidated Projects

Table 6.0-2 contains the Los Angeles County consolidated projects analysis. As discussed in **Subsection 6.3.1**, above, projects more than five miles away from the Project area and/or smaller-scale projects (less than 700 acres) were analyzed in a consolidated manner, and were grouped by local jurisdiction. **Table 6.0-2** also includes the projects selected for individual review, which are discussed further in **Subsection 6.4.2**, below.

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Residential/Mixed Use Projects					
Ritter Ranch[3]	Map ID #1 - South of Bouquet Canyon Road and Elizabeth Lake Road, west of Antelope Valley Freeway, and north of Sierra Highway; 40 miles east of the proposed Project.	7,200	0	10,258	Partially Built Out
Centennial[3]	Map ID #2 - Located on the Tejon Ranch, approximately 60 miles north of Los Angeles, just south of the Kern County/Los Angeles County border, located next to SR-138, just east of I-5; 40 miles north of the proposed Project.	23,000	0	11,700	Pending
Fair Oaks Ranch (TR 47200, 52833, 52938)	East of SR-14, northeast of Via Princessa, and west of Sand Canyon Road; seven miles east of the proposed Project.	1,476	19 acres [827,640 sf]	839 (497 open space)	Under Construction
Stevenson Ranch Phase IV (PD #2528; TR 52796, 43896)	West of I-5 and southwest of Magic Mountain Parkway; one-half mile east of the proposed Project.	1,130	0	488 (113 open space)	Built-out
Plum Canyon (TR 46018)	East of Bouquet Canyon Road and north of the northern terminus of Whites Canyon Road; six miles northeast of the proposed Project.	4,051	150,000	603	Under Construction

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Skyline Ranch (TR 060922)	East of Whites Canyon Road, west of Sierra Highway; eight miles northeast of the proposed Project.	1,325	0	2,196 (1,604 open space)	Pending
Plum Canyon (SunCal) (TR 31803)	South of Plum Canyon Road, east of Bouquet Canyon Road; five miles east of the proposed Project.	499	0	209 (90 open space)	Under Construction
Legacy Village (formerly Stevenson Ranch V)	Map ID #5 - Adjacent to/southeast of the Newhall Ranch Specific Plan area.	3,425	840,200	1,759	Pre-Application
Tesoro del Valle (TR 51644)	Map ID #6 - West side of San Francisquito Creek, north of Copperhill Drive; five miles northeast of the proposed Project.	1,791	0	1,793	Under Construction
West Creek/West Hills Valencia Project (TR 52445)	Map ID #9 - West side of San Francisquito Creek, north of Newhall Ranch Road and south of the Copperhill Drive bridge; four miles northeast of the proposed Project.	2,545	180,000	966	Under Construction
Westridge Project (TR 45433 & MP 19050)	Map ID #10 - Just west of I-5, north of Stevenson Ranch, and directly south of Six Flags Magic Mountain Amusement Park; one-half mile east of the proposed Project.	1,939	192,000	794	Under Construction
Northlake (TR 51852)	Near Castaic Lake; seven miles north of the proposed Project.	1,698	388,775	1,330 (312 open space)	Pending
Tapia Ranch (TR 53822)	Map ID #7 - Tapia Canyon Road, west of Tesoro Residential Development. Access to the site currently *via* Parker Road exit from I-5; four miles east of the proposed Project.	405	0	1167	Pending

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Spring Canyon (TR 48086)	East of city of Santa Clarita boundary, south of Sierra Highway, north of SR-14 and Soledad Canyon Road; 14 miles east of the proposed Project.	542	0	548 (279 open space)	Approved
Bee Canyon (TR 54020)	East of city of Santa Clarita boundary, south of SR-14; 12 miles east of the proposed Project.	556	0	211 (76 open space)	On Hold
Tick Canyon / Park Place (TR 060259)	Along Shadow Pines Boulevard just east of city of Santa Clarita boundary, north of Stonecrest Annexation area and SR-14; miles east of the proposed Project.	492	0	523 (272 open space)	Pending
Hasley Golf Course (TR 52584)	North of Hasley Canyon Road, west of I-5; three miles north of the proposed Project.	209	0	438 (67 open space)	Approved
Meadow Peak Project (TT 47760)	South of the Angeles National Forest, north of the city of Santa Clarita boundary, and northeast of the intersection of Copperhill Drive and Haskell Canyon Road; six miles east of the proposed Project.	495	0	454	Pending
Tincher (TR 060319)	Located at The Old Road and Villa Canyon Road; two miles north of the proposed Project.	36	0	8	Pending
G. H. Palmer and Associates (TR 45023)	North of Fair Oaks Ranch, east of SR-14; seven miles east of the proposed Project.	752	0	8	Map Recorded
North Park (TR 46389)	West of Seco Canyon Road, east of Mc Bean Parkway, north of Decoro Drive; two miles east of the proposed Project.	744	0	350	Map Recorded
Pacific Bay Homes (TR 36943)	East of city of Santa Clarita boundary and Stonecrest Annexation area, north of Highway 14; 12 miles east of the proposed Project.	636	0	213	Completed

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Stevenson Ranch III (TR 33608)	North of Pico Canyon Road, west of The Old Road; one mile southeast of the proposed Project.	972	0	112	Built Out
Fair Oaks Ranch (TR 44492)	East of Sierra Highway, north of Via Princessa; nine miles east of the proposed Project.	634	0	37	Map Recorded
Centex Homes Bouquet Canyon (TR 46908)	South of the Angeles National Forest, north of Copperhill Drive, west of the Meadow Peak project; six miles northeast of the proposed Project.	594	0	381	Completed
Ion Communities, Castaic (Tract 46443)	West of I-5 in Castaic; three miles north of the proposed Project.	95	0	159	Pending
Johannes Van Tiburge (TR 43570)	West of I-5, east of Hasley Golf Course; three miles north of the proposed Project.	540	0	8	Map Recorded
Curtis Development Corporation (TR 47657)	North of Haskell Canyon Road and Copperhill Drive; six miles northeast of the proposed Project.	223	0	63	Map Recorded
G. H. Palmer and Associates (TR 45287)	On Sandy Drive and Jakes Way, between Sierra Highway and SR-14, south of the Santa Clara River; 10 miles east of the proposed Project.	463	0	23	Map Recorded
Davidon Homes (TR 35783)	North of Copperhill Drive and east of Seco Canyon Road; five miles east of the proposed Project.	419	0	149	Map Recorded
Green Valley Ranch Residential (TR 62000, 60257, and 062275)	Located south of Del Valle Road near Cromwell Avenue. The property is located approximately one-half mile west of the intersection of Hasley Canyon Road and Del Valle Road, and approximately one and one-half miles north of SR-126; one mile north of the proposed Project.	233	30,000	224 (25 open space)	Pending Approval

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Newhall Land (TR 44429)	Along Ridge Route Road, east of I-5 in Castaic; three miles north of the proposed Project.	293	0	113	Map Recorded
Valencia Company (TR 48202)	Northeast corner of Decoro Drive and Copperhill Drive; three miles northeast of the proposed Project.	458	3.5 acres [152,460 sf]	9	Map Recorded
Valencia Company (TR 45084)	Corner of Commerce Center Drive and Hasley Canyon Road; two miles north of the proposed Project.	294	0	150	Completed
Valencia Company (TR 36668)	West of The Old Road, north of Commerce Center Drive; two miles north of the proposed Project.	359	one lot	134	Completed
Curtis Development Corporation (TR 45958)	West of I-5 in Castaic; five miles north of the proposed Project.	296	0	357	Map Recorded
Gerald Nordeman (TR 44373)	Along Hillcrest Parkway, west of I-5, north of Hasley Golf Course; two miles north of the proposed Project.	1,114	4 acres [174,240 sf]	376	Map Recorded
Vista Canyon Ranch	Along Lost Canyon Road and the Santa Clara River, east of the Fair Oaks Ranch community, south of the 14 Freeway and west of Sand Canyon Road, seven miles east of the proposed Project.	1,600	1,500,000	217 (80 open space)	Pending
Davidon Homes (TR 46183)	West of Haskell Canyon Road, north of Copperhill Drive; five miles northeast of the proposed Project.	213	0	80	Completed
Forest Edge Project (Western Pacific Housing, TR 51789)	West of Haskell Canyon Road, north of Copperhill Drive; five miles northeast of the proposed Project.	194	0	79 (30 open space)	Map Recorded

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Bouquet Canyon Land Fund 8, LLC (TR 52193)	Located west of Bouquet Canyon Road near the intersection of Bouquet and Vasquez Canyon Road; six miles northeast of the proposed Project.	179	20,000	260	Pending
Westshire (Pardee Homes, TR 063483)	Located immediately south of SR-14, southwest of Via Princessa and north of Lost Canyon Road; seven miles east of the proposed Project.	190	0	13 (3 open space)	Pending
Overland National Land Fund (TR 52192)	Southwest of the intersection of Bouquet Canyon Road and Vasquez Canyon Road; six miles northeast of the proposed Project.	155	0	204	Pending
Condo III Development, Larwin Company, Val Verde (TR 51995)	West of I-5, south of Hillcrest Parkway; three miles north of the proposed Project.	114	0	15	Map Recorded
Forecast Homes (TR 46353)	Located in Mint Canyon just southeast of Sierra Highway and west of Sand Canyon Road, just north of the city of Santa Clarita boundary; nine miles east of the proposed Project.	110	0	65	Map Recorded
Golden Valley Ranch (TR 52535)	West of I-5 in Castaic; six miles north of the proposed Project.	80	0	260	Pending
Decoro Drive Residential (TR 45440)	West of McBean, east of San Francisquito Creek; three miles northeast of the proposed Project.	182	0	99	Completed
Dierckman & Mayh (PM 19784)	West of Commerce Center Drive, north of SR-126; one-quarter mile north of the proposed Project.	115	0	288	Map Recorded
(TR 42537)	West of I-5 in Castaic; four miles north of the proposed Project.	95	0	553	Approved

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Sierra Way Estates (TR 47573)	Located northeast of the intersection of Sierra Highway and Vasquez Canyon Road; 12 miles northeast of the proposed Project.	75	0	246 (179 open space)	Pending
(TR 47807)	West of Sloan Canyon Road and I-5 in Castaic; three miles north of the proposed Project.	77	0	197	Approved
SunCal Burnam Project (TR 53189)	Along San Francisquito Creek, west of McBean Parkway and north of Copperhill Drive; five miles northeast of the proposed Project.	60	0	186	Pending
Hasley Ranch Co. Greystone Homes Inc. (TR 45645)	Hasley Canyon Road and Romero Canyon Road, west of the Hasley Canyon Golf Course and I-5; two miles north of the proposed Project.	67	0	160	Approved
Arciero and Sons, Inc. (TR 53725)	West of Hasley Canyon Golf Course and I-5; two miles north of the proposed Project.	42	0	139	Pending
Del Valle Project (TR 060665)	South of Hasley Canyon Golf Course; one-half mile north of the proposed Project.	111	0	134	Pending
Tract 52475	North of Hasley Canyon Road, west of Del Valle Road, three miles north of the proposed Project.	46	0	70	Pending
Sterling Gateway (TR 60030)	Located east of Chiquita Canyon Road, just north of the Project area; one-half mile north of the proposed Project.	21	1,300,000	108	Pending

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Total Los Angeles County Residential/Mixed Use[3]		**35,459**	**5,755,315**	**20,565**	
Industrial/Commercial Projects					
Castaic Junction (PM 26574)	North of Henry Mayo Drive, west of The Old Road, north of the I-5 and SR-126 interchange; one-quarter mile northeast of the proposed Project.	0	1,879,500	114	Under Construction
Valencia Industrial Center	Map ID #4 - East of I-5, south of Newhall Ranch Road, north of Magic Mountain Parkway; one-quarter mile northeast of the proposed Project.	0	12,900,000	1,840	Approved
PM 18654	Northwest of The Old Road and Magic Mountain Parkway, near Six Flags Magic Mountain Amusement Park; one-quarter mile east of the proposed Project.	0	200,000	9	Approved
Curtis Sand and Gravel Mine and Aggregate Plant	Upper Santa Clara River, about 10 miles upstream from Newhall Ranch Specific Plan area.	0	n/a	185	Operating since 1955
Transit Mix (CEMEX) Soledad Canyon Mine	East of City of Santa Clarita boundary, at the entrance to Soledad Canyon; 16 miles east of the proposed Project.	0	n/a	300	Suspended pending federal legislation
Chiquita Canyon Landfill Expansion	Map ID #17 - West of I-5, north of SR-126 at Wolcott Way; one-half mile north of the proposed Project.	0	n/a	98	Pending
Industrial/Commercial Subtotal		**0**	**14,879,500**	**2,546**	
Institutional Projects					
Castaic High School	North of Lake Hughes Road, east of Ridge Route Road, four miles north of the proposed Project.	0	500,000	50	Pending
Total Los Angeles County Institutional		**0**	**500,000**	**50**	

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Infrastructure Projects					
CLWA Reclaimed Water Master Plan (Santa Clara River)	Map ID #14 - Los Angeles County and city of Santa Clarita; six miles north of the proposed Project.	n/a	n/a	n/a	Pending
Bouquet Canyon Bridge Widening	Adding one lane in each direction on Bouquet Canyon Bridge at Santa Clara River; two miles east of the proposed Project.	n/a	n/a	n/a	Completed
Copperhill Drive Bridge	Upper San Francisquito Creek, 565-foot bridge, six lanes; three miles northeast of the proposed Project.	n/a	n/a	n/a	Completed
Commerce Center Drive Extension	Extension of Commerce Center Drive and Bridge over Castaic Creek; one-quarter mile east of the proposed Project.	n/a	n/a	n/a	Completed
Cross Valley Connector	Two-mile extension of Newhall Ranch Road to east of Bouquet Canyon Road, including approximately 120-foot wide bridge over Santa Clara River, connecting with Golden Valley Road; three miles east of the proposed Project.	n/a	n/a	n/a	Approved; estimated completion 2008
Santa Clarita Valley Joint Sewerage Facilities Plan	Map ID #16 - Los Angeles County.	n/a	n/a	n/a	Approved
DPW Channel maintenance (South Fork)	70 acres of channel excavation, center of Santa Clara River, South Fork.	n/a	n/a	n/a	Provisional Corps permit in 1997
Natural River Management Plan (NRMP)	Map ID #13 - Natural River Management Plan for 1,200 acres along the Santa Clara River.	n/a	n/a	n/a	Approved in 1998; half built-out

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Santa Clara River Enhancement and Management Plan	Map ID #15 - Santa Clara River from Acton to Pacific Ocean, in Los Angeles and Ventura Counties.	n/a	n/a	n/a	Approved
I-5 and SR-126	I-5/SR-126 interchange; one-half mile northeast of the proposed Project.	n/a	n/a	n/a	Completed
I-5/Hasley Canyon Road	Within Valencia Commerce Center, I-5 at the I-5/Hasley Canyon Road interchange; within the proposed Project area.	n/a	n/a	n/a	Under Construction since 10/07
I-5/Magic Mountain Parkway Interchange Project	Modify the I-5/Magic Mountain Parkway interchange, reconstruct the Santa Clara River Bridge, realign The Old Road, and realign and widen Magic Mountain Parkway from six to eight lanes; one-half mile northeast of the proposed Project.	n/a	n/a	n/a	Construction scheduled to be complete Spring 2009
Valencia Water Reclamation Plant	Immediately downstream of the I-5 bridge, discharges to the Santa Clara River; one-half mile east of the proposed Project.	n/a	n/a	n/a	Completed
I-5 Santa Clara River Bridge Replacement	Santa Clara River and I-5; one-half mile east of the proposed Project.	n/a	n/a	n/a	Completed
Castaic Junction Project	I-5 / SR-126 interchange improvement project; one-quarter mile east of the proposed Project.	n/a	n/a	n/a	Under Construction
DPW Del Valle Sediment Placement Site	Near intersection of SR-126 and Chiquito Canyon Road; one-half mile north of the proposed Project	n/a	n/a	n/a	Pending

Table 6.0-2
Los Angeles County Consolidated Projects

Name	Location	Units	Commercial /Industrial (sf)[1]	Acres[2]	Status
Soledad Canyon Road Trail (Santa Clara River)	South side of Santa Clara River from Metro Link Station to west side of Bouquet Canyon Bridge, continuing along the west side of Valencia Boulevard across South Fork at the Valencia Bridge; three miles east of the proposed Project.	n/a	n/a	n/a	Pending
Infrastructure Subtotal		**n/a**	**n/a**	**n/a**	
Total		**35,459**	**21,134,815**	**23,161**	(includes at least 3,627 acres of open space)

Note: The Las Lomas Project (PM 060792) application was denied, and thus, it was not included in this list because it is currently not reasonably foreseeable.

[1] In some instances, commercial/industrial square footage was not available but an acreage for such uses was provided. That acreage was converted to square footage [shown in brackets] to provide an estimated basis for aggregating square footage totals.

[2] Open space acreage information was not available for all projects, but is provided where available.

[3] Ritter Ranch and Centennial are not included in the totals because they are located in a different watershed.

Source: Los Angeles County.

6.4.1.3 City of Fillmore (Ventura County) Consolidated Projects

Table 6.0-3 contains the City of Fillmore consolidated project list. As discussed in **Subsection 6.3.1**, above, projects more than five miles away from the Project area and/or smaller-scale projects (less than 700 acres) were analyzed in a consolidated manner, and were grouped by local jurisdiction.

Table 6.0-3
City of Fillmore Consolidated Projects

Name	Location	Units	Commercial/ Industrial (sf)[1]	Acres[2]	Status
Residential/Mixed Use Projects					
Heritage Valley Parks Specific Plan	Located within and adjacent to the southeastern boundary of the city of Fillmore; 10 miles east of the proposed Project.	750	0	301 (52 open space)	Under Construction
North Fillmore Specific Plan	North of B Street and 7th Street; 11 miles east of the proposed Project.	350	15,000	101 (2 open space)	Pending
Residential Subtotal		**1,100**	**15,000**	**402**	
Commercial/Industrial Projects					
South West Business Park Master Plan Commercial	South West corner of the city of Fillmore; 10 miles west of the proposed Project.	0	90 acres [3,920,400 sf]	90	Under Construction
Commercial/Industrial Subtotal		**0**	**3,920,400**	**90**	
Infrastructure Projects					
Fillmore Water Recycling Plant	SR-126 and "E" Street, city of Fillmore; 10 miles west of the proposed Project.	n/a	n/a	n/a	Under Construction
Total		**1,100**	**3,935,400**	**492**	(includes at least 54 acres of open space)

[1] In some instances, commercial/industrial square footage was not available but an acreage for such uses was provided. That acreage was converted to square footage [shown in brackets] to provide an estimated basis for aggregating square footage totals.

[2] Open space acreage information was not available for all projects, but is provided where available.

Source: City of Fillmore.

6.4.1.4 City of Santa Paula (Ventura County) Consolidated Projects

Table 6.0-4 contains the City of Santa Paula consolidated project list. As discussed in **Subsection 6.3.1**, above, projects more than five miles away from the Project area and/or smaller-scale projects (less than 700 acres) were analyzed in a consolidated manner, and were grouped by local jurisdiction.

Table 6.0-4
City of Santa Paula Consolidated Projects

Name	Location	Units	Commercial (sf)	Acres	Status
Residential Projects					
Adams Canyon	Map ID #3 - West of SR-150; 22 miles west of the proposed Project.	450	unknown	6,578	Pending (See **Table 6.0-9**)
East Area 1 Specific Plan	The property is bounded by hillside agricultural land to the north, Haun Creek to the east, Main Street and Southern Pacific Railroad to the south, and Santa Paula Creek to the west; 20 miles west of the proposed Project.	900	810,800	541	Annexation Pending
Residential Subtotal		**1,350**	**810,800**	**7,119**	
Total		**1,350**	**810,800**	**7,119**	

Source: City of Santa Paula.

6.4.1.5 Unincorporated Ventura County Consolidated Projects

Table 6.0-5 contains the unincorporated Ventura County consolidated project list. As discussed in **Subsection 6.3.1**, above, projects more than five miles away from the Project area and/or smaller-scale projects (less than 700 acres) were analyzed in a consolidated manner, and were grouped by local jurisdiction.

Table 6.0-5
Ventura County Consolidated Projects

Name	Location	Units	Commercial/ Industrial (sf)	Status
Residential/Mixed Use Projects				
Permit No. LU08-0062	Located within the Piru area of Ventura County; approximately seven miles west of the proposed Project.	66	0	Pending
Residential Subtotal		**66**	**0**	
Commercial/Industrial Projects				
Permit No. LU08-0047	Located in the Piru area of Ventura County; approximately seven miles west of the proposed Project.	0	19,300	Pending
Commercial/Industrial Subtotal		**0**	**19,300**	
Recreational Projects				
Permit No. LU07-0088	Located in the Piru area of Ventura County; approximately eight miles northwest of the proposed Project.	0	**(1)**	Approved
Total		**66**	**19,300**	

(1) This project consists of minor improvements to existing buildings, structures and utilities at Lake Piru
Source: Ventura County

6.4.1.6 Consolidated Projects Overview

Table 6.0-6 contains a summary of the consolidated project information contained in **Tables 6.0-1** to **6.0-4**, above.

Table 6.0-6
Summary of Total City/County/Caltrans Consolidated Projects

Agency	Units	Comm./Ind (sf)[1]	Total Acres/Open Space Acres[2]
Santa Clarita	13,003	18,134,857	7,609/1,883
Los Angeles County	35,459	21,134,815	23,161/3,627
Fillmore	1,100	3,935,400	492/54
Santa Paula	1,350	810,800	7,119
Ventura County	66	19,300	unknown
Total	**50,978**	**44,035,172**	**59,929/5,564**

Notes:

[1] Includes some instances where commercial/industrial acreages were converted to square footage [shown in brackets in **Tables 6.0-1** to **6.0-3**] to provide an estimated basis for aggregating square footage totals.

[2] Open space acreage information was not available for all projects; therefore, the "Open Space Acres" number represents the minimum open space that is planned for the projects in **Tables 6.0-1** to **6.0-3**.

Source: **Tables 60-1**, to **6.0-5**

6.4.1.7 Corps (Section 404 Permit) Projects

Between 1988 and 2006, the Corps issued an average of approximately 12.6 section 404 permits per year within the Santa Clara River watershed. (See **Figures 6.0-2** and **6.0-3**, below, and **Appendix 6.0** of this EIS/EIR.) In general, the acreages of waters of the United States affected by projects authorized under section 404 permits in a given year were related to the number of projects authorized that year. The data for 1998 and 2005 (years in which major El Niño events occurred), showed peaks in the number of authorizations granted, and a corresponding trend with respect to acreages of jurisdictional areas impacted. This is likely due to the fact that dramatic flood events necessitate the need for repairs and maintenance of existing facilities, and may also underscore the general need to construct additional flood and erosion facilities for protection against future disasters.

Of the 228 projects permitted by the Corps under section 404 permits in the Santa Clara River watershed between 1988 and 2006, more were associated with emergency repairs and maintenance than any other type of activity. Combined, the permits issued for emergency repairs and maintenance of existing facilities accounted for a combined 25 percent of the total permits issued (16 percent were emergency repairs, nine percent maintenance). Flood protection activities, including bank protection, riprap, rock groin, and culver/levee improvements, accounted for 25 percent of the total permits issued. Another 17 percent of the permits issued were associated with residential development. Unknown activities (largely from older permits with minimal available data) comprised 15 percent of the permits. The remaining 18 percent include bridges, channel alterations, sediment removal, storm drains, and other projects. (See **Figure 6.0-4**.)

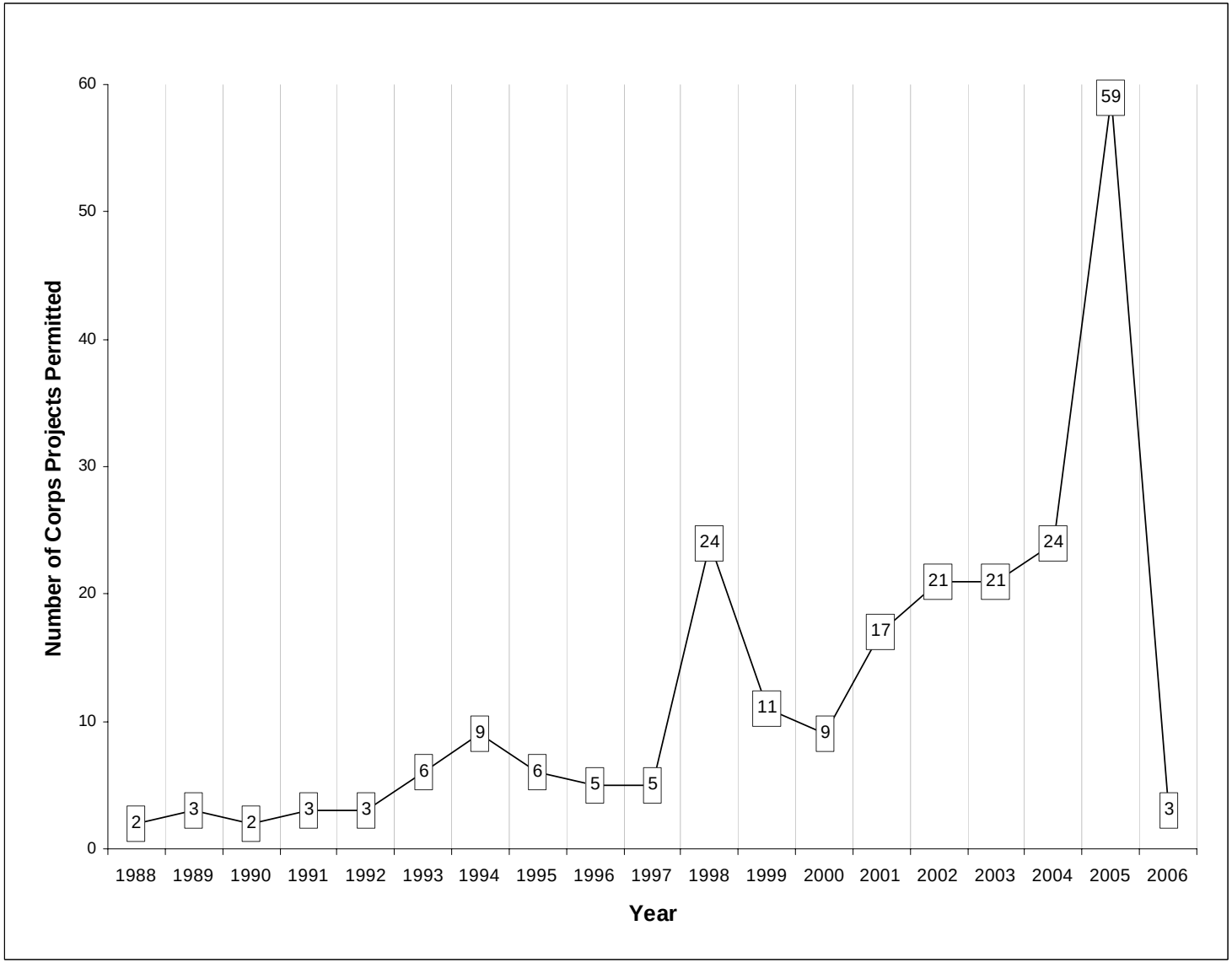
6.4.1.8 Federal Biological Opinions

Table 6.0-7 summarizes federal biological opinions issued in the Santa Clara River watershed between 1993 and 2006 as they relate to the species that are the most likely to be reviewed by the USFWS and CDFG as part of the species-related determinations and/or authorizations that are being sought as part of the proposed RMDP/SCP approval process. A total of 25 USFWS biological opinions were reviewed. One of those opinions is not incorporated below because it did not affect any species of primary concern. Three opinions have been combined into one entry below because they concern the same request.

6.4.1.9 CDFG Streambed Projects

Between 1983 and 2006, CDFG issued an average of 21 streambed alteration agreements per year in the Santa Clara River watershed. (See **Figures 6.0-5** and **6.0-6**.) In general, the acreages of jurisdictional streambeds affected by projects authorized under the Fish and Game Code section 1600 program, in a given year, were related to the number of projects authorized that year. The years following the 1998 and 2005 El Niño events showed peaks in the number of authorizations granted, and a corresponding trend with respect to acreages of jurisdictional areas impacted. This is likely due to the fact that dramatic flood events necessitate the need for repairs and maintenance of existing facilities, and may also underscore the need to construct additional flood and erosion facilities for protection against future disasters.

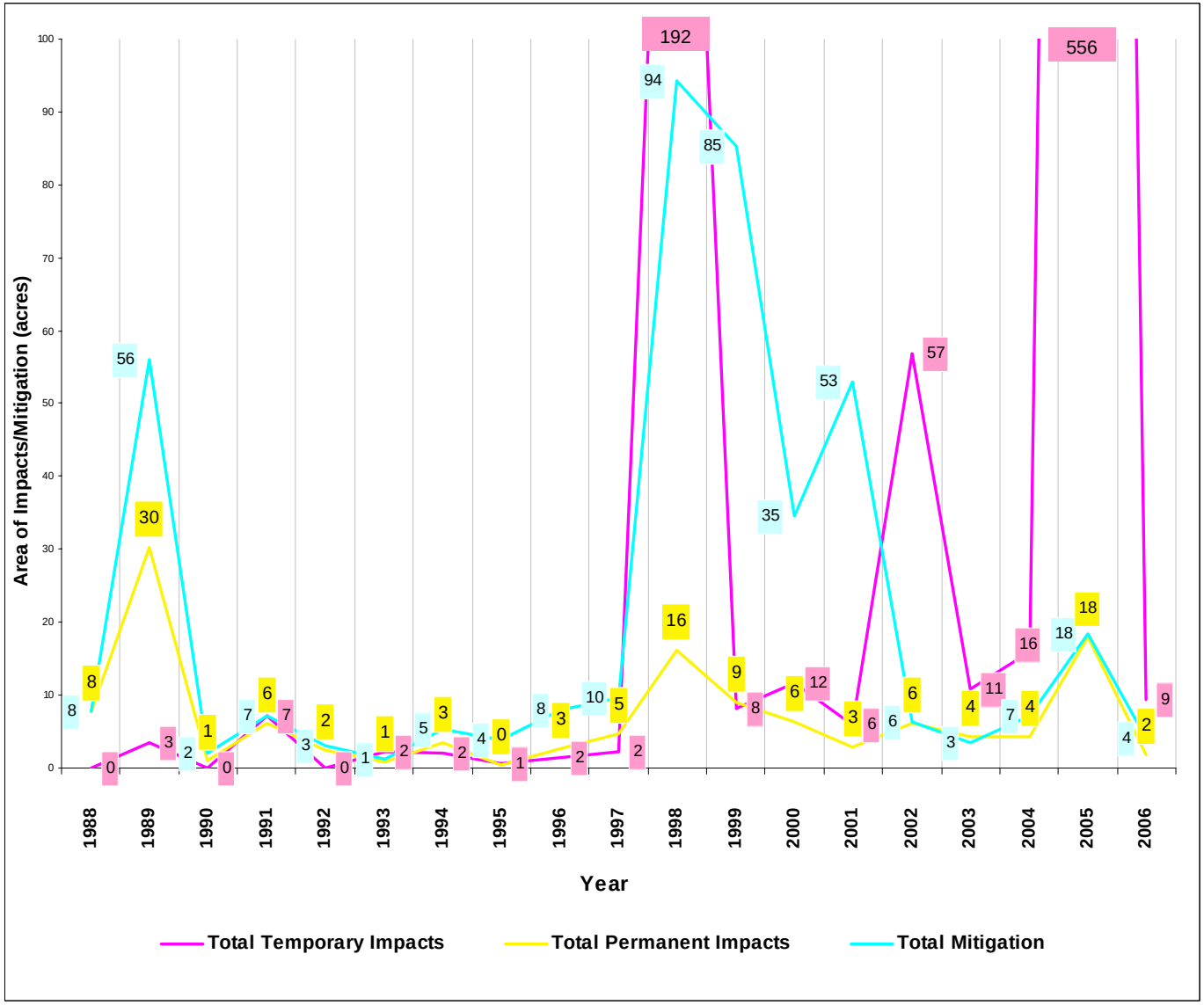
Of the 503 projects permitted under the section 1600 program in the Santa Clara River watershed between 1983 and 2006, 32 percent of the project activities were associated with bridges and maintenance activities. The combined number of streambed alteration agreements issued for the installation of riprap, bank protection, and miscellaneous flood/erosion control facilities accounted for 19 percent of the total authorizations issued. Sediment removal and fill activities accounted for 12 percent of the authorized activities, while channel alterations account for 11 percent of the total authorized activities. Unknown activities (largely from older permits with minimal available data) comprised three percent of the permits. (See **Figure 6.0-7**.) The remaining 23 percent include culverts, storm drains, vegetation removal, and other projects.



SOURCE: CORPS 2008

FIGURE 6.0-2

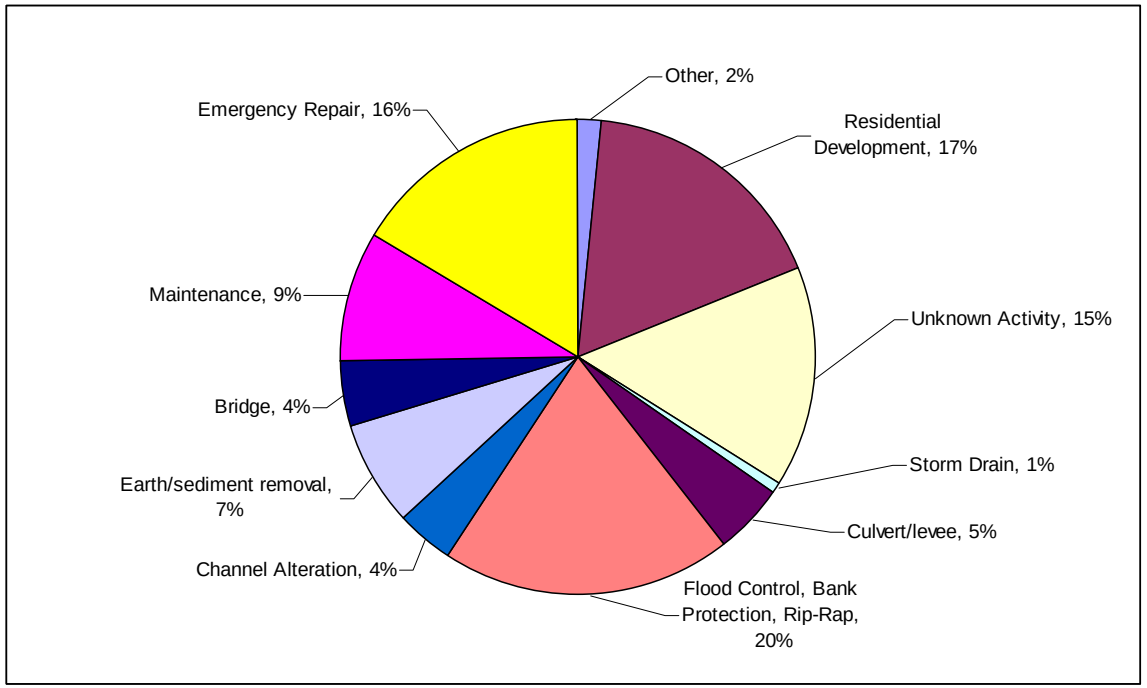
Consolidated Corps Projects (1988 and 2006)



SOURCE: CORPS 2008

FIGURE 6.0-3

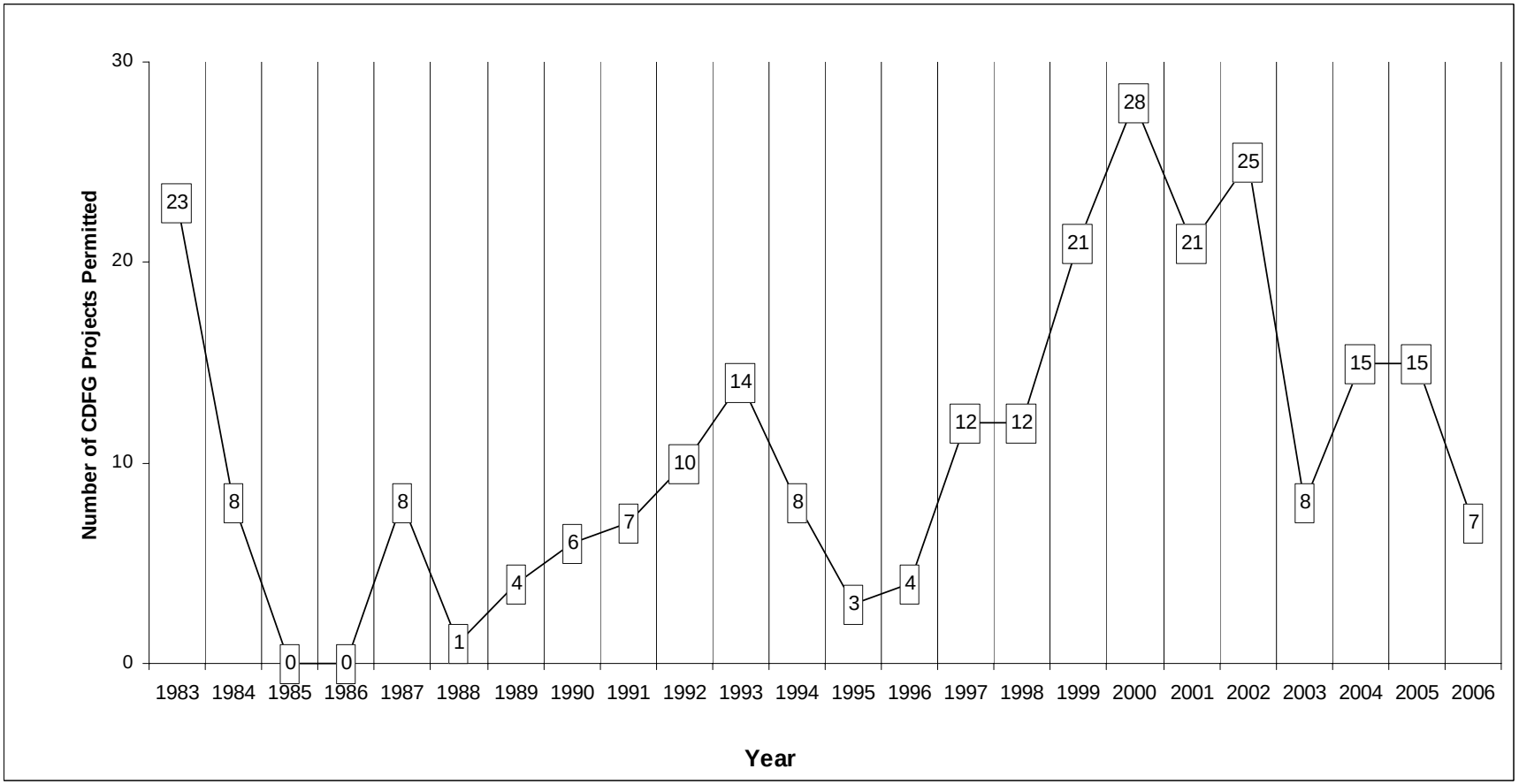
Consolidated Corps Permits, Acreage of Impacts and Mitigation (1988 to 2006)



SOURCE: CORPS 2006, URS 2009

FIGURE 6.0-4

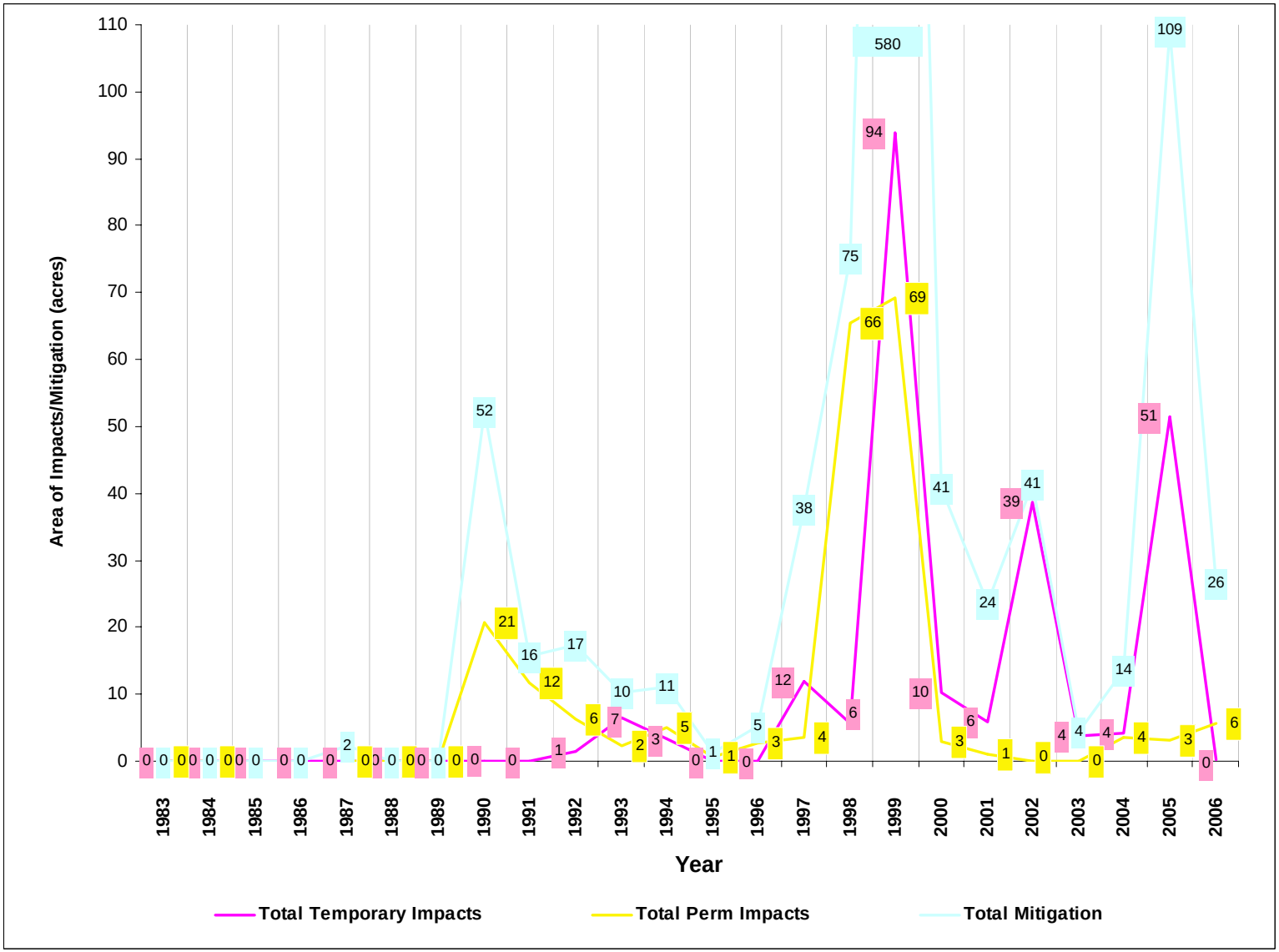
Corps Permitted Activities by Types (1998-2006)



SOURCE: DUDEK – 2008

FIGURE 6.0-5

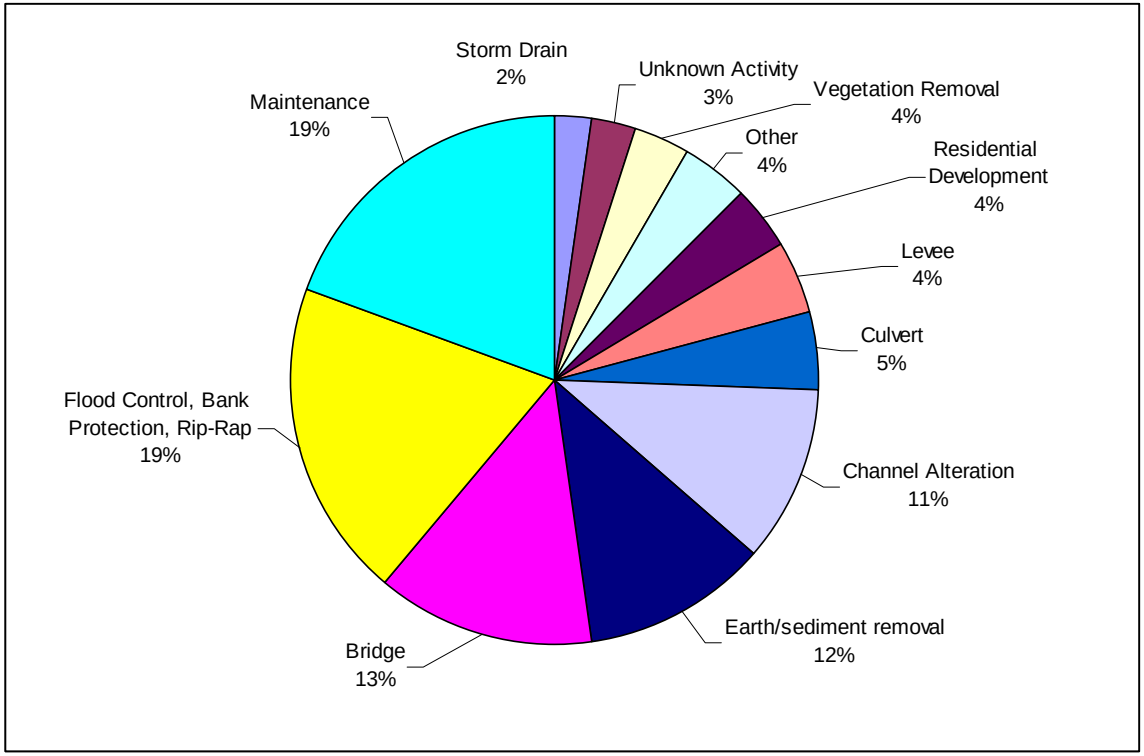
Consolidated CDFG Streambed Projects (1983-2006)



SOURCE: DUDEK – 2008

FIGURE 6.0-6

Consolidated CDFG Streambed Permits, Acreages of Impacts and Mitigation (1983-2006)



SOURCE: DUDEK – 2008

FIGURE 6.0-7

Consolidated CDFG Streambed Permits by Type (1983-2006)

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Temporary Diversion Berm on the Santa Clara River on the Newhall Ranch Op. 1065.1163.1544 October 26, 1993	UTS	0 P 0.09 T (est.)	Along the Santa Clara River on the Newhall Ranch.	Construction of a 2' x 10' x 400' berm to divert water away from an exempt levee which is to be rebuilt.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Southern Pacific Milling Company Sand and Gravel Mine Op.1025.1129.1492 February 7, 1994	LBV	19 P T-unknown	Within and adjacent to the Santa Clara River from the western edge of the city of Santa Paula downstream to the confluence with the Lindsay Barranca in Ventura County.	The applicant proposes to install a sand and gravel mine.	Project is not likely to jeopardize the continued existence of the LBV; no adverse modification of critical habitat.
Installation of a Southern California Gas Company Pipeline Op. 1380.1517.2051 August 28, 1995	UTS	0 P .23 (est.) T	Santa Clara River at Castaic Creek.	Installation of an eight mile gas line that crosses the Santa Clara River and Castaic Creek.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Installation of Irrigation Pipelines on the Santa Clara River in Newhall Ranch Op. 1392.1533.2075 October 23, 1995	UTS	0.005 P 1.45 T	Santa Clara River at Summer Crossing.	Installation of 18" x 12" PVC irrigating pipe and removal of fill that comprises Summer Crossing; purpose is to irrigate nearby Citrus Orchards.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Construction of Erosion Control Facilities for the Valencia Water Reclamation Plant Op. 1406.1547.2098 February 29, 1996	UTS & LBV	1.4 P T-unknown	Santa Clara River near the Valencia Water Reclamation Plant.	Construction of a 50' x 12' x 630' keystone retaining wall.	Project is not likely to jeopardize the continued existence of either species; no adverse modification of critical habitat.
Repair of I-5 Bridge Over Santa Clara River Op. 1443.1591.2158 September 6, 1996	UTS ~LBV & ~SWF	1.4 P T-unknown	The Intersection of I-5 and the Santa Clara River.	The repair of two pier footings of the I-5 bridge crossing the Santa Clara River.	Project is not likely to jeopardize the continued existence of the UTS; no adverse modification of critical habitat.
Widening of SR-126 Op. 1472.1623.2199 April 20, 1997	LBV	0.5 P T-unknown	SR-126 just east of Rancho Camulos, from city of Piru to Los Angeles County line.	Grubbing, vegetation removal, and installation of retaining walls for ROW expansion.	Project is not likely to jeopardize the continued existence of the LBV; no adverse modification of critical habitat.
Sewer Line and Force Main Op. 2390.3666.4402 September 28, 1998	UTS ~LBV	0.7 P T-unknown	Near the intersection of the Santa Clara River and Old Road Bridge in the city of Santa Clarita.	Replacement of two underground sewer lines that cross the Santa Clara River.	Not likely to jeopardize the continued existence of the species or adversely affect critical habitat.
Newhall Land and Farming's Summer Crossings and Water Diversions Op. 911.1015.1329, 911.1015.1330, &	UTS	0 P 14 T	Santa Clara River from the Castaic Creek confluence to the Rancho Camulos vicinity.	Installation of six temporary vehicle crossings and four water diversions along the Santa Clara River from native materials.	The action as is not likely to jeopardize the continued existence of the UTS or modify critical habitat.

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
911.1351.1804 September 25, 1998 Note: Duplicate Letters					
Natural River Management Plan Op. 116.122.166 Nov. 27, 1998	UTS, LBV & SWF	96 P 71 T	Along the Santa Clara River and its tributaries in Valencia and Santa Clarita and adjacent unincorporated areas of Los Angeles County at the inlet of the San Francisquito Creek and confluence with the South Fork of the Santa Clara River.	81,150 lf of bank protection along the River and San Francisquito Creek; a 1,700 foot long inlet structure at the confluence with the South Fork; approximately 85 storm drain outlets; eight new bridges; a replacement for an existing bridge; and upgrades to six existing bridges.	Activities are not likely to jeopardize the continued existence of these species or result in destruction or adverse modification of critical habitat.
Replacement of the I-5 Bridge over the Santa Clara River, Los Angeles County Op. 148.155.1274 December 26, 2000	UTS & LBV	1.18 P 0.42	Where I-5 crosses the Santa Clara River.	Caltrans (with FHWA funding), proposes to replace the existing bridges where I-5 crosses the Santa Clara River, with a single structure, consisting of 10 traffic lanes. Construction activities would include major and minor grading, installing pier supports, and the demolition and removal of the existing bridges.	Not likely to jeopardize the existence of these three species and is not likely to destroy or adversely modify the critical habitat of the LBV or the proposed critical habitat of the UTS.
Replacement of the Highway 101 Bridge over the Santa Clara River, Ventura County, California Op. 852.921.1190 May 3, 2001	LBV & SWF	1.18 P 0.42 T	Highway 101 and the Santa Clara River; activities are expected to occur only on and under the bridge, and within 100 feet up- and downstream of the bridge.	Caltrans, (with FHWA funding) proposes to replace existing Highway 101 bridges over the Santa Clara River with a single concrete bridge with 12 lanes, a bike path, 12 piers and two abutments.	The action as is not likely to jeopardize the continued existence of these species; no critical habitat present.

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Amendment to the Biological Opinion for the Santa Clara River Bridge Replacement Project Op. 852.921.1195 April 3, 2002	LBV & SWF	1.18 P 0.42 T	Interstate 101 and the Santa Clara River (although the opinion inadvertently references I-5).	Caltrans was unable to comply with term and condition 7 of the May 3, 2001 opinion requiring removal of riparian vegetation within 100 yards of the bridge before March 15 of each construction year.	Qualified ornithologists conducted surveys for breeding birds in the project area and concluded that no LBV or SWF had been detected. Therefore, the biological opinion can be amended without resulting in additional take of the species.
Hardluck Campground Low Water Crossing Replacement Op. 2409.3697.4463 September 10, 2002	AT	0.25 P T - unknown	Piru Creek near Hardluck Campground in Los Padres National Forest.	Replacement of a concrete low water crossing.	Not likely to jeopardize the continued existence of the AT or adversely affect critical habitat.
Natural River Management Plan (NRMP) (Supplement to previous application dated November 27, 1998) Op. 116.154.212 Nov. 15, 2002	AT	66 P 71 T (smaller acreage for permanent reflects that a portion of the project had already been completed)	Same as previous.	Same as previous.	The NRMP, as proposed, is not likely to jeopardize the continued existence of the AT.
Castaic Creek Bank Protection, Valencia Commerce Center,	UTS & AT ~LBV	135 P 8.3 T	Castaic and Hasley creeks adjacent to the Santa Clara River.	Installation of approximately 19,400 feet of bank protection along Castaic and Hasley	The project, as proposed, is not likely to jeopardize the continued existence of either of these

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Los Angeles County, California Op. 189.203.342 December 17, 2002				creeks over a period of four years.	species.
Re-initiation of the replacement of the I-5 Bridge over the Santa Clara River, Los Angeles County Op. 148.156.215 August 1, 2003	UTS, LBV, SWF, & AT	1.28 P 0.42 T	Where I-5 crosses the Santa Clara River.	Same as above, but permanently impacted area will be expanded by 0.1 acres.	Action is not likely to jeopardize the continued existence of the species.
Santa Clara River Reaches 71 & 82 Op. 884.976.1397 October 24, 2004	UTS & AT	5.81 P T-unknown	Reaches 71 & 82 of the Santa Clara River.	Clearing of soft-bottom channels using both heavy mechanical equipment and hand clearing.	The action is not likely to jeopardize the continued existence of these species.
Townhomes at the River Development and Construction of a Flood Control Levee Op. 1726.2067.3266 March 31, 2005	LBV	11.4 P T-unknown	City of Fillmore.	66 residential units on an 11.4 acre site and 26' x 730' x 10' x 90' levee installation.	Not likely to jeopardize the continued existence of the LBV; critical habitat will not be adversely affected.
I-5 Hasley Canyon Interchange Improvement	UTS & AT	0.01 P 0.42 T (est)	I-5 at Castaic Creek and Hasley Canyon.	Replacement of existing over-crossings, ramps, and supports.	Not likely to jeopardize the continued existence of either species; critical habitat will be

Table 6.0-7
Federal Biological Opinion Summary, Santa Clara Watershed (1993-2006)

Project	Species Covered	Acres Permanently (P) or Temporarily (T) Disturbed	Location	Description	Conclusion
Op. 2141.3126.3703 May 31, 2005					adversely affected.
Amendment to Biological Opinion for Santa Clara Bridge Replacement Op. 852.921.4942 February 16, 2006	LBV & SWF	1.18 P 0.42 T	Interstate 101 and the Santa Clara River.	Proposed revision of project description to include underground drainage and outlet.	The revised project is not likely to adversely affect these species.
Santa Paula Water Recycling Facility Op. 2260.3483.5550 September 5, 2006	LBV	0 P 9.4 T	Approximately 58 acres immediately south of SR-126 and west of Peck Road in Santa Paula.	Construction of a new water recycling facility including new percolation ponds that would discharge into the Santa Clara River.	Not likely to jeopardize the continued existence of the LBV; critical habitat will not be adversely affected.

Notes:
UTS - Unarmored Threespine Stickleback
SWF - Southwestern Willow Flycatcher
LBV - Least Bell's Vireo
AT - Arroyo toad
~ - species mentioned but not discussed

Source: USFWS.

6.4.1.10 CDFG Take Authorizations

Prior to 1997, CDFG issued Memoranda of Understanding and a few permits for authorization of incidental take of species listed under the California ESA. Between 1988 and 1997, CDFG considered 273 incidental take authorizations statewide, of which 174 were ultimately signed. Of those 174 authorizations, three were for western yellow-billed cuckoo, 11 for least Bell's vireo, and one for unarmored threespine stickleback. In the bioregion that includes the proposed Project (the South Coast bioregion), approximately 20 take authorizations were issued during that time period, which authorized a total of roughly 1,000 acres of habitat impacts (including coastal sage scrub, alluvial fan sage scrub, non-native grassland, riparian, and wetland habitat types) and required 2,000 acres of mitigation. (CDFG, 1998.)

More recently, CDFG has issued 48 take authorizations in the general regional vicinity of the project (*i.e.*, generally within Los Angeles, Ventura, and Santa Barbara Counties, but also including some authorizations in San Diego County), a complete list of which are included in **Appendix 6.0** of this EIS/EIR. Most of those authorizations were for projects that are a significant distance from the proposed Project (*e.g.*, greater than 25-30 miles), and/or for species that are not of primary concern for the proposed Project. The four most relevant authorizations are summarized in **Table 6.0-8**, below. Relevancy was determined by proximity to the Project and shared species impacts.

Table 6.0-8
Recent CDFG Take Authorizations in Project Vicinity

Project Number	Project Name	Project Location	Project Impact Description	Relevant Species
2080-2001-029-05	I-5/Santa Clara River Bridge Replacement	City of Santa Clarita.	Unknown.	LBV, SWF, UTS*
2081-2002-008-05	SR 101 Santa Clara River Bridge Replacement	Santa Clara River Bridge where it is crossed by SR 101, between Post miles 22 and 24 in Ventura County.	The permanent destruction of 1.0 acres of habitat and temporary impacts to 0.9 acres of habitat during 4 breeding seasons.	LBV, SWF
2080-2003-018-05	I-5 Santa Clara River Bridge Replacement Additional Work Area	City of Santa Clarita.	Permanent acres-1.28; temporary acres-3.30.	LBV, SWF, UTS*
2081-1998-49-5	NRMP	Santa Clara River in Los Angeles County by City of Santa Clarita.	74 acres.	LBV, SWF, UTS*

UTS - Unarmored Threespine Stickleback. *Discussed, but no take authorized.

SWF - Southwestern Willow Flycatcher.

LBV - Least Bell's Vireo.

Source: CDFG 2007.

In addition, several NCCPs have recently been proposed and/or approved in the Southern California area. These NCCPs (or combination HCP/NCCPs) would provide comprehensive take authorizations for larger planning areas in parts of Kern, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties. However, none of these proposed or approved planning/take authorization documents were deemed to be relevant for analysis in this EIS/EIR because of their distance from the proposed Project (*e.g.*, greater than 25-30 miles) and/or their lack of similarity of species of primary concern.

6.4.2 Individual Projects

As discussed in the methodology section above (**Subsection 6.3**), major residential/mixed use, commercial, and industrial projects of 700 or more acres within five miles of the Project area, as well as larger-scale infrastructure projects involving the Santa Clara River, are referenced throughout the separate resource category discussions below. A summary of these projects' size, location, and current status appears in the following table (**Table 6.0-9**). These projects are identified by the same numbers used in **Figure 6.0-1**, Individual Project Location Map.

Table 6.0-9
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
1	Ritter Ranch	City of Palmdale (Los Angeles County)	Residential/Mixed Use	South of Bouquet Canyon Road and Elizabeth Lake Road, west of Antelope Valley Freeway, and north of Sierra Highway; 40 miles east of the proposed Project.	7,200	10,258	Partially Built Out
2	Centennial	Northern Los Angeles County	Residential/Mixed Use	Located on the Tejon Ranch, just south of the Kern County/Los Angeles County border, located next to SR-138, just east of I-5; 40 miles north of the proposed Project.	23,000	11,700	Pending
3	Adams Canyon	City of Santa Paula	Residential/Mixed Use	West of SR-150; 22 miles west of the proposed Project.	450	6,578	Pending
4	Valencia Industrial Center	Los Angeles County	Industrial Park and Commercial Retail	East of I-5, south of Newhall Ranch Road, and north of Magic Mountain Parkway; one-quarter mile northeast of the proposed Project.	12,900,000	1,840	Completed
5	Legacy Village (Stevenson Ranch V)	Los Angeles County	Residential/Mixed Use	Adjacent to/southeast of the Newhall Ranch Specific Plan area..	3,425/ 840,200	1,759	Pre-Application
6	Tesoro del Valle (TR 51644)	Los Angeles County	Residential/Mixed Use	West side of San Francisquito Creek, north of Copperhill Drive; five miles northeast of the proposed Project.	1,791	1,793	Under construction

Table 6.0-9
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
7	Tapia Ranch (TR 53822)	Los Angeles County	Residential/Mixed Use	Tapia Canyon Road, west of Tesoro Residential Development. Access to the site currently via Parker Road exit from I-5; four miles east of the proposed Project.	405	1167	Pending
8	Whittaker Bermite / Porto Bello Project (TR 51599)	City of Santa Clarita	Residential/Mixed Use	West of Golden Valley Road, south of Soledad Canyon Road, and east of San Fernando Road; three miles east of the proposed Project.	2911/ 609,832	996 (407 open space)	On hold pending remediation activities and bankruptcy proceedings.
9	West Creek/West Hills Valencia Project (TR 52445)	Los Angeles County	Residential/Mixed Use	West side of San Francisquito Creek, north of Newhall Ranch Road, and south of the Copperhill Drive bridge; four miles northeast of the proposed Project.	2,545/ 180,000	966	Near build-out.
10	Westridge Project (TR 45433 & MP 19050)	Los Angeles County	Residential/Mixed Use	Just west of I-5, north of Stevenson Ranch, and directly south of Six Flags Magic Mountain Amusement Park; one-half mile east of the proposed Project.	1,939/ 192,000	794	Under Construction
11	North Valencia Specific Plan No. 1 (Industrial Park)	City of Santa Clarita	Industrial and Business Park	South of Newhall Ranch Road, north of Magic Mountain Parkway, east of Rye Canyon Road, and west of Bouquet Canyon Road; one-half mile east of the proposed Project..	2,000/ 803,000	707 (365 open space)	Completed

Table 6.0-9
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status
12	RiverPark (TR 53425)	City of Santa Clarita	Residential/Mixed Use	Located at the eastern terminus of Newhall Ranch Road, east of Bouquet Canyon Road, and north of Soledad Canyon Road and the Santa Clara River; four miles east of the proposed Project.	1,089/ 16,000	695	Under Construction
13	NRMP	Los Angeles County	Infrastructure	Approved NRMP for 1,200 acres of the Santa Clara River.	NA	NA	Approved and Partially Built Out
14	CLWA Reclaimed Water Master Plan (SCR)	Los Angeles County and the City of Santa Clarita	Infrastructure	Los Angeles County and the City of Santa Clarita; six miles north of the proposed Project.	NA	NA	Approved
15	Santa Clara River Enhancement and Management Plan	Los Angeles and Ventura Counties	Infrastructure/Environmental	Santa Clara River from Acton to Pacific Ocean.	NA	NA	Approved
16	Santa Clarita Valley Joint Sewerage Facilities Plan	Los Angeles County	Infrastructure	Los Angeles County	NA	NA	Approved
17	Chiquita Canyon Landfill Expansion	Los Angeles County	Industrial	West of I-5, north of SR-126 at Wolcott Way; one-half mile north of the proposed Project.	NA	98	Pending

Table 6.0-9
Individual Project Summary

Map ID	Name	Jurisdiction	Project Type	Location and Distance from Proposed Project	Residential Units/ Comm./Ind. Square Feet	Size (Acres)	Status

Source:

1 - Final EIR, dated March 1992, Lead Agency City of Palmdale Planning Department; SCH No. 1990010124.

2 - Notice of Preparation dated March 2004, Lead Agency Los Angeles County Regional Planning; SCH No. 2004031072; http://www.ceqanet.ca.gov, (September 22, 2008).

3 - Two different projects have been proposed for this site. The Ventura County version would provide for 34 single-family lots ranging in size from 40 to 160 acres (SCH No. 2007021073, NOP dated February 2007, http://www.ceqanet.ca.gov, last visited on September 22, 2008). In May 2007, City of Santa Paula voters amended the City's urban restriction boundary to include Adams Canyon and amended the City's General Plan to allow 495 residential units, 100 acres of public recreation facilities, open space, a 40-acre school site, a hotel and a golf course on the site. (See http://www.ci.santa-paula.ca.us/adamscanyon/; http://recorder.countyofventura.org/Results/050807/Election%20Result.htm.) According to City planning staff, as of February, 2009, the current proposal for the site is 450 estate homes. Any proposed development on the site would still require discretionary approvals from the City Council (*e.g.*, a specific plan and development agreement), and would require annexation to the City's jurisdiction before it could be developed with City approvals. (See http://www.ci.santa-paula.ca.us/adamscanyon/ImpartialAnalysis_A7.pdf.)

4 - Applicant provided information.

5 - Applicant provided information.

6 - Initial Study dated 2/6/2007, Lead Agency Los Angeles County Regional Planning; SCH No. 1993021007.

7 - Initial Study dated November 2006, Lead Agency Los Angeles County Regional Planning; SCH No. 2006121016.

8 - SCH No. 1995101595 (cleanup being processed under SCH No. 2001051089); more information can be found at http://www.santa-clarita.com/cityhall/cd/planning/bermite.asp.

9 - CEQA findings dated July 2005, Los Angeles County; SCH No. 1998021052.

10 - Revised Draft EIR, dated May 1999, Lead Agency Los Angeles County Regional Planning; SCH No. 1990011146, containing text revisions to Draft EIR text based on comments received during the project review process. Los Angeles County certified the Final EIR for this project in May 1999.

11 - Draft EIR, dated August 1997, Lead Agency City of Santa Clarita Planning Department; SCH No. 1996071077.

12 - Draft EIR, dated March 2004, Lead Agency City of Santa Clarita; SCH No. 2002091081. The City of Santa Clarita certified a Final EIR for this project in May 2005. The Final EIR did not change the Draft EIR's conclusions regarding impacts and their significance.

13 - CEQA findings from August 2003, California Department of Fish and Game; SCH No. 1997061090.

14 - Draft EIR, dated November 2006, Lead Agency Castaic Lake Water Agency (CLWA); SCH No. 2005041138. The CLWA certified a Final EIR for this project in March 2007. The Final EIR did not change the Draft EIR's conclusions regarding impacts and their significance.

15 - Document and information available at: http://www.santaclarariverparkway.org/wkb/projects/scremp, last visited on September 9, 2008.

16 - Final EIR, dated January 1998, Lead Agencies County Sanitation Districts 26 and 32 of Los Angeles; SCH No. 1998109408.

17 - NOP/IS dated July 20, 2005, Lead Agency Los Angeles County Regional Planning; SCH No. 2005081071.

6.5 CUMULATIVE RESOURCE IMPACTS

This section includes discussions of potential cumulative impacts for each resource category analyzed in this EIS/EIR. For each resource category, except biological resources and global climate change, which use a different format, the analysis is structured as follows:

- Summary of project-specific impacts and mitigation for the proposed Project;
- Discussion of potential cumulative impacts, utilizing either the list or the plan method, as appropriate (as noted above, agricultural resources, air quality, noise, traffic, and water resources impacts are analyzed using the "plan" method, and all others utilize the "list" method). Resource areas that were analyzed using the "list" method include tabular and textual identification of impacts for the individual projects listed in **Subsection 6.4.2**, above. That information is organized by identifying which projects had significant impacts (regardless of whether those significant impacts could be mitigated) under the same or substantially similar criteria as those used to evaluate the proposed Project.[2] Potential impacts from consolidated projects (see **Subsection 6.4.1**, above) were estimated based on the overall development patterns that were reflected by the consolidated project lists in **Subsection 6.4.1**, as well as patterns identified by reviewing the more detailed information that was available for the individual projects;
- Discussion of the incremental contribution of the proposed Project to the cumulative impacts and whether that contribution is cumulatively considerable;
- Discussion of cumulative mitigation measures; and
- Summary of cumulative impacts and mitigation, with pre- and post-mitigation cumulative significance levels.

6.5.1 Surface Water Hydrology And Flood Control

6.5.1.1 Summary of Project Hydrology Impacts

The following tables summarize the hydrology/flood control impacts of the proposed Project, as discussed in greater detail in **Section 4.1** of this EIS/EIR.

[2] As shown in **Table 6.0-9** and as discussed in **Subsection 6.4.2**, several of the individual projects are too early in the planning process to have environmental impact analysis at the level of detail necessary to provide meaningful analysis in this context. For those projects, or others where the environmental documents do not provide the requisite level of detail, "NA" is used to indicate that information was not available.

Table 6.0-10
Summary of Proposed Project Hydrology Impacts to the Santa Clara River

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Flooding/Flood Hazards -- Impacts would be significant if implementation of the proposed Project would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.	HY-1; HY-2; HY-3; HY-4; HY-5; HY-6; HY-7	RMDP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS
Criterion 2. Storm Water Conveyance -- Impacts would be significant if implementation of the proposed Project would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.	HY-1; HY-2; HY-3; HY-4; HY-5; HY-6; HY-7	RMDP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.1-18**.

Table 6.0-11
Summary of Proposed Project Hydrology Impacts to the Tributary Drainages[1]

Significance Criteria	Applicable Mitigation Measures	Drainage	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Flooding/Flood Hazards -- Impacts would be significant if implementation of the proposed Project would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.	HY-1; HY-2; HY-3; HY-4; HY-5; HY-6; HY-7	Potrero	NS	NS
		Long	NS	NS
		Grande	NS	NS
		Chiquito	NS	NS
		Salt Creek	NS	NS
		Minor Drainage	NS	NS
Criterion 2. Storm Water Conveyance -- Impacts would be significant if implementation of the proposed Project would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.	HY-1; HY-2; HY-3; HY-4; HY-5; HY-6; HY-7	Potrero	NS	NS
		Long	NS	NS
		Grande	NS	NS
		Chiquito	NS	NS
		Salt Creek	NS	NS
		Minor Drainage	NS	NS

Notes:

[1] Other than Legacy, cumulative projects are not expected to contribute to flows/runoff from the tributaries within the RMDP area.

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.1-19**.

6.5.1.2 Cumulative Hydrology Impacts

6.5.1.2.1 *Methodology for Assessing Cumulative Hydrology Impacts*

Cumulative hydrology impacts were assessed using the List Method discussed in **Subsection 6.3.1**. The geographic scope of this analysis is set forth in **Subsection 6.4** above (see footnote 1).

6.5.1.2.2 *Discussion of Cumulative Hydrology Impacts*

While the vast majority of the 1,036,571-acre Santa Clara River watershed is comprised of natural lands in the Angeles and Los Padres National Forests and the Santa Monica Mountains Conservancy area, substantial land alterations in the form of agricultural and residential, commercial, and industrial urban uses have occurred in the Santa Clarita Valley and adjacent foothills, and substantial future development is anticipated in this area. Along floodplain and valley bottom areas of the Santa Clara River Valley, orchard and row crop agriculture is the dominant land use, with significant urban areas in the upper (Santa Clarita) and lower (Ventura, Santa Paula, Fillmore, Oxnard) valley areas. In the lower Santa Clara River, below the confluence with Sespe Creek, agricultural and urban use account for 22% and 9% of land cover respectively (Stillwater Sciences, 2005). Construction of dams within tributary watersheds has also contributed to alterations of the Santa Clara River. Major dams within the drainage area in the Santa Clara River watershed include Santa Felicia, Pyramid, Bouquet and Castaic. These dams are estimated to

have reduced flow to the Santa Clara River by 26 percent and have reduced suspended sediment delivery by 21 percent (Stillwater Sciences, 2005).

Consistent with other rivers in the region, the Santa Clara River watershed experiences highly variable annual rainfall and peak flows. During the rainy season, flows can increase, peak, and subside rapidly in response to high intensity rainfall (the term "flashy" is commonly used to describe this characteristic), with potential for severe flooding under saturated or near-saturated watershed conditions (Stillwater Sciences, 2005).

Land-use changes associated with the ten-fold growth in watershed population since the 1940s have potentially impacted the hydrologic regime of the Santa Clara River. Increase in the urban extent is frequently associated with a suite of changes to watershed hydrology, focused particularly in the increased frequency of moderate flood events (Stillwater Sciences, 2005). The hydrologic changes generally take the form of higher peak flows and a shorter time-to-peak discharge for the flood flow. This increase is due to the prevalence of impermeable ground surfaces in urban areas, which produce more runoff in a shorter amount of time in comparison to native land cover. In larger (*i.e.*, less frequent), flood events when natural ground surfaces are typically saturated and thus act as impermeable surfaces anyway, the effect of the urban surfaces is diminished (Stillwater Sciences, 2005).

In general, streamflow, and especially dry-season streamflow, has increased over the past few decades primarily due to discharges from the two wastewater treatment plants. Mean annual flow at the Los Angeles/Ventura County line increased from 25,700 acre-feet in 1972 (averaged over a 20-year record) to 35,360 acre-feet in 1988 (36-year record), with a significant decrease in the number of very low years over that period (Balance Hydrologics, Inc., 2005). Annual peak flows at the Los Angeles/Ventura County line between 1953 and 1996 ranged from 68,800 cfs (1969) to 109 cfs (1960). Of note is that the second highest annual peak, 32,000 cfs in 1966, was less than half of the highest peak (68,800 in 1969). Both of these events occurred in the late pre-urban to early-urbanization stages within the Santa Clarita Basin and no consistent increase in peak flow is evident since this time (Balance Hydrologics, Inc., 2005).

Levee construction and bank protection are linked to protecting urban communities in Los Angeles and Ventura counties and result in further constraining the river corridor. These structures could result in greater flood losses and damage to developed areas if the levees are breached or overtopped by flood events (Stillwater Sciences, 2005).

The cumulative projects either have impacted or will impact over 59,000 acres in the watershed. (See **Table 6.0-6**.) Many of the cumulative projects would result in significant hydrology impacts prior to mitigation. As indicated on **Table 6.0-12**, about 12 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 1 prior to mitigation, and 5 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 2 prior to mitigation.

Table 6.0-12
Cumulative Projects with Related Impacts to Surface Water Hydrology and Flood Control

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-10)	
		Criterion 1	Criterion 2
1	Ritter Ranch	NA	NA
2	Centennial	ND	ND
3	Adams Canyon	ND	ND
4	Valencia Industrial Center	ND	ND
5	Legacy Village	PS	ND
6	Tesoro Del Valle	M	ND
7	Tapia Ranch	PS	ND
8	Whittaker Bermite/Porta Bella Project	M	ND
9	West Creek/West Hills Project	M	ND
10	Westridge	M	M
11	North Valencia Specific Plan No. 1	M	ND
12	RiverPark	NS	ND
13	Natural River Management Plan	NS	ND
14	Recycled Water Master Plan (CLWA)	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	NS	NS
17	Chiquita Canyon Landfill	M	ND
	Consolidated City of Santa Clarita Projects	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely

Table 6.0-12
Cumulative Projects with Related Impacts to Surface Water Hydrology and Flood Control

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-10)	
		Criterion 1	Criterion 2

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

Pursuant to Los Angeles County DPW requirements, all future drainage facilities in the Los Angeles County portion of the tributary watershed must be designed for either the 50-year capital flood event or the 25-year urban flood event; note, however, that storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps must be designed for the 50-year capital flood event. DPW also prohibits significant increases in off-site post-development storm flows and significant increases in storm flow velocities. As a result of compliance with these regulatory standards, overall storm runoff discharge quantities from the Los Angeles County portion of the watershed under post-development runoff conditions would be less than or equal to existing conditions largely because the runoff would be free of the debris that is typical of undeveloped watersheds and flow velocities would not significantly increase. Furthermore, because facilities within the proposed Project area already would have been built for burned and bulked flows from undeveloped areas, they would have more than adequate capacity to accommodate off-site flows as the off-site portions of the drainage areas develop.

Because on-site drainage facilities would have adequate capacity to capture and convey off-site flows from developed upstream areas including flows from tributaries with headwaters in Legacy Village (*i.e.*, Potrero, Middle, Long, Lion, and Magic Mountain), before, during, and after Legacy build-out and because the storm drainage improvements in the remainder of the watershed would be required to comply with applicable DPW and Ventura County design criteria, no significant cumulative project flooding impacts are expected to occur within the watershed.

Development of the Specific Plan, along with development facilitated on the VCC and Entrada planning areas, would increase runoff into the Santa Clara River from upland areas due to increased impervious surface areas (*e.g.*, pavement, roads, and buildings). The increase in discharges for different return events (two-year, five-year, 10-year, 20-year, 50-year, and 100-year) would be measurable to a point about four miles downstream of Newhall Ranch in Ventura County. Beyond this point, development of the Project would have no impact to flows.

The drainage improvements associated with cumulative projects in Los Angeles County would be required to conform to the requirements of the DPW to convey the capital flood event from the affected watersheds. In addition, similar flood control requirements exist for Ventura County as discussed below. Therefore, no significant cumulative flooding impacts are expected to occur within the watershed.

As discussed in **Subsection 4.6.1.3**, the hydrology and flooding impacts of the proposed Project are less than significant. The proposed Project includes mitigation measures that further ensure that such impacts remain less than significant (see **Subsection 4.1.7.4**). Based on a review of available information regarding the identified cumulative projects, the incremental effects of the proposed Project are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative hydrology and flooding impacts are less than significant, and the proposed Project's incremental contribution to cumulative impacts is less than cumulatively considerable (Criteria 1 and 2).

6.5.1.3 Cumulative Hydrology Mitigation Measures

Although the proposed Project would not result in any significant hydrology and flooding impacts, and would not contribute to any significant cumulative hydrology and flooding impacts, this EIS/EIR contains mitigation measures to further ensure that the proposed Project's impacts remain less than significant. (See **Subsection 4.1.7.4**.) Many of the mitigation measures proposed for the Project, if adopted for other projects in the watershed, would similarly ensure that cumulative hydrology and flooding impacts remain less than significant. Specifically, mitigation measures HY-1 to HY-7 require compliance with regulatory programs, including DWP flood control standards, and obtaining all other necessary permits from state and federal agencies. Additionally, the Ventura County Watershed Protection District, which covers the Ventura County areas of the Santa Clara River watershed, has requirements for flood design standards based on a 100-year flood. These regulatory requirements for the Ventura County Watershed Protection District would apply to development in Ventura County areas. Compliance with these regulatory programs by other projects in the watershed would minimize potential cumulative hydrology impacts related to flooding. Projects within the watershed should include flood control and drainage facility design controls similar to those articulated in mitigation measures HY-1 to HY-7, which would minimize potential cumulative flood impacts. Cumulative stormwater drainage capacity impacts could be minimized by other projects in the watershed by implementing mitigation similar to that required by mitigation measures HY-1 to HY-7.

In general, while the proposed Project does not result in a cumulatively considerable contribution to a significant cumulative impact, the proposed Project nonetheless includes additional mitigation measures to further ensure that impacts remain less than significant. No cumulative mitigation is required because there are no cumulatively significant hydrology or flooding impacts. Cumulative impacts and mitigation associated with hydromodification are discussed in **Subsection 6.5.2**, below.

6.5.1.4 Summary of Cumulative Hydrology Impacts and Mitigation

The proposed Project would not have a significant hydrology impact, even prior to mitigation, nonetheless this EIS/EIR includes additional mitigation measures (Measures HY-1 to HY-7) to further ensure that impacts remain less than significant. The proposed Project does not result in a cumulatively considerable contribution to any significant cumulative hydrology impacts. Other cumulative projects

should be required to comply with regulatory requirements and measures similar to HY-1 to HY-7 that will further ensure that any potential hydrology impacts of those projects are minimized.

Table 6.0-13
Summary of Project Contribution to Cumulative Hydrology Impacts, Santa Clara River

Significance Criteria (See Table 6.0-10)	Planning Area	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1.	RMDP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	NS	NS			
Criterion 2.	RMDP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	NS	NS			

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

NA = Not applicable

Table 6.0-14
Summary of Project Contribution to Cumulative Hydrology Impacts, Tributary Drainages

Significance Criteria (See Table 6.0-10)	Drainage	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1.	Potrero	NS	NS	No	NA	NA
	Long	NS	NS			
	Grande	NS	NS			
	Chiquito	NS	NS			
	Salt Creek	NS	NS			
	Minor Drainage	NS	NS			
Criterion 2.	Potrero	NS	NS	No	NA	NA
	Long	NS	NS			
	Grande	NS	NS			
	Chiquito	NS	NS			
	Salt Creek	NS	NS			
	Minor Drainage	NS	NS			

Notes:

SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.2 Geomorphology and Riparian Resources

6.5.2.1 Summary of Project Geomorphology Impacts

The following tables summarize the geomorphology/riparian resource impacts of the proposed Project, as discussed in greater detail in **Section 4.2** of this EIS/EIR.

Table 6.0-15
Summary of Proposed Project Geomorphology Impacts to the Santa Clara River

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would result in short-term impacts from construction activities that would temporarily change the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site	SP-4.2-1, SP-4.2-2, SP-4.2-3, SP-4.2-4, SP-4.2-5, SP-4.2-6, SP-4.2-7;	RMDP	SI	M
		Entrada	SI	M
		VCC	SI	M
Criterion 2. Project would result in excessive long-term erosion and/or downstream deposition following Project implementation.	SP-4.2-5, SP-4.2-6, SP-4.2-7; GRR-1, GRR-3, GRR-4	RMDP	SI	M
		Entrada	SI	M
		VCC	SI	M
Criterion 3. Project would result in a substantial reduction in geomorphic function (*i.e.*, channel stability).	SP-4.2-1, SP-4.2-2, SP-4.2-3, SP-4.2-4, SP-4.2-5. SP-4.2-6, GRR-1, GRR-2, GRR-3, GRR-4, GRR-5, GRR-6	RMDP	SI	M
		Entrada	SI	M
		VCC	SI	M
Criterion 4. Project would result in a substantial increase in the frequency and magnitude of scouring of riparian vegetation.	SW-1, SW-2, SW-3, SW-5	RMDP	SI	M
		Entrada	NS	NS
		VCC	NS	NS
Criterion 5. Project would result in decreased flow (short term or long term) from the Middle Canyon Spring and adversely impact riparian resources supported by the spring.	None required.	RMDP	NI	NI
		Entrada	NI	NI
		VCC	NI	NI
Criterion 6. Project would substantially lengthen the duration of seasonal flow in the "Dry Gap."	GRR-6	RMDP	NS	NS
		Entrada	NS	NS
		VCC	NS	NS
Criterion 7. Project would result in an average annual reduction of greater than 1 percent of sediment delivered from the Santa Clara River to Ventura County beaches.	GRR-6	RMDP	NS	NS
		Entrada	NS	NS
		VCC	NS	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.2-65**.

Table 6.0-16
Summary of Proposed Project Geomorphology Impacts to Tributaries

Significance Criteria	Applicable Mitigation Measures	Planning Area	Drainage	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would result in short-term impacts from construction activities that would temporarily change the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.	SP-4.2-1, SP-4.2-2, SP-4.2-3, SP-4.2-4, SP-4.2-5, SP-4.2-6, SP-4.2-7;	RMDP	Chiquito	SI	M
			San Martinez Grande	SI	M
			Long	SI	M
			Potrero	SI	M
			Lion	SI	M
			Minor Drainage	SI	M
		VCC	Castaic Creek	SI	M
			Hasley Creek	SI	M
		Entrada	Unnamed Canyon 1	SI	M
			Unnamed Canyon 2	SI	M
Criterion 2. Project would result in excessive long-term erosion and/or downstream deposition following Project implementation.	SP-4.2-1, SP-4.2-2, SP-4.2-3, SP-4.2-4, SP-4.2-5, SP-4.2-6, SP-4.2-7; GRR-1, GRR-2, GRR-3, GRR-4, GRR-5, GRR-6, GRR-7	RMDP	Chiquito	SI	M
			San Martinez Grande	SI	M
			Long	SI	M
			Potrero	SI	M
			Lion	SI	M
			Minor Drainage	SI	M
		VCC	Castaic Creek	SI	M
			Hasley Creek	SI	M
		Entrada	Unnamed Canyon 1	SI	M
			Unnamed Canyon 2	SI	M
Criterion 3. Project would result in a substantial reduction in geomorphic function (*i.e.*, channel stability).	SP-4.2-5; SW-1, SW-2, SW-3; GRR-1, GRR-2, GRR-3, GRR-4, GRR-5, GRR-6	RMDP	Chiquito	SI	M
			San Martinez Grande	SI	M
			Long	SI	M
			Potrero	SI	M
			Lion	SI	M
			Minor Drainage	SI	M
		VCC	Castaic Creek	SI	M
			Hasley Creek	SI	M
		Entrada	Unnamed Canyon 1	SI	M
			Unnamed Canyon 2	SI	M

Table 6.0-16
Summary of Proposed Project Geomorphology Impacts to Tributaries

Significance Criteria	Applicable Mitigation Measures	Planning Area	Drainage	Impacts Before Mitigation	Impacts After Mitigation
Criterion 4. Project would result in a substantial increase in the frequency and magnitude of scouring of riparian vegetation.	SW-2, SW-3; SW-5, BIO-1, BIO-6, BIO-7	RMDP	Chiquito	SI	M
			San Martinez Grande	SI	M
			Long	SI	M
			Potrero	SI	M
			Lion	SI	M
			Minor Drainage	SI	M
		VCC	Castaic Creek	SI	M
			Hasley Creek	SI	M
		Entrada	Unnamed Canyon 1	SI	M
			Unnamed Canyon 2	SI	M
Criterion 5. Project would result in decreased flow (short term or long term) from the Middle Canyon Spring and adversely impact riparian resources supported by the spring.	BIO-74, BIO-77	RMDP	Chiquito	NI	NI
			San Martinez Grande	NI	NI
			Long	NI	NI
			Potrero	NI	NI
			Lion	NI	NI
			Minor Drainage	SI	M
		VCC	Castaic Creek	NI	NI
			Hasley Creek	NI	NI
		Entrada	Unnamed Canyon 1	NI	NI
			Unnamed Canyon 2	NI	NI
Criterion 6. Project would substantially lengthen the duration of seasonal flow in the "Dry Gap."	None required.	RMDP	Chiquito	NS	NS
			San Martinez Grande	NS	NS
			Long	NS	NS
			Potrero	NS	NS
			Lion	NS	NS
			Minor Drainage	NS	NS
		VCC	Castaic Creek	NS	NS
			Hasley Creek	NS	NS
		Entrada	Unnamed Canyon 1	NS	NS
			Unnamed Canyon 2	NS	NS

Table 6.0-16
Summary of Proposed Project Geomorphology Impacts to Tributaries

Significance Criteria	Applicable Mitigation Measures	Planning Area	Drainage	Impacts Before Mitigation	Impacts After Mitigation
Criterion 7. Project would result in an average annual reduction of greater than 1 percent of sediment delivered from the Santa Clara River to Ventura County beaches.	GRR-6	RMDP	Chiquito	NS	NS
			San Martinez Grande	NS	NS
			Long	NS	NS
			Potrero	NS	NS
			Lion	NS	NS
			Minor Drainage	NS	NS
		VCC	Castaic Creek	NS	NS
			Hasley Creek	NS	NS
		Entrada	Unnamed Canyon 1	NS	NS
			Unnamed Canyon 2	NS	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.2-66**.

6.5.2.2 Cumulative Geomorphology Impacts

6.5.2.2.1 *Methodology for Assessing Cumulative Geomorphology Impacts*

Cumulative geomorphology impacts were assessed using the List Method discussed in **Subsection 6.3.1,** above. The geographic scope of this analysis is set forth in **Subsection 6.4**, above (see footnote 1).

6.5.2.2.2 *Discussion of Cumulative Geomorphology Impacts*

A variety of channel-related infrastructure, channel modifications, and land use changes within the Santa Clara River watershed have affected geomorphic processes in the lower Santa Clara River. Infrastructure changes include dams constructed during the twentieth century, the failure of the St. Francis Dam in 1928, water diversions, and the construction of roads, bridges, and levees.

Dams are estimated to have reduced flow to the Santa Clara River by 26 percent and have reduced suspended sediment delivery by 21 percent. (Stillwater Sciences, 2005.) In the Santa Clara River, morphologic effects of dams may be the greatest in the reach downstream of both the Castaic and Piru Creeks; these effects presumably decrease near Fillmore, following significant sediment contributions from the unregulated Sespe Creek watershed. Sespe Creek provides the largest individual contribution of sediment through the Santa Clara River watershed (Stillwater Sciences, 2005).

Water diversions associated with a dramatic increase in irrigated crop land in the early twentieth century may have led to the loss of both riparian vegetation and vegetation thickets on the floodplain and gravel bars of the lower Santa Clara River. Such reduction in vegetation may have reduced the cohesion of river banks and lowered the threshold for the transport of significant quantities of channel bed sediment. Potentially, this could have caused the River to widen and transform from a meandering to a braided stream. (Stillwater Sciences, 2005.)

Since construction of levees first began in the 1950s, there has been a progressive increase in the extent of bank protection in Ventura County to its current total of approximately 33 percent of the total bank length of the Santa Clara River. Some damage has occurred to levees during large flood events (*e.g.*, 1969), but primarily they have acted to significantly reduce the width of the lower Santa Clara River and to confine high discharges. This increases the chance of bed erosion during flood events, but also means that extensive sediment deposition may occur in-channel as the flood recedes. As such, levees may have caused channel incision or aggradation, depending on the supply of sediment from upstream. Since levees also "train" the river planform in potentially unnatural alignments during flood events, flood flows can be reflected to cause erosion on an opposite, unprotected bank. (Stillwater Sciences, 2005.)

The distinct impact of levees and bank protection on geomorphic processes in the lower Santa Clara River is difficult to determine, due to the competing influence of direct and indirect channel modifications associated with extensive channel and floodplain aggregate mining. Various reports cite aggregate mining as the single largest anthropogenic factor in changing the fluvial geomorphology of the lower Santa Clara River. Mining operations grew in size following the Second World War and, by the 1970s, attention began to focus on the amount of the extensive incision of the Santa Clara River attributed to the mining activities. Incision was threatening to undermine bridges across the River, to damage other infrastructure including the irrigation facilities of the UWCD (and which led directly to the construction of the Vern Freeman Diversion dam, completed in 1991), and was reducing the replenishment of beach material at the mouth of the Santa Clara River. Following "red line" restrictions on the depth of permissible gravel mining, in-stream mining in Ventura County ceased by 1989. Several reports indicated that the mean yearly rate of aggregate extraction was removing sand and gravel from the channel bed faster than it was being replenished by upstream sources, resulting in a net increase in the cross-sectional area of the Santa Clara River channel. The average annual extraction rate in the period 1960 to 1977 (*i.e.*, before the peak of mining activity) was 1.71 million tons per year, as compared to an estimated post-dam sand and gravel yield of 1.08 million tons per year (1956 to 1975); however, the highly intermittent nature of sediment transport in the Santa Clara River complicates such comparisons (the estimated sediment discharge from the 1969 flood alone was 13.8 million tons). (Stillwater Sciences, 2005.)

The episodic and extreme nature of discharge in the Santa Clara River watershed results in the majority of sediment being transported over very short periods of time. Concepts of "normal" or "average" sediment-supply and flow conditions have limited value in this "flashy" environment where episodic storm and wildfire events have enormous influence on sediment and stormflow conditions (Balance Hydrologics, Inc., 2005). The implication is that the morphology of the Santa Clara River does not change progressively in response to small floods, but instead will experience significant episodic changes associated with much larger events (Stillwater Sciences, 2005).

Balance Hydrologics, Inc. (2005) performed a study of historic aerial photographs to assess the magnitude of geomorphic change over the course of recent history, in response to natural and human disturbances in

the watershed with respect to understanding the potential response to future urbanization within the watershed. The following conclusions were made:

- Major perturbations within the Santa Clara River watershed (dam construction, levee construction, changes in flows in response to decadal-scale climatic patterns, and increases in woody vegetation) do not appear to have had a significant impact on the geomorphic expression of the Santa Clara River, as quantified from measurements made from a series of historical aerial photographs flown during the years 1927 through 2005.

- Large events (those which are typically not as affected by increases in impervious area and associated increases in stormwater peaks and runoff volume) can completely alter the form of the Santa Clara River channel. These "re-set" events, which occur on average once every 10 years, are a dominant force in defining channel characteristics.

- The geomorphic dominance of "re-set" events overwhelms geomorphic effects of hydromodification on smaller events. The "re-set" events appear to adequately buffer changes that may occur in short-term sediment transport.

- Given that the channel morphology of the Santa Clara River mainstem has not adjusted significantly to much larger perturbations in flow, sediment yield, and riparian vegetation growth factors, within the Newhall reach, a significant geomorphic impact to the Santa Clara River mainstem due to the anticipated increase in 'urban area' is not expected.

As detailed in **Subsections 4.2.3.1.3** and **4.2.5.3.3**, the Santa Clara River exports an estimated 4.08 million tons of sediment per year from its mouth into the Santa Barbara Channel. (Stillwater Sciences, 2005.) Sediment delivery upstream of the Los Angeles County/Ventura County line is reduced by dams located on Castaic Creek and Bouquet Creek and is less than the sediment delivery to downstream reaches following significant sediment contributions from the unregulated Sespe Creek watershed and the lower Santa Clara River subwatershed where weak Plio-Pleistocene siltstones predominate and presumably contribute to enhanced erosion. (Stillwater Sciences, 2005.) Roughly 1,170 tons per square mile per year of suspended sediment originates from the area upstream of the Los Angeles County/Ventura County line. (Stillwater Sciences, 2005.) In total, the RMDP and SCP would result in the net reduction of 9,966 tons of sediment per year, or approximately 0.254 percent reaching the Santa Barbara Channel. Therefore, **Section 4.2** concluded this reduction in sediment supply due to the RMDP components and build-out of the Specific Plan, VCC and Entrada planning areas would be less than significant. In addition, as part of Mitigation Measure GRR-6, sediment from upland sources, such as debris basins and other sediment retention activities, would be redistributed in DPW-designated and permitted upland or riparian locations along the Santa Clara River and/or tributaries to reintroduce sediment for beach replenishment purposes. This sediment management activity would lessen the adverse effect of debris and sediment reduction on downstream beach erosion. **Section 4.2** determined this reduction of sediment delivered to Ventura County beaches would be less than significant. Absent mitigation, when combined with past, present, and reasonably foreseeable future projects, due to the increases in impervious surfaces, the proposed Project's contribution to cumulative sediment reduction impacts is considered to be cumulatively considerable, and cumulative impacts to Ventura County beaches are potentially significant (Criterion 7).

The cumulative effects to the "Dry Gap" are a function of WRP discharges to the River along with increased runoff as a result of land development and urbanization. Since the 1960's, treated effluent has

been released directly to the Santa Clara River. Specifically, the Valencia WRP and Saugus WRP, located upstream of the future Newhall Ranch WRP discharge water to the Santa Clara River. The Saugus WRP, located near the Bouquet Canyon Road bridge, has a permitted dry weather average design capacity of 6.5 mgd, and the Valencia WRP has a permitted dry weather average design capacity of 21.6 mgd. The combined average discharge of treated water from the Saugus and Valencia WRPs was approximately 20 mgd during the period January 2004 through June 2007. In 2006, the combined annual discharge volume from these two WRPs was 22,913 AF. This, combined with an increase in applied, imported agricultural water, has led to increased summer baseflows in the Santa Clara River at the Los Angeles/Ventura County line, which had only rarely occurred under pre-urban conditions (Balance Hydrologics, Inc., 2005).

Most of the treated water generated by the Newhall WRP will be recycled to meet non-potable (outdoor irrigation) demands of the Specific Plan. Based on a detailed water demand analysis presented, the inflows to the Newhall Ranch WRP will average 5,630 acre-feet per year (AF/yr), of which 5,344 AF/yr will be recycled. The remaining 286 AF will be discharged to the Santa Clara River during the wettest (winter) months, at a rate of between 0.6 and 2.0 mgd, which is equivalent to rates of 0.9 to 3.1 cubic feet per second (cfs). This discharge will occur primarily during December and January. Additionally, during wet years (when rainfall is significantly above average because of heavy winter storms), non-potable demands may be lower than average during the winter and early spring months, resulting in Newhall Ranch WRP discharge volumes greater than 286 AF. This discharge volume could amount to as much as 1,025 AF, based on a 5- to 6-month discharge period (beginning as early as October or November and potentially extending through March) and the discharge limit of 2 mgd that is specified in the permit for the Newhall Ranch WRP (Los Angeles RWQCB, 2007). Future discharges from the Saugus and Valencia WRPs will increase over time. Specifically, the annual discharges to the River from the Saugus and Valencia WRPs could increase to about 24,300 AF in the future, an increase of 1,400 AF/yr compared with annual discharge for 2006 (GSI Water Solutions, Inc., 2008).

During a recent 5-year period of low rainfall (calendar years 1999 through 2003), total annual flow in the Santa Clara River, as measured at the Los Angeles County/Ventura County line, ranged from about 25,000 to 44,000 AF/yr, and the non-storm flow (groundwater discharge and WRP flows) ranged from about 23,000 to 30,000 AF/yr (GSI Water Solutions, Inc., 2008). For this period of dry conditions, the future Newhall Ranch WRP average discharge of 286 AF/yr would have represented between 0.6 and 1.1 percent of the total annual flow volume in the river. The Newhall Ranch WRP discharge would represent a much smaller percentage of the total annual flow volume in the River during wet years when the annual volume of river flow at the county line can exceed 100,000 AF/yr -- and even 200,000 AF/yr -- because of high rainfall runoff from the watershed. Therefore, **Section 4.1** concluded the addition of the Newhall Ranch WRP flows to the Santa Clara River would have a less-than-significant effect on the Dry Gap since they will not substantially lengthen the duration of seasonal flow in the Dry Gap. This significance finding is based on the fact that discharge from the Newhall Ranch WRP would occur in the winter and would be small relative to the overall flow in the Santa Clara River, and the existing data shows that increases in base flow due to discharges from the Valencia WRP and the Saugus WRP since the 1960s have not led to a substantial change in the duration of seasonal flow in the Dry Gap. Similarly, the future increase in discharges from the Valencia WRP and Saugus WRP is not expected to cumulatively affect the Dry Gap. However, the increase in dry-weather flows (*e.g.*, irrigation runoff) from the developed areas may incrementally increase summer baseflows in the Santa Clara River. While there is no expected increase in summer flows due to additional treated effluent discharge to the Santa Clara River, even if

summer baseflows do increase, a significant geomorphic change within the channel is not expected. Additional growth in the extent or density of vegetation is not anticipated, as the reach near Newhall already appears to have enough flow to support summer vegetation, and the existing vegetation does not appear to affect channel form for durations longer than the "re-set" interval. Further, re-sets occur at intervals significantly shorter than the period required for maturation of riparian vegetation, such that full development of bank-holding properties is frequently interrupted (Balance Hydrologics, Inc., 2005). Cumulative impacts related to the Dry Gap are less than significant, and the proposed Project does not result in a cumulatively considerable contribution to a significant cumulative Dry Gap impact (Criterion 6).

Because most of the tributary drainages and associated watersheds within the Project area are included within the site, off-site projects would not affect riparian conditions within these tributaries; and, therefore, no cumulative effects would occur. In those tributaries that are only partially within the Project area (Chiquito Canyon, San Martinez Grande Canyon, and Castaic Creek), the effects of future projects in the off-site portions could potentially combine with effects of the proposed Project to produce an additive effect on riparian conditions. In the Castaic Creek and San Martinez Grande Canyon tributaries, the proposed Project would result in increases in riparian condition compared to baseline conditions, and, therefore, would not contribute to any cumulative adverse effects on these drainages. In Chiquito Canyon, the proposed Project would result in a loss of 2.98 HARC AW-Total Score Units, and this impact could cumulate with the impacts of other projects in the watershed. However, there are currently no proposed or reasonably foreseeable projects that would affect riparian resources in the Chiquito Canyon watershed upstream of the Project area. The proposed Project, therefore, would not contribute considerably to a significant cumulative impact to riparian resources in the Chiquito Canyon watershed, as no such impact exists. (Criterion 4.)

Within the Santa Clara River mainstem, absent mitigation, the proposed Project could result in a cumulatively considerable contribution to significant cumulative impacts to riparian vegetation. Mitigation for the proposed Project, however, would result in substantial increases in riparian condition, improving the River Corridor by 42.85 HARC AW-Total Score Units. The proposed Project, therefore, would not result in a cumulatively considerable contribution to any significant cumulative impacts associated with loss of riparian condition along the river mainstem, and cumulative impacts to riparian vegetation in the watershed would be less than significant (Criterion 4).

Development within Middle Canyon associated with the proposed Project would result in a significant impact to riparian resources supported by the Middle Canyon Spring by affecting the existing groundwater hydrology and/or water quality at the spring. This impact of the Project would be reduced to a less-than-significant level with the implementation of proposed Mitigation Measures BIO-74 and BIO-77. Impacts to Middle Canyon Spring are limited to the Project area, and other projects could not contribute to a cumulative impact to that resource (Criterion 5).

Land-use changes that have potentially impacted the fluvial geomorphology of the lower Santa Clara River include the introduction of ranching (and exotic grass species) and the growth in watershed population that has occurred since the 1940s. Much of the associated urban growth, which is estimated to cover over 59,000 acres, has occurred along the mainstem River Corridor. (See **Table 6.0-6**.) Based on current public lands ownership and currently zoned open space, approximately 733,526 acres (71 percent) of the Santa Clara River watershed is open space. (Dudek, 2008: Table 1 and Figure 3.) As shown in **Table 6.0-17**, below, 7 of the cumulative projects or groups of projects would have significant or

potentially significant impacts under Criterion 1 prior to mitigation, and for all other Criteria, impacts would be less than significant or the Criteria were not analyzed in the corresponding environmental documents. Increase in the urban extent is frequently associated with a suite of changes to watershed hydrology and geomorphology, focused particularly in the increased frequency of moderate flood events. However, these impacts should be taken in context when considered within the lower Santa Clara River. First, geomorphic activity is concentrated into very large magnitude flood events (*i.e.*, "re-set" events). Specifically, due to the "flashy", flood event-dominated nature of the Santa Clara River watershed, geomorphologic response to human influences may not be progressive, but is more likely to be episodic, with channel morphology responding primarily to larger flood events. Further, detecting the relative effects of human impacts on natural flood events and morphological response may be difficult, since relatively infrequent large flood events appear to exert the greatest influence on morphological change in the Santa Clara River watershed. For example, in humid watersheds, urbanization can affect channel morphology by increasing the occurrence of moderate flood events. This increase is due to the prevalence of impermeable ground surfaces in urban areas, which produce more runoff in a shorter amount of time in comparison to native land cover. In larger (*i.e.*, less frequent), flood events when natural ground surfaces are typically saturated and thus act as impermeable surfaces anyway, the effect of the urban surfaces is diminished. However, because the Santa Clara River watershed is large, and has a flood frequency dominated by large flood events, the effect of moderate magnitude events on channel morphology is likely to be less significant (Stillwater Sciences, 2005). Therefore, it is unclear whether increasing the frequency of intermediate floods from the upper watershed will have a substantial influence on the downstream channel morphology. Second, urban expansion is currently focused in the Santa Clarita region of the upper watershed and may have less impact in the lower watershed due to the influence of incoming creeks (*e.g.*, Santa Paula Creek and Sespe Creek) on the morphology of the lower river (Stillwater Sciences, 2005).

Historic changes in the geomorphology of the Santa Clara River have been driven by large flood events, and the proposed Project, in conjunction with past, present, and reasonably foreseeable future projects, do not substantially alter the magnitude of such large flood events. There are no significant cumulative erosion, downstream deposition, and geomorphic function impacts in the Santa Clara River mainstem, and therefore, the proposed project will not result in a cumulatively considerable contribution to significant cumulative impacts under Criteria 1-3.

Because most of the tributary drainages and associated watersheds within the Project area are included within the site, off-site projects would not combine with the proposed Project's geomorphic impacts within these tributaries; and, therefore, no cumulative effects would occur (Criteria 1-6).

Although generally the environmental documents for the identified cumulative development projects have not analyzed geomorphic effects on the same scale as this Project's analysis (see **Table 6.0-17** below), based on a review of available information regarding these projects, the incremental effects of the proposed Project on the geomorphology of the Santa Clara River (Criteria 1-3, 5-6) and Newhall area tributaries (Criteria 1-6) are not significant when viewed in connection with the effects of other past, present, and foreseeable future projects. The proposed Project's contributions to impacts under Criteria 4 and 7 are reduced to less than cumulatively considerable with mitigation.

Table 6.0-17
Cumulative Projects with Related Impacts to Geomorphology and Riparian Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-15)						
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7
1	Ritter Ranch	NA	NA	NA	NA	NA	NA	NA
2	Centennial	ND	ND	ND	ND	NA	ND	ND
3	Adams Canyon	ND	ND	ND	ND	NA	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND	NA	ND	ND
5	Legacy Village	PS	ND	ND	ND	NA	ND	ND
6	Tesoro Del Valle	M	ND	ND	ND	NA	ND	ND
7	Tapia Ranch	PS	ND	ND	ND	NA	ND	ND
8	Whittaker Bermite/Porta Bella Project	M	ND	ND	ND	NA	ND	ND
9	West Creek/West Hills Project	ND	ND	ND	ND	NA	ND	ND
10	Westridge	ND	ND	ND	ND	NA	ND	ND
11	North Valencia Specific Plan No. 1	M	ND	ND	ND	NA	ND	ND
12	RiverPark	M	NS	ND	ND	NA	ND	ND
13	Natural River Management Plan	NS	NS	NS	NS	NA	ND	NS
14	Recycled Water Master Plan (CLWA)	NS	ND	ND	ND	NA	ND	ND
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND	NA	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND	ND	ND	NA	ND	ND
17	Chiquita Canyon Landfill Expansion	M	ND	ND	ND	NA	ND	ND
	Consolidated City of Santa Clarita Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated Los Angeles County Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated Ventura County Project	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Santa Paula Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Table 6.0-17
Cumulative Projects with Related Impacts to Geomorphology and Riparian Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-15)						
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.2.3 Cumulative Geomorphology Mitigation Measures

Mitigation measures for the geomorphology and riparian resources impacts of the proposed Project are found in **Section 4.2**, and would reduce the proposed Project's incremental contribution to cumulatively significant impacts under Criteria 4 and 7 to less than significant. In addition, many of the mitigation measures proposed for the proposed Project, if adopted for other projects in the watershed, would further ensure that cumulative geomorphology and riparian resources impacts remain less than significant. Specifically, mitigation measures GRR-1 through GRR-6 require compliance with regulatory programs, including DPW runoff control design standards, and obtaining all other necessary permits from state and federal agencies. Mitigation Measures SW-1 through SW-3 are proposed in **Section 4.6**, Jurisdictional Waters and Streams, to increase post-Project AW-score units through enhancement of areas within Salt Creek.

6.5.2.4 Summary of Cumulative Geomorphology Impacts and Mitigation

The application of the mitigation measures GRR-1 through GRR-7, ensure that cumulative geomorphology and riparian resources impacts would remain less than cumulatively considerable, and similar mitigation measures (GRR-1, GRR-4 through GRR-7) applied to other projects in the watershed would further ensure that overall cumulative geomorphology and riparian resources impacts remain less than significant.

Table 6.0-18
Summary of Project Contribution to Cumulative Geomorphology Impacts, Santa Clara River

Significance Criteria (See Table 6.0-15)	Planning Area	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	RMDP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 2	RMDP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 3	RMDP	S	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 4	RMDP	SI	M	Yes	SW-1, SW-2, SW-3; and SW-5.	No
	VCC	NS	NS			
	Entrada	NS	NS			
Criterion 5	RMDP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			

Table 6.0-18
Summary of Project Contribution to Cumulative Geomorphology Impacts, Santa Clara River

Significance Criteria (See Table 6.0-15)	Planning Area	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 6	RMDP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	NS	NS			
Criterion 7	RMDP	NS	NS	Yes	GRR-6.	No
	VCC	NS	NS			
	Entrada	NS	NS			

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

NA = Not applicable

Table 6.0-19
Summary of Project Contribution to Cumulative Geomorphology Impacts, Tributary Drainages

Significance Criteria (See Table 6.0-15)	Planning Area	Drainage	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	RMDP	Chiquito	SI	M	No	NA	NA
		San Martinez Grande	SI	M			
		Long	SI	M			
		Potrero	SI	M			
		Lion	SI	M			
		Minor Drainage	SI	M			
	VCC	Castaic Creek	SI	M			
		Hasley Creek	SI	M			
	Entrada	Unnamed Canyon 1	SI	M			
		Unnamed Canyon 2	SI	M			

Table 6.0-19
Summary of Project Contribution to Cumulative Geomorphology Impacts, Tributary Drainages

Significance Criteria (See Table 6.0-15)	Planning Area	Drainage	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 2	RMDP	Chiquito	SI	M	No	NA	NA
		San Martinez Grande	SI	M			
		Long	SI	M			
		Potrero	SI	M			
		Lion	SI	M			
		Minor Drainage	SI	M			
	VCC	Castaic Creek	SI	M			
		Hasley Creek	SI	M			
	Entrada	Unnamed Canyon 1	SI	M			
		Unnamed Canyon 2	SI	M			
Criterion 3	RMDP	Chiquito	SI	M	No	NA	NA
		San Martinez Grande	SI	M			
		Long	SI	M			
		Potrero	SI	M			
		Lion	SI	M			
		Minor Drainage	SI	M			
	VCC	Castaic Creek	SI	M			
		Hasley Creek	SI	M			
	Entrada	Unnamed Canyon 1	SI	M			
		Unnamed Canyon 2	SI	M			
Criterion 4	RMDP	Chiquito	SI	M	No	NA	NA
		San Martinez Grande	SI	M			
		Long	SI	M			
		Potrero	SI	M			
		Lion	SI	M			
		Minor Drainage	SI	M			

Table 6.0-19
Summary of Project Contribution to Cumulative Geomorphology Impacts, Tributary Drainages

Significance Criteria (See Table 6.0-15)	Planning Area	Drainage	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
	VCC	Castaic Creek	SI	M			
		Hasley Creek	SI	M			
	Entrada	Unnamed Canyon 1	SI	M			
		Unnamed Canyon 2	SI	M			
Criterion 5	RMDP	Chiquito	NI	NI	No	NA	NA
		San Martinez Grande	NI	NI			
		Long	NI	NI			
		Potrero	NI	NI			
		Lion	NI	NI			
		Minor Drainage	SI	M			
	VCC	Castaic Creek	NI	NI			
		Hasley Creek	NI	NI			
	Entrada	Unnamed Canyon 1	NI	NI			
		Unnamed Canyon 2	NI	NI			
Criterion 6	RMDP	Chiquito	NS	NS	No	NA	NA
		San Martinez Grande	NS	NS			
		Long	NS	NS			
		Potrero	NS	NS			
		Lion	NS	NS			
		Minor Drainage	NS	NS			
	VCC	Castaic Creek	NS	NS			
		Hasley Creek	NS	NS			
	Entrada	Unnamed Canyon 1	NS	NS			
		Unnamed Canyon 2	NS	NS			

Table 6.0-19
Summary of Project Contribution to Cumulative Geomorphology Impacts, Tributary Drainages

Significance Criteria (See Table 6.0-15)	Planning Area	Drainage	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 7	RMDP	Chiquito	NS	NS	Yes	GRR-6.	No
		San Martinez Grande	NS	NS			
		Long	NS	NS			
		Potrero	NS	NS			
		Lion	NS	NS			
		Minor Drainage	NS	NS			
	VCC	Castaic Creek	NS	NS			
		Hasley Creek	NS	NS			
	Entrada	Unnamed Canyon 1	NS	NS			
		Unnamed Canyon 2	NS	NS			

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

NA = Not applicable

6.5.3 Water Resources

6.5.3.1 Summary of Water Resources Project Impacts

Table 6.0-20
Summary of Proposed Project Water Resources Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	SP 4.11-1 - 4.11-10;	NRSP	NS	NS
	SP 4.11-15 - 4.11-19;	VCC	NS	NS
	SP 4.11-21	Entrada	NS	NS

Table 6.0-20
Summary of Proposed Project Water Resources Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 2. Have insufficient water supplies to serve the project from existing entitlements and resources; or new or expanded entitlements are needed.	SP 4.11-1 - 4.11-10; SP 4.11-17; SP 4.11-20; SP 4.11-22	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS
Criterion 3. Result in the spreading of perchlorate in groundwater beyond the wells currently affected by perchlorate.	No impacts; and no mitigation required	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.3-27**.

6.5.3.2 Cumulative Water Resources Impacts

The following discussion focuses on the cumulative impacts to water availability for the Santa Clarita Valley. The analysis evaluates cumulative impacts utilizing the plan approach under the following two future water demand and supply scenarios:

Scenario 1. Existing development within the CLWA service area (see **Figure 4.3-1**, Castaic Lake Water Agency Service Area), plus near-term projections (*i.e.*, to be built in the next 10 years or less), plus the proposed Project (referred to as the SB 610 Water Demand and Supply Scenario).

Scenario 2. Build-out within the CLWA service area by 2030, plus active pending General Plan Amendment requests, plus the proposed Project (referred to as the Santa Clarita Valley 2030 Build-Out Scenario).

Under either Scenario, the CLWA 2005 Urban Water Management Plan (UWMP) explains that contaminated wells are not included in supply projections, and perchlorate contamination is thoroughly considered in the UWMPs discussion of groundwater resources. Therefore, cumulative development is not expected to result in the spreading of perchlorate in the groundwater beyond currently affected wells. (See CLWA 2005 UWMP, Chapters 3 and 5.) Under Significance Criterion 3, no cumulatively significant impacts would result, and the proposed Project would not result in a cumulatively considerable contribution to a cumulative impact.

Cumulative development projects identified in the Santa Paula, Fillmore and surrounding unincorporated areas of Ventura County do not obtain water from the CLWA. Therefore, cumulative development in

Ventura County would not result in or contribute to potential cumulative water supply impacts in the Project area.

6.5.3.2.3 *SB 610 Water Demand and Supply Scenario*

The Newhall Ranch Specific Plan, VCC, and Entrada projects will require approximately 19,909 afy at build-out during average years and 21,890 afy during dry years. This demand is accounted for by the UWMP. The average year, dry year, and multiple dry-year water assessments are presented below. These assessments are based on the UWMP and the State Water Project Delivery Reliability Report 2007, August 2008 (see **Appendix 4.3** of this EIS/EIR).

Average Year Water Assessment. After adjusting for the 2007 SWP delivery reliability factors provided in DWR's State Water Project Delivery Reliability Report 2007, no shortages are anticipated within the CLWA service area in an average water year through 2030. In addition, planned water banking programs (*e.g.*, potential programs with the Chino Basin Watermaster, Calleguas Municipal Water District, and San Gorgonio Pass Water Agency[3]) are planned to be developed to ensure that supplies remain available in dry years. Total projected water demands for the CLWA through the year 2030 are compared with the supplies projected to be available to meet demands in this analysis. The following table, **Table 6.0-21**, summarizes the data from the 2005 UWMP, 2006 Water Report, and State Water Project Delivery Reliability Report 2007 (see **Appendix 4.3** of this EIS/EIR).

The projected average year surpluses in years 2010 through 2030 would increase with each of the alternatives when compared with Alternative 2. Consequently, no cumulatively significant water resource impacts would occur with any of the alternatives studied.

[3] With storage now existing in the Semitropic and Rosedale-Rio Bravo groundwater banking programs, CLWA is assessing southern water banking opportunities. These include potential programs with the Chino Basin Watermaster (with whom CLWA signed an MOU in 2003), Calleguas Municipal Water District and San Gorgonio Pass Water Agency. Groundwater banking and conjunctive-use programs enhance the reliability of both the existing and future supplies. (See CLWA 2005 UWMP, page 3-23.)

Table 6.0-21
Projected Average/Normal Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*73,007*	*73,707*	*74,407*	*75,107*	*75,407*
SWP Table A Supply[1]	60,400	61,100	61,800	62,500	62,800
Buena Vista-Rosedale[4]	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)[2]	0	0	0	0	0
Flexible Storage Account (Ventura County)[2]	0	0	0	0	0
Local Supplies					
Groundwater	*46,000*	*46,000*	*46,000*	*46,000*	*46,000*
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	**120,707**	**121,407**	**122,107**	**122,807**	**123,107**
Existing Banking Programs					
Semitropic Water Bank[2]	0	0	0	0	0
Rosedale-Rio Bravo[2]	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	0	0	0	0	0
Restored wells (Saugus Formation)[2]	0	0	0	0	0
New Wells (Saugus Formation)[2]	0	0	0	0	0
Recycled Water - CLWA[3]	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Land	0	1,500	2,500	3,500	5,400
Total Planned Supplies	**0**	**3,100**	**8,800**	**14,500**	**21,100**
Planned Banking Programs					
Additional Planned Banking[2]	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking	**120,707**	**124,507**	**130,907**	**137,307**	**144,207**
Total Estimated Demand (w/o conservation)	**100,050**	**109,400**	**117,150**	**128,400**	**138,300**
Conservation	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand[5]	**91,450**	**99,700**	**106,450**	**116,500**	**125,400**
Total Surplus/(Deficit)	**29,257**	**24,807**	**24,457**	**20,807**	**18,807**

Notes:
[1] SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available (63.45 percent in 2010, 64.20 percent in 2015, 64.95 percent in 2020, 65.70 percent in 2025 and 66 percent in 2030), derived from DWR's "State Water Project Delivery Reliability Report, 2007" (August 2008).
[2] Not needed during average/normal years. (See CLWA 2005 UWMP, page 3-23.)
[3] Recycled water supplies based on projections provided in the 2005 UWMP, Chapter 4, Recycled Water.
[4] CLWA acquired this supply in 2007, primarily to meet the potential demands of future annexations to the CLWA service area.
[5] Includes the proposed Project.
Source: Valencia Water Company and CLWA 2008.

Single Dry Year Water Assessment. Table 6.0-22 summarizes the existing and planned water supplies available in the Santa Clarita Valley over the 25-year planning period should a single-dry event occur, similar to the drought that occurred in California in 1977. Demand during single-dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation BMPs. (See CLWA 2005 UWMP, p. 2-11.) After adjusting for the 2007 SWP delivery reliability factors provided in DWR's State Water Project Delivery Reliability Report 2007, no shortages are anticipated within the CLWA service area in a single-dry water year through 2030, as discussed above.

It should be noted that dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 6.0-22
Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	**2015**	**2020**	**2025**	**2030**
Existing Supplies					
Wholesale (Imported)	*24,567*	*24,767*	*23,587*	*23,887*	*23,987*
SWP Table A Supply[1]	5,900	6,100	6,300	6,600	6,700
Buena Vista-Rosedale[5]	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County)[2]	1,380	1,380	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	**73,767**	**73,967**	**72,787**	**73,087**	**71,187**
Existing Banking Programs					
Semitropic Water Bank[3]	17,000	0	0	0	0
Rosedale-Rio Bravo[6]	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank - Newhall Land [(10)]	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	**41,950**	**24,950**	**24,950**	**24,950**	**24,950**
Planned Supplies					
Local Supplies					
Groundwater	10,000	10,000	20,000	20,000	20,000
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water -CLWA[4]	0	1,500	2,500	3,500	5,400
Total Planned Supplies	**10,000**	**13,100**	**28,800**	**34,500**	**41,100**
Planned Banking Programs					
Additional Planned Banking[7]	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	**0**	**20,000**	**20,000**	**20,000**	**20,000**

Table 6.0-22
Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Total Existing and Planned Supplies and Banking	**125,717**	**132,017**	**146,537**	**152,537**	**159,237**
Total Estimated Demand (w/o conservation)	**110,100**	**120,300**	**128,900**	**141,200**	**152,100**
Conservation	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	**100,600**	**109,600**	**117,200**	**128,100**	**137,900**
Total Surplus/(Deficit)	**25,117**	**22,417**	**29,337**	**24,437**	**21,337**

Notes:

[1] SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry deliveries projected to be available for the worst case single dry year of 1977 (6.15 percent in 2010, 6.40 percent in 2015, 6.65 percent in 2020, 6.90 percent in 2025 and 7.0 percent in 2030), derived from DWR's "State Water Project Delivery Reliability Report, 2007" (August 2008).

[2] Initial term of the Ventura County entities' flexible storage account is 10 years (from 2006 to 2015).

[3] The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

[4] Recycled water supplies based on projections provided in 2005 UWMP, Chapter 4, Recycled Water.

[5] CLWA acquired this supply in 2007, primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy, under which it will not approve potential annexations unless additional water supplies are acquired.

[6] CLWA has banked 70,200 af in the Rosedale-Rio Bravo Water Banking and Recovery Program.

[7] Based on additional planned banking supplies available by 2014. (See CLWA 2005 UWMP, page 3-23.)

Source: Valencia Water Company and CLWA, 2008.

The projected single-dry year surpluses in years 2010 through 2030 would increase with each of the alternatives when compared with Alternative 2. Consequently, no cumulatively significant water resource impacts would occur with any of the alternatives studied.

Multiple Dry Year Water Assessment. **Table 6.0-23** summarizes the existing and planned water supplies available in the Santa Clarita Valley over the 25-year planning period should a four-year multiple dry year event occur, similar to the drought that occurred in California during the years 1931 to 1934. Demand during single dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation BMPs. (See CLWA 2005 UWMP, p. 2-11.) After adjusting for the 2007 SWP delivery reliability factors provided in DWR's State Water Project Delivery Reliability Report 2007, no shortages are anticipated within the CLWA service area in multiple-dry water years through 2030, as discussed above.

Information concerning "Planned Water Supply," as listed below from the (2005 UWMP), are included to indicate examples of how, along with additional banking programs, CLWA would add reliability and flexibility to its water supply portfolio. Programs such as these will be analyzed by CLWA and contracts will be entered into as need and cost-effectiveness are determined through time. Future water supply assessments will reflect these contractual agreements. As shown, water supplies exceed demand by 7,070 to 18,370 af in multiple dry years. Again, it should be noted that dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 6.0-23
Projected Multiple-Dry Year Supplies[1]

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*47,017*	*46,317*	*45,277*	*44,477*	*44,277*
SWP Table A Supply[2]	32,900	32,200	31,500	30,700	30,500
Buena Vista-Rosedale[6]	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)[3]	1,170	1,170	1,170	1,170	1,170
Flexible Storage Account (Ventura County)[3]	340	340	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation[4]	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	**96,217**	**95,517**	**94,477**	**93,677**	**93,477**
Existing Banking Programs					
Semitropic Water Bank[3]	12,700	0	0	0	0
Rosedale-Rio Bravo[7, 8]	5,000	15,000	15,000	15,000	15,000
Semitropic Water Bank - Newhall Ranch	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	**22,650**	**19,950**	**19,950**	**19,950**	**19,950**
Planned Supplies					
Local Supplies					
Groundwater	6,500	6,500	6,500	6,500	6,500
Restored wells (Saugus Formation)[4]	6,500	6,500	5,000	5,000	5,000
New Wells (Saugus Formation)[4]	0	0	1,500	1,500	1,500
Recycled Water[5]	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	4,500
Total Planned Supplies	**6,500**	**9,600**	**15,300**	**21,000**	**27,600**
Planned Banking Programs					
Additional Planned Banking[8, 9]	0	5,000	15,000	15,000	15,000
Total Planned Banking Programs	**0**	**5,000**	**15,000**	**15,000**	**15,000**
Total Existing and Planned Supplies and Banking	**125,367**	**130,067**	**144,727**	**149,627**	**156,027**
Total Estimated Demand (w/o conservation)	**110,100**	**120,300**	**128,900**	**141,200**	**152,100**
Conservation	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	**100,600**	**109,600**	**117,200**	**128,100**	**137,900**
Total Surplus/(Deficit)	**24,767**	**20,467**	**27,527**	**21,527**	**18,127**

Table 6.0-23
Projected Multiple-Dry Year Supplies[1]

Notes:

[1] Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).

[2] SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of deliveries projected to be available for the worst case four-year drought of 1931-1934 (34.55 percent in 2010, 33.80 percent in 2015, 33.05 percent in 2020, 32.30 percent in 2025 and 32.00 percent in 2030), derived from DWR's "State Water Project Delivery Reliability Report, 2007" (August 2008).

[3] Based on total amount of storage available divided by four (four-year dry period). Initial term of the Ventura County entities' flexible storage account is 10 years (from 2006 to 2015).

[4] Total Saugus pumping is the average annual amount that would be pumped under the groundwater operating plan, as summarized in UWMP Table 3-6 ([11,000+15,000+25,000+35,000]/4).

[5] Recycled water supplies based on projections provided in 2005 UWMP, Chapter 4, Recycled Water.

[6] CLWA acquired this supply in 2007, primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy, under which it will not approve potential annexations unless additional water supplies are acquired. Currently, CLWA is prudently deferring consideration of any proposed annexations to the CLWA service area until the situation that has arisen as a result of the recent court rulings is resolved. Unless and until any such annexations are actually approved, this supply will be available to meet demands within the existing CLWA service area.

[7] CLWA has banked 70,200 af in the Rosedale-Rio Bravo Water Banking and Recovery Program.

[8] Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.

[9] Based on additional planned banking supplies available by 2014. (See CLWA 2005 UWMP, page 3-23.)

Source: Valencia Water Company and CLWA, 2008.

As shown in **Tables 6.0-21** to **6.0-23**, purveyors have access to an amount of water that exceeds demand under all conditions. As discussed in **Section 4.3**, adequate water exists to serve the proposed Project, and the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the incremental effects of the proposed Project are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative water resources impacts are less than significant, and the proposed Project's incremental contribution to cumulative impacts is less than cumulatively considerable (Criteria 1 and 2).

6.5.3.2.4 *The Santa Clarita Valley 2030 Build-out Scenario.*

The Santa Clarita Valley 2030 Build-Out Scenario entails build-out of lands under the current land-use designations indicated in the County's Area Plan and the city of Santa Clarita's General Plan by the year 2030, plus the proposed Project, plus all known active pending General Plan amendment requests for additional urban development in the County unincorporated area and the city of Santa Clarita, including the VCC and Entrada sites. When combined, the 2030 build-out scenario demand is approximately 125,400 af with conservation in an average year. (2005 UWMP and 2003 Newhall Ranch Additional Analysis.)

Table 6.0-24 and **Table 6.0-25** summarize the cumulative water demand and supply for this 2030 build-out scenario. As shown, the project is not expected to create any significant cumulative water availability impacts in either average or dry years. In addition, under the build-out scenario, there are adequate water supplies for each project alternative, with no significant cumulative water supply impacts occurring in either average or dry years. The water supplies exceed demand under this build-out scenario in average and dry years in 2030 with Alternative 2. Alternatives 3 through 7 create less water demand than

Alternative 2. Consequently, no cumulatively significant average and dry year impacts would be created with any of the alternatives studied.

Table 6.0-24
Santa Clarita Valley 2030 Build-Out Scenario Water Supplies (afy)

	Average Years	Single Dry Year	Multiple Dry Years
Santa Clarita Valley Water Supplies [1]			
Local Supply			
Groundwater			
Alluvial Aquifer	35,000	32,500	32,500
Saugus Formation	11,000	15,000	15,000
Restored Impacted Wells		10,000	10,000
Saugus Formation (New Wells)		10,000	10,000
Recycled Water [3]	17,400	17,400	17,400
Newhall Ranch WRP Supply	5,400	5,400	5,400
Imported Supplies			
SWP Table A Amount [2]	62,800	6,700	30,500
Newhall Nickel Water	1,607	1,607	1,607
Additional Planned Banking		20,000	15,000
Buena Vista-Rosedale Transfer	11,000	11,000	11,000
Flexible Storage Account		4,680	1,170
Rosedale-Rio Bravo Groundwater Bank		20,000	15,000
Total Supply	**144,207**	**154,287**	**151,007**

Notes:

[1] SWP maximum allocation reduced in average years to approximately 66 percent of maximum allocation, and in dry years to approximately seven percent (single-dry years) to 32 percent (multi-dry years) of maximum allocation.

[2] In any given year, the actual amount of SWP water deliveries could be above or below these model projections.

[3] Recycled water not at maximum of WRP water throughput, thus reclaimed volumes not decreased during drought.

Source: 2005 UWMP (see **Appendix 4.3** of this EIS/EIR).

Table 6.0-25
Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply (af)

	Build-out (Year 2030)		
	Average Years	**Single Dry Years**	**Multi-Dry Years**
Santa Clarita Valley Water Supplies[a]	144,207	154,287	151,007
Total Build-Out Demand[a, b]	125,400	137,900	137,900
Total Surplus (Alternative 2)	18,807	16,297	13,177

Notes:

[a] Source: 2005 UWMP, the Newhall Ranch Additional Analysis, May 2003 and State Water Project Delivery Reliability Report, 2007 (August 2008).

[b] Demand is increased by approximately 10 percent in dry years, and these totals also reflect conservation reducing demand by 10 percent. The demands indicated above include the demand generated by the Newhall Ranch Specific Plan, VCC, and Entrada.

Available dry year supplies that are above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand. For a dry year, when reliability of the SWP could be reduced, CLWA would utilize both dry year supplies available from the Saugus aquifer, and water banking and conjunctive use projects as indicated in **Table 6.0-24**.

As depicted in **Table 6.0-25**, purveyors have access to an amount of water that exceeds demand under all conditions. As discussed in **Section 4.3**, adequate water exists to serve the proposed Project, and the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the incremental effects of the proposed Project are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative water resources impacts are less than significant, and the proposed Project's incremental contribution to cumulative impacts is less than cumulatively considerable (Criteria 1 and 2).

6.5.3.3 Cumulative Water Resources Mitigation Measures

Because cumulative water supplies exceed demand, cumulative development (including the proposed Project) does not result in or contribute to any significant impacts on Santa Clarita Valley water resources. Therefore, cumulative mitigation measures are not required. Cumulative projects could, however, implement mitigation similar to that required for the Newhall Ranch Specific Plan.

6.5.3.4 Summary of Cumulative Water Resources Impacts and Mitigation

Table 6.0-26
Summary of Project Contribution to Cumulative Water Resources Impacts

Significance Criteria (See Table 6.0-20)	Planning Area	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1.	RMDP	NS	NS	No	NA	NA
	Entrada	NS	NS			
	VCC	NS	NS			
Criterion 2.	RMDP	NS	NS	No	NA	NA
	Entrada	NS	NS			
	VCC	NS	NS			
Criterion 3.	RMDP	NS	NS	No	NA	NA
	Entrada	NS	NS			
	VCC	NS	NS			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.4 Water Quality

6.5.4.1 Summary of Project Water Quality Impacts

The following table summarizes the water quality impacts of the proposed Project, as discussed in greater detail in **Section 4.4** of this EIS/EIR.

Table 6.0-27
Summary of Proposed Project Water Quality Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Violate any water quality standards or waste discharge requirements.	WQ-1, WQ-2	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	WQ-1, WQ-2	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 3. Otherwise substantially degrade water quality.	WQ-1, WQ-2	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 4. Through changes in surface water runoff quality and quantity and changes in groundwater recharge, result in a violation of any groundwater quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality.	WQ-1, WQ-2	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M

Note:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
Source: **Table 4.4-44**.

6.5.4.2 Cumulative Water Quality Impacts

6.5.4.2.1 *Methodology for Assessing Cumulative Water Quality Impacts*

Cumulative water quality impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth in **Subsection 6.4** above (see footnote 1).

6.5.4.2.2 *Discussion of Cumulative Water Quality Impacts*

Subsection 4.4.3.2.3 describes the existing (pre-Project) surface water quality in the Santa Clara River though the Project area. This baseline condition includes mitigated water quality effects of many of the cumulative projects that have already been constructed. Similarly, **Subsection 4.4.3.2.4**, contains

background groundwater quality data that reflects existing conditions including those caused by already existing (*i.e.*, past and present) cumulative projects (*e.g.*, the remediation efforts at the Whittaker Bermite site).

The Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan assesses potential storm water quality impacts associated with the approved Specific Plan development and proposes control measures to address those potential impacts. A technical memorandum prepared by Geosyntec (2007b) incorporates the water quality modeling results for the Specific Plan area contained in the Newhall Ranch Specific Plan Sub-Regional Stormwater Mitigation Plan in combination with additional modeling for the RMDP area outside of the Specific Plan boundary and the portions of the Entrada and VCC planning areas within the SCP area.

The proposed Project's indirect impacts to surface water quality are discussed above in **Subsection 4.4.5.2.2**, and indirect impacts to groundwater quality are discussed in **Subsection 4.4.5.2.5**. **Section 4.4** concluded that these potential impacts of the proposed Project would be significant and that implementation of Mitigation Measures WQ-1 and WQ-2 would reduce the impacts to a less-than-significant level by ensuring compliance with proposed PDF and regulatory requirements.

A few of the larger projects on the cumulative projects list, *i.e.*, Ritter Ranch and Centennial, do not have the ability to contribute to a cumulative water quality impact because they are located in a different watershed. In addition, uncompleted projects in the vicinity, including those listed in **Table 6.0-28**, have potentially significant water quality impacts that are not reflected in the baseline conditions. Overall, As indicated on **Table 6.0-28**, about 11 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 1 prior to mitigation, 11 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 2 prior to mitigation, 11 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 3 prior to mitigation, and 8 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 4 prior to mitigation.

Runoff from construction activities could combine to create cumulative pollutant levels that violate water quality standards, degrade water quality, and cause excess runoff that exceeds drainage system capacity, prior to mitigation. Based on a review of available information regarding the identified cumulative development projects, the incremental effects of the proposed Project are significant when viewed in connection with the effects of other past, present, and foreseeable future projects, and, thus, the proposed Project's contribution to cumulative water quality impacts is considered cumulatively considerable, prior to mitigation (Criteria 1 through 4).

Build-out of the Specific Plan includes the Newhall Ranch Water Reclamation Plant (WRP) to be constructed in the western edge of the Specific Plan area. The WRP's treatment capacity is planned to be 6.8 mgd of wastewater generated by the Specific Plan, all of which would be treated at the WRP, and upon tertiary treatment, reclaimed for landscape irrigation purposes (except for wet winters when irrigation demands would be lower, requiring the discharge of unused reclaimed water to the Santa Clara River during periods of high river flow). Recycled water from the WRP would be used to partially meet the non-potable water demands (*e.g.*, irrigation) of the Specific Plan. Construction of the WRP will require outfall facilities in and near the Santa Clara River. The WRP will be required to comply with the terms of its NPDES Permit and Waste Discharge Requirements (WDRs) for the Newhall Ranch WRP

(Order No. R4-2007-0046, effective October 27, 2007 (Los Angeles RWQCB, 2007)), which will ensure that any impacts of the WRP component of the Specific Plan build-out remain less than significant.

In addition, there are two regional wastewater reclamation plants in the area operated by the County Sanitation Districts of Los Angeles County that discharge tertiary-treated wastewater to the Santa Clara River. The Saugus WRP, located near Bouquet Canyon Road bridge, has a permitted dry weather average design capacity of 6.5 million gallons per day (mgd), creating surface flows from the outfall to near Interstate 5. The Valencia WRP outfall is located immediately downstream of the Interstate 5 bridge and has a permitted dry weather average design capacity of 21.6 mgd, creating surface flows extending through the Project area and into the far eastern portion of Ventura County. The combined average treated discharge from both WRPs between January 2004 and June 2007 was approximately 20 mgd. (Geosyntec, 2008.) Like the Newhall Ranch WRP, the Saugus and Valencia WRPs are required to comply with the terms of their permits. However, the WRPs could nonetheless contribute to significant cumulative water quality impacts in the Santa Clara River.

Table 6.0-28
Cumulative Projects with Related Impacts to Water Quality

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-27)			
		Criterion 1	Criterion 2	Criterion 3	Criterion 4
1	Ritter Ranch	NA	NA	NA	NA
2	Centennial	NA	NA	NA	NA
3	Adams Canyon	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND
5	Legacy Village	PS	PS	PS	PS
6	Tesoro Del Valle	M	M	M	M
7	Tapia Ranch	PS	PS	PS	PS
8	Whittaker Bermite/Porta Bella Project	ND	ND	ND	ND
9	West Creek/West Hills Project	ND	ND	ND	ND
10	Westridge	ND	ND	ND	ND
11	North Valencia Specific Plan No. 1	ND	M	ND	ND
12	RiverPark	M	M	M	M
13	Natural River Management Plan	NS	NS	NS	NS
14	Recycled Water Master Plan (CLWA)	M	NS	M	ND
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	M	M	M	NS
17	Chiquita Canyon Landfill Expansion	PS	PS	PS	PS
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely

Table 6.0-28
Cumulative Projects with Related Impacts to Water Quality

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-27)			
		Criterion 1	Criterion 2	Criterion 3	Criterion 4
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.4.3 Cumulative Water Quality Mitigation Measures

Development on the Specific Plan, Entrada, and VCC project sites will comply with applicable regulatory requirements for both construction and post-development surface runoff water quality, which ensures that Project-related development will not result in significant water quality impacts. These regulatory requirements include PDFs; MS4 Permit and SUSMP requirements; Construction General Permit requirements; General Dewatering Permit requirements; and benchmark Basin Plan water quality objectives, CTR criteria, and TMDLs issued by the Los Angeles RWQCB and Los Angeles County. Any future urban development occurring in the Santa Clara River watershed must also comply with these requirements. Therefore, cumulative impacts on surface water quality of receiving waters from the proposed Project and future urban development in the Santa Clara watershed would be addressed through compliance with the applicable regulatory requirements that are intended to be protective of beneficial uses of the receiving waters. In addition, WQ-1 sets a minimum BMP approach required for the SUSMP and WQ-2 sets a minimum required approach for a Landscape and Integrated Pest Management Plan. Based on compliance with these regulatory mitigation requirements, cumulative water quality impacts related to stormwater and nonstormwater runoff would be less than significant, and the proposed Project's contribution would be less than cumulatively considerable. Other cumulative projects will be required to comply with federal, state, and local water quality regulations, including implementation of BMPs and PDFs to minimize and mitigate each project's potential water quality impacts. In addition, the Newhall Ranch WRP, like the existing Saugus and Valencia WRPs, is required to comply with the terms of its NPDES permit and WDRs, which would ensure that the Newhall Ranch WRP's contribution to cumulative impacts is rendered less than cumulatively considerable. Because each cumulative project will be subject to this rigorous regulatory regime, cumulative water quality impacts are considered to be less than significant, following mitigation.

6.5.4.4 Summary of Cumulative Water Quality Impacts and Mitigation

Table 6.0-29
Summary of Project Contribution to Cumulative Water Quality Impacts

Significance Criteria (See Table 6.0-27)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	SI	M	Yes	MM WQ-1 and WQ-2 and Compliance with NPDES and RWQCB requirements.	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 2	NRSP	SI	M	Yes	MM WQ-1 and WQ-2 and Compliance with NPDES and RWQCB requirements.	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion	NRSP	SI	M	Yes	MM WQ-1 and WQ-2 and Compliance with NPDES and RWQCB requirements.	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion	NRSP	SI	M	Yes	MM WQ-1 and WQ-2 and Compliance with NPDES and RWQCB requirements.	No
	VCC	SI	M			
	Entrada	SI	M			

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

NA = Not applicable

6.5.5 Biological Resources

6.5.5.1 Summary of Project Biological Resources Impacts

The following tables summarize the proposed Project's impacts on biological resources, as discussed in greater detail in **Section 4.5** of this EIS/EIR.

Table 6.0-30 summarizes the significance findings for direct, indirect, and secondary impacts to vegetation communities and unique landscape features, and lists the associated mitigation measures.[4] **Table 6.0-31** summarizes the significance findings for impacts to general wildlife organized by species guilds (mitigation measures are addressed at the special-status species level). **Table 6.0-32** summarizes the significance findings for impacts to wildlife habitat linkages, wildlife corridors, and wildlife crossings (mitigation measures are addressed at the special-status species level). **Table 6.0-33** summarizes the significance findings for special-status species, and lists the associated mitigation measures.

[4] Note that in this subsection, as in **Section 4.5**, but different from all of the other sections (compare methodology explained in **Section 4.0**), "indirect" impacts are those that are caused by development of the Specific Plan, Entrada, and VCC planning areas (*e.g.*, loss of habitat due to construction of buildings, roads, *etc*.), while "secondary" impacts refer to potential impacts to species in non-disturbed areas during construction and after the development is occupied.

Table 6.0-30
Summary of Significance Findings for Impacts to Vegetation Communities and Unique Landscape Features

Vegetation Communities and Land Covers	Direct Impacts (Removal of Vegetation) for Alternatives 2-7	Indirect Impacts (Removal of Vegetation) for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Removal of Vegetation	Mitigation for Secondary Impacts	Significance Finding After Mitigation
Riparian Communities	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-26, 26a, 27, 28, 34-43, 47a, 63); BIO (1-16, 19, 52, 62, 69, 73)	SP-4.6 (7, 17-20, 26a, 29-35, 39, 43-45, 49-52, 58, 64); BIO (45-47, 49, 52, 69-73)	Adverse but not significant
California Annual Grassland, Agriculture, Disturbed Land, and Developed Land	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	SP-4.6 (17-26, 27, 34-42); BIO (19, 52, 62, 69, 73)	SP-4.6 (17-20, 29-35, 39, 44, 45, 49-52, 58); BIO (45-47, 49, 52, 69-73)	Adverse but not significant
Coastal Scrub Communities	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	SP-4.6 (17-26, 27, 34-42); BIO (19, 20, 21, 52, 62, 69, 73)	SP-4.6 (17-20, 29-35, 39, 44, 45, 49-52, 58); BIO (45-47, 49, 52, 69-73)	Adverse but not significant
Chaparral Communities	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	SP-4.6 (17-26, 27, 34-42); BIO (19, 52, 62, 69, 73)	SP-4.6 (17-20, 29-35, 39, 44, 45, 49-52, 58); BIO (45-47, 49, 52, 69-73)	Adverse but not significant
Oak Woodland Communities (Coast Live Oak Woodland, Mixed Oak Woodland, Valley Oak/Grass, Valley Oak Woodland)	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-26, 26a, 27, 28, 34-43, 47a, 48, 63); BIO (1-16, 19, 22, 42, 52, 62, 69, 73)	SP-4.6 (7, 17-20, 26a, 29-35, 39, 43-45, 49-52, 58, 64); BIO (45-47, 49, 52, 69-73)	Adverse but not significant
Purple Needlegrass	No impact is expected to occur	No impact is expected to occur	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (17, 31, 32, 33, 49-52); BIO (69, 72)	Adverse but not significant
California Walnut Woodland	No impact is expected to occur	No impact is expected to occur	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (17, 31, 32, 33, 49-52); BIO (69, 72)	Adverse but not significant
Unique Landscape Features	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 6.0-31
Summary of Significance Findings for Impacts to Common Wildlife

Wildlife Species Guild	Direct Impacts for Alternatives 2-7	Indirect Impacts for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to the Guild	Mitigation for Direct and Indirect Impacts	Mitigation for Secondary Impacts
Insect	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 58, 63); BIO (1-16, 19, 22, 49, 64, 70-72)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Mollusk	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**	n/a	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Reptile -- Low Mobility	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19, 22, 52, 63, 64, 69, 72, 85, 87	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Reptile and Amphibian -- Semi-Aquatic	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 55, 56, 58, 63; BIO (1-16, 19, 22, 45, 49, 52, 63, 69, 72, 80, 85, 87)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Fish	Adverse but not significant	No impact is expected to occur	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 30-32, 55, 58, 63); BIO (1 -16, 45-49, 63, 64)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bird -- Raptor	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19, 22, 52, 56, 63, 64, 69, 72, 81, 82)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bird -- Riparian	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19, 22, 52, 56, 63, 64, 69, 72, 78)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bird -- Upland Grassland	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	SP-4.6 (27, 30-32, 36-42, 56); BIO (19, 52, 56, 63, 64, 69)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bird -- Upland Scrub and Chaparral	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	SP-4.6 (27, 30-32, 36-42, 56); BIO (19-21, 52, 56, 63, 64, 69, 72, 78)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bird -- Upland Woodland	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19, 22, 52, 56, 63, 64, 69, 72, 78)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Bat	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-17, 63, 21-26, 27, 30-32, 36-42, 48, 56); BIO (1-16, 19, 22, 63, 69)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Mammal -- Low Mobility	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (19-21, 52, 63, 64, 69)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Mammal -- Moderate Mobility	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19-22, 52, 63, 64, 69)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**
Mammal -- High Mobility	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	SP-4.6 (1-19, 21-26, 27, 30-32, 36-42, 56, 63); BIO (1-16, 19-22, 52, 59, 63, 64, 69)	Addressed at species level in **Subsection 4.5.5.3**	Addressed at species level in **Subsection 4.5.5.3**

Table 6.0-32
Summary of Significance Findings for Impacts to Wildlife Habitat Linkages, Wildlife Corridors, and Wildlife Crossings

Category	Significant Impacts?	Impacts to Wildlife for Alternatives 2-7	Mitigation for General Significant Impacts	Mitigation for Removal of Vegetation	Mitigation for Secondary Impacts
Wildlife Landscape Habitat Linkages	No	Adverse but not significant	n/a	Mitigation addressed at species level in **Subsection 4.5.5.3**	Mitigation addressed at species level in **Subsection 4.5.5.3**
Wildlife Corridors	Yes	Significant absent mitigation	SP-4.6 (1-17, 21-26, 29-32, 36-42, 56, 63); BIO (1-16, 19-21, 59, 63, 69, 72, 73, 85, 87)	Mitigation addressed at species level in **Subsection 4.5.5.3**	Mitigation addressed at species level in **Subsection 4.5.5.3**
Wildlife Crossings	No	Adverse but not significant	n/a	Mitigation addressed at species level in **Subsection 4.5.5.3**	Mitigation addressed at species level in **Subsection 4.5.5.3**

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Reptile and Amphibian -- Semi-Aquatic	arroyo toad	FE/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 63); BIO (1-16)	SP-4.6 (53, 55, 58, 59); BIO (17, 46, 48, 49, 52, 70)	SP-4.6 (1-20, 24, 27, 53, 55, 56, 58, 59, 63); BIO (1-17, 19-21, 44-49, 63, 64, 69-74, 77, 80, 85, 87)	Adverse but not significant
Reptile and Amphibian -- Semi-Aquatic	California red-legged frog	FT/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 63); BIO (1-16)	SP-4.6 (53, 55, 58, 59); BIO (18, 46, 48, 49, 52, 70)	SP-4.6 (1-20, 24, 27, 53, 55, 56, 58, 59, 63); BIO (1-16, 18, 19, 44-49, 63, 64, 69-74, 77, 80, 85, 87)	Adverse but not significant
Fish	southern steelhead	FE/CSC	No	Less than significant	No impact is expected to occur	Less than significant	Less than significant	No impact is expected to occur	n/a	Less than significant	Less than significant	n/a	n/a	n/a	Adverse but not significant
Fish	unarmored threespine stickleback	FE/CE, CFP	Yes	Significant absent mitigation	No impact is expected to occur	Adverse but not significant	Significant absent mitigation	No impact is expected to occur	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (44, 54, 55, 58); BIO (45, 47-49, 70, 71); GRR (1-7); WQ (1)	SP-4.6 (44, 53-59); BIO (43-49, 70, 71); GRR (1-7); WQ (1)	SP 4.6 (1-17, 44, 54, 55, 58, 63); BIO (1-16, 45, 47-49, 63, 70, 71, 73, 80); GRR (1-7); WQ (1)	Adverse but not significant
Bird -- Raptor	American peregrine falcon	BCC/CE, CFP	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Raptor	California condor	FE/CE, CFP	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Adverse but not significant	Significant absent mitigation	n/a	BIO (82)	SP-4.6 (29-33, 36-42); BIO (19-21,81, 82)	Adverse but not significant
Bird -- Raptor	golden eagle (nesting and wintering)	BCC/WL, CFP	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-43, 48); BIO (19-21, 42)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (29-43, 48, 56); BIO (19-21, 52, 56, 63, 64, 69, 81, 82)	Adverse but not significant

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Bird -- Raptor	white-tailed kite (nesting)	None/CFP	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19-22, 42, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-22, 52, 56, 63, 64, 69, 71, 73)	Adverse but not significant
Bird -- Riparian	least Bell's vireo (nesting)	FE/CE	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation.	SP-4.6 (1-16, 18, 19, 21-26, 63); BIO (1-16, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 55, 56, 58, 63); BIO (1-16, 47, 49, 52, 55, 56, 63, 64, 70-73, 78, 85, 87)	Adverse but not significant
Bird -- Riparian	southwestern willow flycatcher (nesting) (applies to full species willow flycatcher also)	FE/CE	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 63); BIO (1-16)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 55, 56, 58, 63); BIO (1-16, 47, 49, 52, 55, 56, 63, 64, 70-73, 78, 85, 87)	Adverse but not significant
Bird -- Riparian	western yellow-billed cuckoo (nesting)	FC, BCC/CE	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 63); BIO (1-16)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 55, 56, 58, 63); BIO (1-16, 47, 49, 52, 55, 56, 63, 64, 70-73, 78, 85, 87)	Adverse but not significant
Bird -- Upland Scrub and Chaparral	coastal California gnatcatcher	FT/CSC	No	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-42); BIO (19-21, 55)	SP-4.6 (53; 59); BIO (52, 56)	SP-4.6 (29, 32-42, 56); BIO (19-21, 52, 56, 63, 64, 69, 71, 72, 85, 87)	Adverse but not significant
Mammal -- Moderate Mobility	ringtail	None/CFP	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19, 42, 55)	SP-4.6 (53, 59); BIO (52, 83)	SP-4.6 (1-19, 21-26, 27, 29-32, 36-42, 56, 63); BIO (1-16, 19, 52, 63, 64, 73, 83)	Adverse but not significant

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Mollusk	undescribed snail	None/None	Yes	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	n/a	Significant absent mitigation	Significant absent mitigation	n/a	n/a	SP-4.6 (1-26, 47a, 55, 58, 63); BIO (1-16, 45, 49, 51, 52, 70-74, 77, 86)	Adverse but not significant
Reptile -- Low Mobility	coast horned lizard	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Reptile -- Low Mobility	coast patch-nosed snake	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 56, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 72, 73, 85, 87)	Adverse but not significant
Reptile -- Low Mobility	silvery legless lizard	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Reptile and Amphibian -- Semi-Aquatic	south coast garter snake	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 55, 58, 63); BIO (1-16, 19)	SP-4.6 (53, 55, 58, 59); BIO (46, 48, 49, 52, 70, 89)	SP-4.6 (1-26, 27, 29-32, 34-42, 53, 55, 58, 59, 63); BIO (1-16, 19, 44-49, 63, 64, 69-74, 77, 80, 85, 87, 89)	Adverse but not significant
Reptile and Amphibian -- Semi-Aquatic	southwestern pond turtle	None/CSC	Yes	Alternative 2: Significant Unavoidable Impacts, absent further mitigation Alternatives	Significant absent mitigation	Alternative 2: Significant Unavoidable Impacts, absent further mitigation Alternatives	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18-19, 21-26, 36-42, 55, 58, 63); BIO (1-16,	SP-4.6 (53, 55, 58, 59); BIO (45-49, 50, 52, 70)	SP-4.6 (1-26, 27, 29-32, 34-42, 53, 55, 56, 58, 59, 63); BIO (1-16, 19-21, 44-50, 52, 63,	Alternative 2: Significant Unavoidable Impacts; Alternatives 3 through 7:

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
				3-7: Significant absent mitigation		3-7: Significant absent mitigation						19-21)		64, 69-74, 77, 80)	Adverse but not significant
Reptile and Amphibian -- Semi-Aquatic	two-striped garter snake	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 55, 58, 63); BIO (1-16, 19)	SP-4.6 (53, 55, 58, 59); BIO (46-49, 52, 70,89)	SP-4.6 (1-26, 27, 29-32, 34-42, 53, 55, 58, 59, 63); BIO (1-16, 19, 44-49, 63, 64, 69-74, 77, 80, 85, 87, 89)	Adverse but not significant
Reptile and Amphibian -- Semi-Aquatic	western spadefoot toad	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 55, 58, 63); BIO (1-16, 19-21, 53)	SP-4.6 (53, 55, 58, 59); BIO (46, 48, 49, 52, 53, 70)	SP-4.6 (1-26, 27, 29-32, 34-42, 53, 55, 56, 58, 59, 63); BIO (1-16, 19-21, 44, 46, 48, 49, 52, 63, 64, 69-74, 77, 80, 85, 87)	Adverse but not significant
Fish	arroyo chub	None/CSC	Yes	Significant absent mitigation	No impact is expected to occur	Adverse but not significant	Significant absent mitigation	No impact is expected to occur	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (44, 54, 55, 58); BIO (45, 47-49, 70, 71); GRR (1-7); WQ (1)	SP-4.6 (44, 53-55, 57-59); BIO (43-49, 70, 71); GRR (1-7); WQ (1)	SP 4.6 (1-26, 27, 44, 54, 55, 58, 63); BIO (1-16, 45, 47-49, 63, 70, 71, 73, 80); GRR (1-7); WQ (1)	Adverse but not significant
Fish	Santa Ana sucker	None/CSC	Yes	Significant absent mitigation	No impact is expected to occur	Adverse but not significant	Significant absent mitigation	No impact is expected to occur	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (44, 54, 55, 58); BIO (45, 47-49, 70, 71); GRR (1-7); WQ (1)	SP-4.6 (44, 53-55, 57-59); BIO (43-49, 70, 71); GRR (1-7); WQ (1)	SP 4.6 (1-26, 27, 44, 54, 55, 58, 63); BIO (1-16, 45, 47-49, 63, 70, 71, 73, 80); GRR (1-7); WQ (1)	Adverse but not significant

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Bird--Upland Scrub and Chaparral	loggerhead shrike	BCC/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19-22)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-21, 42, 52, 56, 63, 64, 69,71)	Adverse but not significant
Bird -- Raptor	long-eared owl (nesting)	None/CSC	Yes	Adverse but not significant	Foraging habitat: Significant absent mitigation; Nesting habitat: Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19, 42, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19, 52, 56, 63, 64, 69, 71, 73)	Adverse but not significant
Bird -- Raptor	northern harrier (nesting)	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 55, 56, 58, 63); BIO (1-16, 19-21, 47, 49, 52, 56, 63, 64, 69-71, 73)	Adverse but not significant
Bird -- Raptor	short-eared owl (nesting)	USBC/CSC	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Raptor	western burrowing owl (burrow sites and some wintering sites)	BCC/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-42); BIO (19)	SP-4.6 (53, 59); BIO (52, 57)	SP-4.6 (29-42, 53, 56, 59); BIO (19, 52, 57, 63, 64, 69, 71)	Adverse but not significant
Bird -- Riparian	summer tanager (nesting)	None/CSC	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Riparian	tricolored blackbird (nesting colony)	BCC/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16,18, 19, 21-26, 36-42, 63); BIO (1-16, 19)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 55, 56, 58, 63); BIO (1-16, 19, 47, 49, 52, 56, 63, 64, 69-71, 73)	Adverse but not significant

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Bird -- Riparian	vermilion flycatcher (nesting)	None/CSC	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Riparian	yellow-breasted chat (nesting)	None/CSC	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 56, 55, 58, 63); BIO (1-16, 47, 49, 52, 55, 56, 63, 64, 69-73, 78, 85, 87)	Adverse but not significant
Bird -- Riparian	yellow-headed blackbird (nesting)	None/CSC	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Riparian	yellow warbler (nesting)	None/CSC	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 55, 56, 58, 63); BIO (1-16, 47, 49, 52, 55, 56, 63, 64, 69-73, 78, 85, 87)	Adverse but not significant
Bird -- Upland Grassland	grasshopper sparrow (nesting)	None/CSC	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Adverse but not significant	Adverse but not significant	n/a	SP-4.6 (53, 59); BIO (52, 56)	n/a	Adverse but not significant
Bat	pallid bat	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant
Bat	pocketed free-tailed bat	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant

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Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Bat	Townsend's big-eared bat	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant
Bat	western mastiff bat	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant
Bat	western red bat	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant
Mammal -- Low Mobility	San Diego desert woodrat	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 36-42, 63); BIO (1-16, 19-21)	BIO (52, 58)	SP-4.6 (1-26, 27, 29-42, 56, 63); BIO (1-16, 19-21, 52, 58, 63, 64, 69, 73)	Adverse but not significant
Mammal -- Low Mobility	southern grasshopper mouse	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation.	Significant absent mitigation	SP-4.6 (1-16, 18-19, 21-26, 36-42, 63); BIO (1-16, 19-21)	BIO (52)	SP-4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-21, 52, 63, 64, 69, 73)	Adverse but not significant
Mammal -- Moderate Mobility	American badger	None/CSC	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (41, 52)	SP-4.6 (1-26, 27, 29-42, 53, 56, 59, 63); BIO (1-16, 19-21, 41, 52, 58, 59, 63, 64, 69, 73)	Adverse but not significant

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Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Mammal -- Moderate Mobility	San Diego black-tailed jackrabbit	None/CSC	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 58)	SP-4.6 (1-26, 27, 29-42, 53, 56, 59, 63); BIO (1-16, 19-21, 52, 58, 59, 63, 64, 69, 73)	Adverse but not significant
Insect (Butterflies)	monarch butterfly (wintering sites)	None/California Special Animal	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	Although no mitigation is required, the species will benefit from SP-4.6 (53, 59).			Adverse but not significant
Insect (Butterflies)	San Emigdio blue butterfly	None/California Special Animal	Yes	Alternative 2: Significant Unavoidable Impacts Alternatives 3-7: Significant absent mitigation	Alternative 2: Significant Unavoidable Impacts Alternatives 5 and 6: Significant absent mitigation Alternatives 3, 4, and 7: No impact is expected to occur	Alternative 2: Significant Unavoidable Impacts, absent further mitigation Alternatives 3-7: Significant absent mitigation	Alternative 2: Significant Unavoidable Impacts, absent further mitigation Alternatives 3-7: Significant absent mitigation	Alternative 2: Significant Unavoidable Impacts Alternatives 3-7: Significant absent mitigation	n/a	Significant Unavoidable Impacts, absent further mitigation Alternatives 3-7: Significant absent mitigation	Alternative 2: Significant Unavoidable Impacts Alternatives 3-7: Significant absent mitigation	SP-4.6 (21-26, 36-42); BIO (19, 66, 67)	BIO (65)	SP-4.6 (21-26, 33, 36-42, 49-52, 55, 58, 67); BIO (24, 34-37, 52, 70-72, 79)	Alternative 2: Significant Unavoidable Impacts; Alternatives 3 through 7: Adverse but not significant
Reptile -- Low Mobility	coastal western whiptail	None/California Special Animal	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53,59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Reptile -- Low Mobility	rosy boa	None/California Special Animal	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 56, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant

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Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Reptile -- Low Mobility	San Bernardino ringneck snake	None/California Special Animal	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26, 27, 36-42, 63); BIO (1-16, 19-21)	SP-4.6 (53, 59); BIO (52, 54)	SP-4.6 (1-26, 27, 29-42, 53, 56, 59, 63); BIO (1-16, 19-21, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Bird -- Raptor	Cooper's hawk (nesting)	None/WL	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19-22, 42, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-22, 52, 56, 63, 64, 69, 71, 73)	Adverse but not significant
Bird -- Raptor	ferruginous hawk (wintering)	BCC/WL	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	SP-4.6 (21-25, 36-42); BIO (19-21)	n/a	n/a	Adverse but not significant
Bird -- Raptor	merlin (wintering)	None/WL	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Raptor	prairie falcon (nesting)	BCC/WL	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Raptor	sharp-shinned hawk (nesting)	None/WL	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Raptor	turkey vulture	None/CDFG Trust Resource	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (29-42, 48, 56); BIO (19-21, 52, 56, 63, 64, 69, 81, 82)	Adverse but not significant
Bird -- Riparian	black-crowned night-heron (rookery)	None/California Special Animal	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant

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Bird -- Riparian	Nuttall's woodpecker (nesting)	None/California Special Animal	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26a, 29-42, 48, 55, 56, 58, 63); BIO (1-16, 19, 22, 42, 47, 49, 52, 56, 63, 64, 69-73, 85, 87)	Adverse but not significant
Bird -- Upland Grassland	California horned lark	None/WL	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-42); BIO (19)	SP-4.6 (53, 59); BIO (52, 56)	SP 4.6 (29-42, 53, 56, 59); BIO (19, 52, 56, 63, 64, 71, 72, 78, 85, 87)	Adverse but not significant
Bird -- Upland Scrub and Chaparral	Allen's hummingbird (nesting)	None/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 63); BIO (1-16, 19-21, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP 4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-21, 63, 69, 71-73, 85, 87)	Adverse but not significant
Bird -- Upland Scrub and Chaparral	Bell's sage sparrow (nesting)	BCC/WL	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-42); BIO (19)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (29-42, 56); BIO (19, 52, 56, 63, 64, 69, 71, 72, 78, 85, 87)	Adverse but not significant
Bird -- Upland Scrub and Chaparral	black-chinned sparrow (nesting)	BCC/California Special Animal	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Upland Scrub and Chaparral	Costa's hummingbird (nesting)	None/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 18, 19, 21-26a, 36-42, 48, 63); BIO (1-16, 19-21, 55)	SP-4.6 (53, 59); BIO (52, 56)	SP 4.6 (1-26, 29-42, 56, 63); BIO (1-16, 19-21, 52, 56, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Bird -- Upland Scrub and Chaparral	rufous hummingbird (nesting)	BCC/California Special Animal	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant

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Bird -- Upland Scrub and Chaparral	southern California rufous-crowned sparrow	None/WL	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (36-42); BIO (19-21)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (29-42, 56); BIO (19-21, 52, 56, 63, 64, 69, 71, 72, 85, 87)	Adverse but not significant
Bird -- Upland Woodland	chipping sparrow (nesting)	None/California Special Animal	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP 4.6 (1-26a, 29-42, 48, 56, 63); BIO (1-16, 19, 22, 42, 52, 56, 63, 64, 69, 71, 72, 78, 85, 87)	Adverse but not significant
Bird -- Upland Woodland	hermit warbler (nesting)	None/CDFG Trust Resource	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Bird -- Upland Woodland	Lawrence's goldfinch (nesting)	BCC/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 36-42, 48, 63); BIO (1-16, 19-21, 42)	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26, 29-42, 48, 56, 63); BIO (1-16, 19-21, 42, 52, 56, 63, 64, 69, 71, 72, 78, 85, 87)	Adverse but not significant
Bird -- Upland Woodland	oak titmouse (nesting)	None/California Special Animal	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59); BIO (52, 56)	SP-4.6 (1-26a, 29-42, 48, 56, 63); BIO (1-16, 19, 22, 42, 52, 56, 63, 64, 69, 71-73, 85, 87)	Adverse but not significant
Bat	fringed myotis	None/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61,63, 64, 68, 71, 84)	Adverse but not significant
Bat	long-legged myotis	None/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant

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Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Bat	western small-footed myotis	None/California Special Animal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 63); BIO (1-16, 19-21)	BIO (52, 61, 68, 84)	SP-4.6 (56); BIO (61, 63, 64, 68, 71, 84)	Adverse but not significant
Bat	Yuma myotis	None/California Special Animal	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	n/a	BIO (52, 61, 68, 84)	SP-4.6 (1-16, 21-26a, 27, 36-42, 48, 56, 63); BIO (1-16, 19, 61, 63, 64, 68, 71, 84)	Adverse but not significant
Mammal -- High Mobility	black bear	None/CDFG Trust Resource	Yes	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Significant absent mitigation	Significant absent mitigation	n/a	n/a	SP-4.6 (1-19, 21-26a, 27, 29-33, 36-43, 48, 56, 63); BIO (1-16, 19-22, 59, 63, 70)	Adverse but not significant
Mammal -- High Mobility	mountain lion	None/Specially Protected Mammal	Yes	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Adverse but not significant	Significant absent mitigation	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-17, 21-26a, 27-32, 36-43, 48, 63); BIO (1-16, 19-22)	BIO (60)	SP-4.6 (1-19, 21-26, 29-33, 36-42, 48, 56, 63); BIO (1-16, 19-22, 59, 63, 64)	Adverse but not significant
Mammal -- High Mobility	mule deer	None/CDFG Trust Resource	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant
Plant[1]	San Fernando Valley spineflower	FC/CE	Yes	n/a	n/a	n/a	Alternative 2: Significant Unavoidable Impacts Alternatives 3-7: Significant absent mitigation	No impact is expected to occur	Alternative 2: Significant Unavoidable Impacts, absent further mitigation Alternatives 3-7: Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (53, 59, 65-73, 76-78, 80); BIO (23-26, 35-37)	SP-4.6 (53, 59, 65-80); BIO (23-31, 33-39, 85, 87)	Alternative 2: Significant Unavoidable Impacts; Alternatives 3 through 7: Adverse but not significant
Plant	undescribed everlasting	None/None	Yes	n/a	n/a	n/a	Significant absent	Significant absent	Significant absent	Significant absent	Significant absent mitigation		SP-4.6 (1-16, 21-26, 47a, 55, 58,	SP-4.6 (1-26, 47a, 55, 58, 63); BIO (1-	Adverse but not

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							mitigation	mitigation	mitigation	mitigation			63); BIO (1-16, 75, 76)	16, 45, 49, 52, 70-73, 75, 76)	significant
Plant	undescribed sunflower	None/None	Yes	n/a	n/a	n/a	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	Significant absent mitigation	Significant absent mitigation	n/a	n/a	SP-4.6 (1-26, 47a, 55, 58, 63); BIO (1-16, 45, 49, 51, 52, 70-74, 77)	Adverse but not significant
Plant	island mountain-mahogany	None/None	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (27, 29-33, 36-42, 53, 59); BIO (19, 62)	n/a	SP-4.6 (27, 29-42, 39, 44, 45, 49-52, 55, 58); BIO (19, 49, 52, 63, 69-72)	Adverse but not significant
Plant	late-flowered mariposa lily	None/None	No	n/a	n/a	n/a	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	Adverse but not significant	Adverse but not significant	Although no mitigation is required, the species will benefit from SP-4.6 (53, 59).			Adverse but not significant
Plant	mainland cherry	None/None	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 28, 36-47a, 48, 55, 58, 61, 63); BIO (1-16, 19, 22, 62, 88)	n/a	SP-4.6 (1-26a, 27-47a, 49, 52, 55, 58, 63); BIO (1-16, 45, 49, 52, 62, 69-73)	Adverse but not significant
Plant	oak trees	None/None	Yes	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (1-19, 21-33, 36-47, 48-52, 55, 58 63); BIO (1-16, 19, 22, 62, 69, 73)	SP-4.6 (1-26a, 27-47a, 49-52, 55, 58, 63); BIO (1-16, 42, 45, 49, 52, 58, 62, 63 69-73)	Adverse but not significant
Plant	oak-leaved nemophila	None/None	No	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (27, 29-33, 36-42, 49, 53, 59); BIO (19, 62)	n/a	SP-4.6 (29-42, 44, 45, 49-52, 55, 58); BIO (19, 49, 52, 63, 69-72)	Adverse but not significant
Plant	Ojai navarretia	None/None	No	n/a	n/a	n/a	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	Although no mitigation is required, the species will benefit from SP-4.6 (53, 59).			Adverse but not significant

Table 6.0-33
Summary of Significance Findings for Special-Status Species

Species Guild	Common Name	Status	Significant Impacts?	Direct Impacts to Habitat for Alternatives 2-7	Indirect Impacts to Habitat for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Habitat for Alternatives 2-7	Direct Impacts to Individuals for Alternatives 2-7	Indirect Impacts to Individuals for Alternatives 2-7	Combined Direct and Indirect Permanent Impacts to Individuals for Alternatives 2-7	Short-Term Secondary Impacts for Alternatives 2-7	Long-Term Secondary Impacts for Alternatives 2-7	Mitigation for Impacts to Habitat	Mitigation for Impacts to Individuals	Mitigation for Secondary Impacts	Significance Finding after Mitigation
Plant	Parish's sagebrush	None/None	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26a, 27, 28, 36-43, 46-47a, 55, 58, 63); BIO (1-16, 62)	n/a	SP-4.6 (1-26a, 27-47a, 49-52, 55, 58, 63); BIO (1-16, 45, 49, 52, 62, 69-73)	Adverse but not significant
Plant	Peirson's morning-glory	None/None	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a	n/a	Significant absent mitigation	Significant absent mitigation	SP-4.6 (27, 29-33, 36-42, 53, 59); BIO (19-21, 62)	n/a	SP-4.6 (27, 29-42, 39, 44, 45, 49-52, 55, 58); BIO (19-21, 49, 52, 63, 69-72)	Adverse but not significant
Plant	Plummer's mariposa lily	None/None	No	n/a	n/a	n/a	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	No impact is expected to occur	Although no mitigation is required, the species will benefit from SP-4.6 (53, 59).			Adverse but not significant
Plant	slender mariposa lily	None/None	Yes	n/a	n/a	n/a	Adverse but not significant	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	SP-4.6 (27, 29-33, 36-42, 53, 59); BIO (25, 40)	SP-4.6 (27, 29-42, 44, 45, 49-52, 55, 58); BIO (19-21, 40, 49, 52, 63, 69-72)	Adverse but not significant
Plant	southern California black walnut	None/None	Yes	Significant absent mitigation	Significant absent mitigation	Significant absent mitigation	n/a	n/a		Significant absent mitigation	Significant absent mitigation	SP-4.6 (1-16, 21-26, 26a, 27, 28, 36-47a, 48, 55, 58, 63); BIO (1-16, 19, 22, 62, 88)	n/a	SP-4.6 (1-26a, 27-47a, 48-52, 55, 58, 63); BIO (1-16, 19, 22, 45, 49, 52, 62, 69-73)	Adverse but not significant
Plant	southwestern spiny rush	None/None	No	Adverse but not significant	Adverse but not significant	Adverse but not significant	n/a	n/a	n/a	Adverse but not significant	Adverse but not significant	Although no mitigation is required, the species will benefit from SP-4.6 (1-16, 53, 59, 63); BIO (1-16).			Adverse but not significant

Notes:

[1] For those plant species for which several years of mapped occurrence data are available, impacts to those species were evaluated by impacts to individuals rather than by loss of habitat. For those plant species for which occurrences were not mapped (List 4 and Locally Regulated), impacts to those species were evaluated by loss of habitat instead of impacts to individuals

6.5.5.2 Cumulative Impacts on Biological Resources

The following discussion evaluates the proposed Project's cumulative impacts on biological resources located within the Santa Clara River Watershed (SCRW). As permitted under California Code of Regulations, Title 14, section 15130, this cumulative impacts analysis uses a "project list" approach. (Cal. Code Reg. tit. 14, § 15130(b)(1)(A)). Under such an approach, the proposed Project's impacts are considered in conjunction with impacts from past, present, and reasonably foreseeable projects within the study area, which, in this case, is the SCRW. Because the SCRW is so large and spans across multiple jurisdictions, the project list for this cumulative impacts analysis includes projects only in the watershed from: (1) Los Angeles County and the City of Santa Clarita; and (2) Ventura County, extending west to the City of Santa Paula and including the community of Piru and the City of Fillmore. Note that this analysis generally addresses past, present, and reasonably foreseeable projects located within the watershed itself; however, for some biological resources other scales are more applicable and are used as appropriate. For certain species, the scope of analysis extends beyond the watershed boundary (*e.g.*, San Fernando Valley spineflower), and for other species the scope of analysis is more focused based on limited distribution and use of habitat within the watershed (*e.g.*, unarmored threespine stickleback).

This cumulative analysis describes the effects of past, present, and reasonably foreseeable projects on the biological resources of SCRW. The list of past, present, and reasonably foreseeable cumulative development projects used to conduct this cumulative impact analysis was prepared for the Santa Clara River Watershed Study (Dudek 2008A). The Watershed Study is provided in **Appendix 4.5**. Several additional cumulative development projects identified in **Tables 6.0-1 to 6.0-5** that have the potential to result in impacts to biological resources were also added to the evaluation of cumulative biological impacts because those projects were not included on the Watershed Study project list. In general, the additional projects are located in the Santa Clarita area and are small- to moderately sized (*i.e.*, one to 100 acres) urban "infill" projects. In total, 14 additional projects encompassing an area of 337 acres were added to this analysis.

It is recognized that any list of cumulative development projects will be "dynamic" in that projects will be discontinued and new development projects will be proposed. This is particularly true for the evaluation of the proposed Project's cumulative impacts and the large geographic area compassed by this analysis. Although specific development projects may subsequently be identified that are not included on the cumulative development list, reasonable efforts have been made to identify projects or groups of projects that could substantially contribute to cumulative habitat- and species-related impacts in the watershed area.

The evaluation of cumulative impacts was based on two vegetation and land cover data sets: (1) for the Project area the project-level vegetation and land covers data were used, as summarized in **Table 4.5-17**; and (2) for areas outside of the Project area boundaries, data provided by the California Gap Analysis Program (GAP) database (UCSB, 1999) were used, as these were the only other vegetation and land cover data available for the entire SCRW. The California GAP data were compiled in 1998 by overlaying existing land use maps, vegetation maps, and forest inventory data. The minimum mapping unit for upland vegetation communities was 100 hectares (247 acres), the minimum mapping unit for major wetland areas was 40 hectares (99 acres), and smaller wetlands were included with the same attributes as larger upland polygons. Thus, the California GAP vegetation database was mapped at a broader scale and necessarily lower precision than the project-level vegetation community and land cover mapping. Nonetheless, the GAP data provide reasonable estimates of watershed-wide vegetation community

conditions (*i.e.*, acreage) that existed prior to 1998, and, in conjunction with the project-level data, have been used as a starting point for this assessment's quantitative evaluation of cumulative impacts to various types of vegetation communities and land covers. To estimate cumulative impacts to vegetation communities and land covers that have occurred since 1998, this analysis has relied on an assessment of the development projects included on the list of past, present, and reasonably foreseeable future development projects. This list includes development projects located in the watershed area that were under consideration by Los Angeles County and the City of Santa Clarita during a period that generally extends between the late 1990s and 2008. Cumulative development projects within the study area located in Ventura County and the cities of Santa Paula and Fillmore include projects under consideration by those jurisdictions in late 2008 and early 2009.

No other readily available sources of habitat data were determined to be available that would facilitate the analysis of cumulative impacts on a watershed-wide basis. By estimating impacts to vegetation communities and land covers reasonably expected to occur as a result of the identified past, present and reasonably foreseeable development projects, and comparing those impact estimates to the available GAP data (UCSB, 1999), reasonable characterizations of impact trends throughout the SCRW have been provided. Based on the review and analysis of the project list that has been prepared, conclusions regarding the effects of cumulative impacts have been provided that reflect the "severity of the impacts and their likelihood occurrence" as required by the CEQA Guidelines (14. Cal. Code Reg. § 15130, subd. (b)). Although cumulative impacts are often expressed in this analysis in terms of acres and proportion of habitat loss, *etc*., it should be recognized that these numbers are only meant to be estimates of cumulative impact conditions and trends, and not project-specific evaluations of impacts to biological resources in the watershed. Where acreages are reported for those areas outside of the Project area, they should be considered approximations and not precise measurements. Because the California GAP data are general and the minimum mapping units are very coarse, these data cannot be used to provide specific analyses of impacts to habitats for wildlife and plant species. However, these data can be used to provide the context of the size of the watershed in relation to the impact associated with present and reasonably foreseeable projects.

Where acreages are reported throughout this cumulative impact analysis for the SCRW as a whole, and the California GAP vegetation database (UCSB, 1999) is referenced, the project-level mapping for the RMDP/SCP boundary has been incorporated into the reported acreage.

As in **Section 4.5**, this biology impacts analysis is organized into four separate discussions. The first addresses cumulative impacts to vegetation communities and land covers. The second addresses cumulative impacts to general wildlife (by species guild). The third addresses impacts to wildlife habitat linkages, wildlife corridors, and wildlife crossings (again, by species guilds). The fourth addresses impacts to special-status species, as such species are defined in **Subsection 4.5.3.1** of this EIS/EIR.

6.5.5.2.1 *Impacts to Vegetation Communities and Land Covers*

As indicated in **Subsection 4.5.5.2.3.2**, Impacts to Vegetation Communities, the following vegetative communities and land covers may be affected by the proposed Project and must be assessed for cumulative impacts: riparian communities; California annual grassland; purple needlegrass grassland; coastal scrub communities; chaparral communities; oak woodlands; California walnut woodland; agricultural land; and disturbed land. See **Table 6.0-34** (Summary of Cumulative Impacts to Vegetation Communities and Land Covers in the Santa Clara River Watershed).

There are, however, a host of vegetation communities and land covers that do not occur in the Project area but occur elsewhere in the SCRW and are included in the California GAP vegetation database (UCSB, 1999). These include coniferous forests, black oak forest, Mojavean pinyon and juniper woodlands, bare exposed rock, and sandy areas other than beaches. Because the Project will not affect these vegetation communities and land covers, they are not included in this cumulative analysis.

The cumulative analysis of impacts to vegetation communities and land covers is organized by three general themes, as follows.

The Santa Clara River Watershed is Relatively Undeveloped and Has Substantial Existing and Designated Open Space. Based on the California GAP data (UCSB, 1999), as of 1998, approximately 52,000 acres of the 1,038,100-acre SCRW[5] had been converted to agricultural uses and approximately 47,300 acres had been converted to industrial, commercial, and urban uses. Combined, these developed uses comprise about 99,000 acres of the total watershed.[6] Based on the project-level mapping for the Project area and the California GAP data for areas outside of the Project area, chaparral is the dominant vegetation community in the SCRW, accounting for about approximately 550,300 acres of the watershed. Coastal scrub comprises approximately 174,340 acres in the watershed. The third most common grouping includes higher elevation coniferous and black oak forests and Mojavean pinyon and juniper woodlands, which together account for about 14% of the SCRW; as noted above, however, none of these vegetation communities occur within the proposed Project area. Riparian and lower elevation oak woodlands account for about 3% of the watershed. The remainder is made up of disturbed (but not developed) lands, annual grasslands, and other land covers.

Figure 6.0-8 shows that most of the approximately 99,000 acres of land converted to development land uses (*i.e.*, agriculture, and residential, commercial, industrial, infrastructure development) has occurred (1) in the southern portion of the watershed along the Santa Clara River, where agricultural uses dominate, and (2) in the cities of Ventura, Santa Paula, Santa Clarita, and the communities of Valencia and Acton, where urban development dominates. It should be noted that **Figure 6.0-8** shows the California GAP data for the watershed outside of the Project area (*i.e.,* the RMDP/SCP boundary). Because of large scale of the vegetation and land covered data shown in **Figure 6.0-8**, the project-level data for the RMDP/SCP cannot be clearly shown on this figure. The reader is referred to **Figures 4.5-11-A1** through **4.5-11-C2**, RMDP/SCP -- Vegetation Communities and Land Covers, for the project-level detail.

Approximately 734,000 acres of the SCRW either currently exist as open space or are classified as open space under available zoning information (**Figure 6.0-9**) (U.C. Davis 2004). Approximately 635,000 acres of the SCRW of this open space currently have a land use designation of federal (Bureau of Land Management, USFWS, U.S. Forest Service) and state

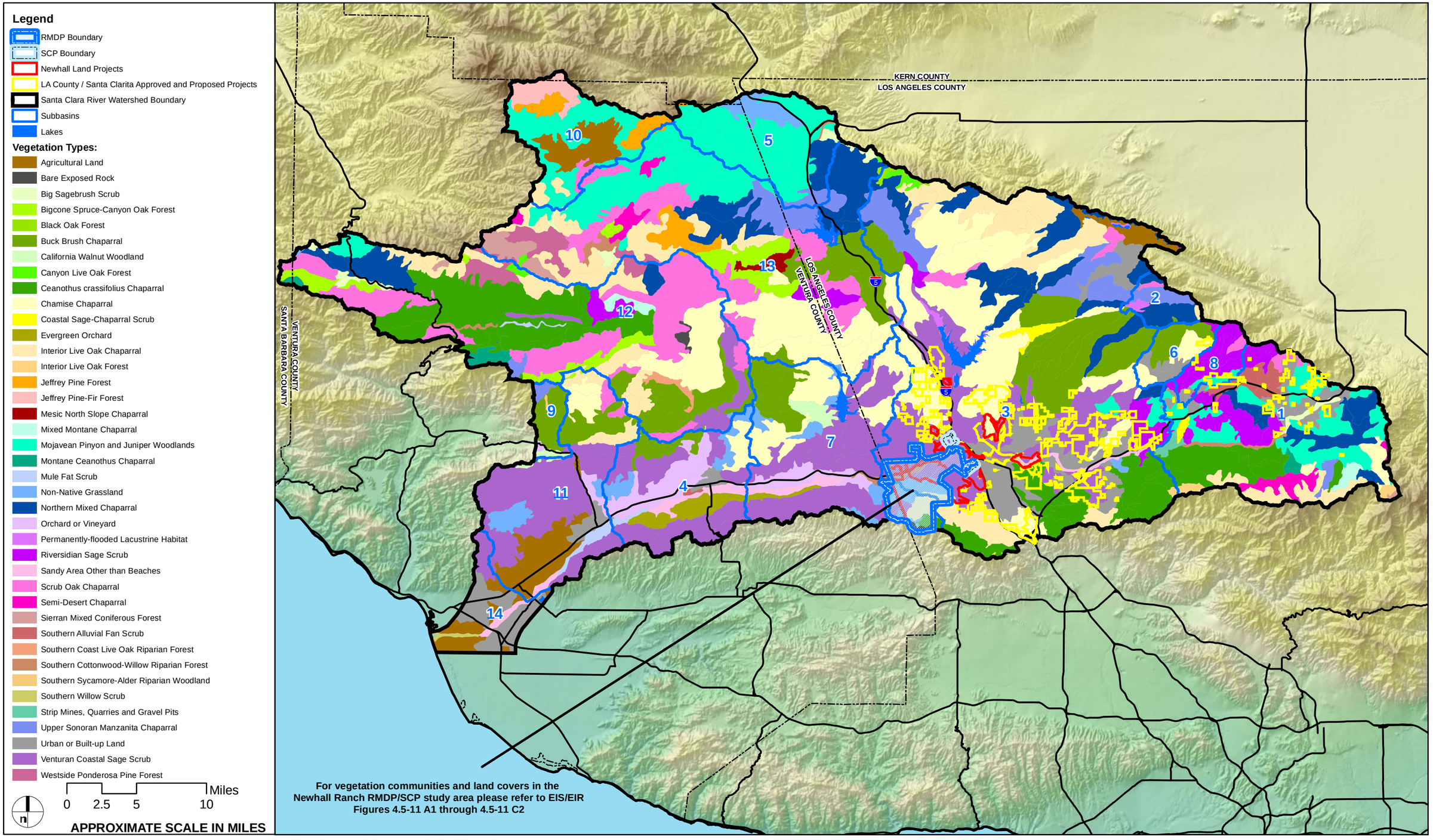
[5] The study area is defined as the Santa Clara River Watershed within Los Angeles and Ventura Counties (CalWater Version 2.2; http://gis.ca.gov/meta.epl?oid=22174)

[6] **Table 6.0-34** provides a summary of vegetation communities and land covers based on the California GAP data and the project-level mapping for the Project area. To be consistent with the groupings of vegetation communities and land covers analyzed in **Section 4.5**, California annual grassland, agriculture, and disturbed lands are grouped together.

(CDFG, Department of Parks and Recreation, State Lands Commission) public lands, as well as privately-held reserves (The Nature Conservancy). The approximately 98,000 acres classified as open space under available zoning information is not currently protected as natural open space, and could be subject to several uses that are allowed under some open space designation, such as active recreation. Relatively large sub-basins with substantial existing and/or classified open space include Eastern (sub-basin 3), Hungry Valley (sub-basin 5), Topa Topa (sub-basin 12), and Upper Piru (sub-basin 13) (**Figure 6.0-9**). Most of the land within each of these sub-basins is open space: 55% of Eastern, 93% of Hungry Valley, 97% of Topa Topa, and 98% of Upper Piru. Eastern is the largest sub-basin. As a result, this sub-basin's approximately 160,000 acres of open space is second only to Upper Piru, which has approximately 165,000 acres of open space. Smaller sub-basins with high percentages of open space include Bouquet (sub-basin 2), Mint Canyon (sub-basin 6), Sisar (sub-basin 9), and Stauffer (sub-basin 10).

Land Use Classification and Past, Present and Reasonably Foreseeable Projects. To assess the cumulative impacts of the proposed Project to vegetation communities and land covers, **Table 6.0-34** provides a breakdown of the potential permanent loss of the different vegetation communities and land covers that would occur as a result of: (1) the proposed Project; and (2) present and reasonably foreseeable projects elsewhere in the SCRW.

As indicated in **Table 6.0-34**, the SCRW consists of approximately 1,038,100 acres of land and supports a variety of vegetation communities and land covers. As described above, the GAP data, although mapped at the broad, landscape level, is the best available data for vegetation communities and land covers in the SCRW outside the Project area and are appropriate for the watershed-level analysis. The project-level mapping data for the Project area were incorporated into this analysis. According to land use information provided by Los Angeles County and Ventura County, and by the cities of Santa Clarita, Ventura, Santa Paula, and Fillmore, and the community of Piru, approximately 47,300 acres (4.6%) of the watershed had been developed per the GAP data (UCSB, 1999). In addition, project list information from these government entities indicates that another 32,300 acres (3.1%) are expected to be developed in the foreseeable future, based on present and reasonably foreseeable future projects. Present and reasonably foreseeable future projects, including the proposed Project, would convert approximately 37,890 additional acres (3.6%) of the watershed to developed uses, resulting in a total of approximately 85,200 acres (8.2%) of watershed being developed.



SOURCE: GAP Analysis Project, Generalized Land Cover of California

FIGURE 6.0-8

Santa Clara River Watershed - Existing Vegetation Types

Z:\Projects\j373801\Newhall Ranch\arcmap\EIS-EIR

KERN COUNTY
LOS ANGELES COUNTY
VENTURA COUNTY
SANTA BARBARA COUNTY
LOS ANGELES COUNTY
VENTURA COUNTY

10
5
13
12
9
11
4
7
14
3
2
6
8
1

Legend

- Newhall Land Projects
- LA County / Santa Clarita Approved and Proposed Projects
- Santa Clara River Watershed Boundary
- Public Ownership 2003
- Subbasins

Land Use

- Agriculture
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Very Low Density Residential
- Low Density Commercial
- High Density Commercial
- Industrial
- Mixed Use
- Planned Development
- Open Space
- Lakes and Reservoirs

n

0 2.5 5 10 Miles

APPROXIMATE SCALE IN MILES

NOTE: The California Land Use dataset was compiled at the University of California, Davis. All county general plans and multiple city general plans were integrated into a statewide Geographic Information System (GIS) dataset. The data were then standardized to thirteen consistent land use classifications for the intent of natural resource and infrastructure planning. The data are freely available and distributed through the California Resources Agency.

LAND USE SOURCE: California Resources Agency UC Davis 2004

FIGURE 6.0-9

Santa Clara River Watershed - Current Land Use Classifications

Z:\Projects\j373801\Newhall Ranch\arcmap\EIS-EIR

Table 6.0-34
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)[1]	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including Proposed Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the Project Plus Present and Reasonably Foreseeable Projects
Riparian Communities	• Mulefat scrub • Permanently flooded lacustrine habitat • Southern coast live oak riparian forest • Southern cottonwood/willow riparian forest • Southern sycamore/alder riparian woodland • Southern willow scrub • Big sagebrush scrub • Southern alluvial fan scrub	GAP = 23,430 RMDP/SCP = 1,190 Total = 24,620	225	800	1,025
California Annual Grassland, Agriculture, and Disturbed Land	• Non-native grassland • Open pit mines, quarries, gravel pits • Agriculture land • Evergreen orchard • Orchard or vineyard	GAP = 72,760 RMDP/SCP = 5,120 Total = 77,880	3,290	500	3,790
Coastal Scrub Communities	• Coastal sage/chaparral scrub • Riversidean sage scrub • Venturan coastal sage scrub	GAP = 170,000 RMDP/SCP = 4,340 Total = 174,340	1,520	19,000	20,520
Chaparral Communities	• Buck brush chaparral • Ceanothus crassifolius chaparral • Chamise chaparral • Interior live oak chaparral	GAP = 548,150 RMDP/SCP = 2,150 Total = 550,300	460	12,000	12,460

Table 6.0-34
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)[1]	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including Proposed Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the Project Plus Present and Reasonably Foreseeable Projects
	• Mesic north slope chaparral • Mixed montane chaparral • Montane ceanothus chaparral • Northern mixed chaparral • Scrub oak chaparral • Semi-desert chaparral • Upper Sonoran manzanita chaparral				
Oak Woodland Communities (Coast Live Oak Woodland, Mixed Oak Woodland, Valley Oak/Grass, Valley Oak Woodland)	• Canyon live oak forest Interior live oak forest	GAP = 3,700 RMDP/SCP = 1,470 Total = 5,170	95	0	95
California Walnut Woodland	• California walnut woodland	GAP = 3,600 RMDP/SCP = 27 Total = 3,627	<1	0	<1
Total—California GAP Vegetation + Project Impacts		**835,950**	**5,590**	**32,300**	**37,890**

Table 6.0-34
Summary of Cumulative Impacts to Vegetation and Land Covers in the Santa Clara River Watershed (GAP Data are Approximate)

Vegetation Communities and Land Covers	California GAP Vegetation Communities	Total Acres of Vegetation Communities and Land Covers in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (RMDP/SCP)[1]	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including Proposed Project)	Estimated Cumulative Impact Acres in Watershed, After Accounting for the Project Plus Present and Reasonably Foreseeable Projects
Other California GAP Vegetation Communities and Land Covers Occurring in SCRW but Not Mapped in Project Area in GAP Data Set[2]					
Other California GAP Woodland/Forest Communities not Mapped in Project Area	• Bigcone spruce/canyon oak forest • Black oak forest • Jeffrey pine/fir forest • Mojavean pinyon and juniper woodlands • Sierran mixed coniferous forest • Westside ponderosa pine forest	145,850	N/A	N/A	N/A
Other California GAP Natural Land Covers not Mapped in Project Area	• Bare exposed rock Sandy areas other than beaches	9,000	N/A	N/A	N/A
Other California GAP Man-made Land Covers not Mapped in Project Area	• Urban or built-up land	47,300	N/A	N/A	N/A
Grand Total for SCRW		**1,038,100**	**N/A**	**N/A**	**N/A**

Notes:

[1] The impacts based on the project-level mapping, as described in **Subsection 4.5.5.4.3.2.**

[2] These California GAP vegetation communities and land covers do not occur in the proposed Project area based on the California GAP data set and, therefore, are not a part of the cumulative impact analysis. They are shown in the table to illustrate the vegetation communities and land covers within the SCRW.

From a specific vegetation community and land cover perspective, the impacts from such development (including the proposed Project) is estimated to affect about 4.9% of existing California annual grassland, agriculture, and disturbed lands; 11.8% of existing coastal scrub communities, 2.3% of existing chaparral communities and 4.2% of existing riparian communities within the watershed (although it is likely that there would be some level of avoidance of these riparian areas). Purple needlegrass grassland, of which 0.6 acre is mapped in the Project area, would not be removed as a result of grading activities, but would be at increased risk of non-native, invasive plant and animal species, litter, hydrological alterations, human disturbance, and modified fire frequency. At the broad scale and necessarily lower precision of the California GAP vegetation database (UCSB, 1999), no oak woodlands or oak/grass vegetation communities were mapped outside of the Project area within present and reasonably foreseeable development sites. The proposed Project, however, would result in the loss of 95 acres of oak woodlands and oak/grass that were mapped at a more detailed project level. It is anticipated that present and reasonably foreseeable development within the watershed would also result in impacts to oak woodland and oak/grass vegetation communities, but these impacts can not be quantified with existing information. Note also that, generally speaking, most of the existing and future projects in the watershed occur or would occur on slopes of 0% to 20%, as these lower slopes are easier to grade and build upon than are steeper slopes, and are often adjacent to areas already developed. For example, in Los Angeles County, of the 6,774 acres of coastal scrub located on land zoned for development, 6,603 acres (97%) occur on slopes of 0% to 20%.

The Proposed Project Area Comprises a Small Proportion (0.5%) of the Santa Clara River Watershed. The proposed Project area -- defined as implementation of the RMDP/SCP and build-out of the Specific Plan, VCC, and Entrada planning areas -- would affect 0.5% (5,590 acres of approximately 1,038,100 acres) of the vegetation communities and land covers that are in the watershed (**Table 6.0-34**). The proposed Project is confined to a substantially urbanized area of one sub-basin -- the Eastern sub-basin (sub-basin 3)—which has the most existing developed uses in the watershed (**Figure 6.0-8**). Nonetheless, this sub-basin supports several federal- and/or state-listed threatened and endangered species such as unarmored threespine stickleback, arroyo toad, least Bell's vireo, and San Fernando Valley spineflower. Development in this sub-basin increases the potential for cumulative effects to these species. The proposed Project is downstream of, and contiguous with, urban development in the City of Santa Clarita and the community of Valencia. The proposed Project would not affect the headwaters of the Eastern and Santa Felicia sub-basins (sub-basins 3 and 7, respectively).

As shown in **Table 6.0-34**, the great majority of the SCRW watershed is currently undeveloped. Approximately 4.6% of the watershed has been converted to agricultural, industrial, commercial, and urban uses. Based on the project lists from the affected jurisdictions in the watershed (including the proposed Project) a total of about 3.6% (37,890 of 1,038,100 acres) of vegetation communities and land covers in the SCRW could be developed at some point in the future. Adding this to existing development (approximately 47,300 acres) would result in a total cumulative impact of approximately 8.2% (85,000 acres of 1,038,100 acres) of the SCRW. Without accounting for past, present, or reasonably foreseeable mitigation and the proposed Project's individual contribution to the above impacts to vegetation communities and land covers, the estimated loss of vegetation communities and land covers in the SCRW could be a potential significant cumulative impact.

Past, present, or reasonably foreseeable mitigation, other than for the proposed Project, is difficult to estimate within the context of this cumulative analysis because of the variety of size, type, and impact of each past, present, or reasonably foreseeable project. In particular, for upland vegetation communities (*e.g.*, coastal scrub, chaparral, and grassland), depending on whether the impact is significant, mitigation in terms of replacement acreage may or may not have been, or be, required. Without a state- and/or federally-listed species inhabiting impacted areas (*e.g.*, coastal California gnatcatcher occupation of coastal scrub), regulation of impacts of upland vegetation communities and requirements for mitigation are variable. Projects that have special-status vegetation communities and/or species on site often have and would require some set aside of open space. In addition some development projects may be required to provide habitat conservation areas.

For state and federal jurisdictional wetlands (including riparian) subject to regulation under Fish and Game Code section 1600 *et seq.* and Clean Water Act (CWA) section 404 (33 U.S.C. 1251 *et seq.*), CDFG and Corps implement "no net loss" policies as part of their respective permitting process for impacts to wetlands. California Executive Order W-59-93 established a State Wetland Conservation Policy (SWCP) that provides for the preservation and protection of wetland communities (State of California Executive Department 1993). A central goal of the SWCP is to ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreages and values. Similarly, per a 1990 Memorandum of Agreement (MOA) between the EPA and the Corps to demonstrate compliance with the CWA section 404(b)(1) guidelines, it is the policy of the Corps to achieve the goal of no overall net loss of wetlands functions and values/services, although it is recognized in the MOA that no net loss of functions and values/services may not be achieved in every permit action (EPA and U.S. Army 1990). With these policies in place, it is reasonable to assume that the permanent cumulative impacts to jurisdictional wetlands will be substantially less than estimated for this analysis.

Oak woodlands also receive some level of protection that would reduce permanent cumulative impacts. As described in **Subsection 4.5.2**, Regulatory Setting, the County of Los Angeles Oak Tree Ordinance (CLAOTO) regulates impacts to oak trees with trunks that are at least 8 inches in diameter (or that have two trunks totaling at least 12 inches in diameter) as measured 4.5 feet above natural ground (County of Los Angeles 1988). CLAOTO requires that all potential impacts to regulated oak trees be reported in a detailed oak tree report and usually requires mitigation as a condition of an Oak Tree Permit issued by the County. Ventura County also has Tree Protection Regulations (County of Ventura 1992) that regulate impacts to oak trees in unincorporated areas of the County that are at least 9.5 inches in circumference (or that have two or more trunks with at least one of the trunks 6.25 inches in circumference) as measured at 4.5 feet above the ground. Impacts to oak trees in Ventura County are mitigated per the Ventura County Non-Coastal Zoning Ordinance section 8107-25.10 - Offsets for Altered, Felled, or Removed Trees, which requires a minimum 1:1 ratio of mitigation. With these regulations, it is reasonable to assume that the permanent cumulative impacts to oak woodlands would be substantially less than would occur absent mitigation.

Of the approximately 85,200 acres that are either developed currently or, based on the project list, expected to be developed in the foreseeable future, the proposed Project would consume 5,590 acres of the approximately 37,890 acres of impact from recent past, present, and reasonably foreseeable future projects. CEQA requires an analysis of whether this contribution to a

significant impact can be rendered less than "cumulatively considerable," as that term is defined under CEQA (14. Cal. Code Reg. § 15130):

> "An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable *if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.* The Lead Agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable." *(Italics added for emphasis.)*

With respect to the proposed Project, the Newhall Ranch Specific Plan Program EIR and this EIS/EIR impose measures on the applicant to mitigate the loss of vegetation communities. These measures include (1) replacing the functions and values/services of riparian vegetation communities that may be lost through construction, and (2) the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA, High Country SMA, and Salt Creek area, totaling approximately 9,753 acres. Mitigation also includes compliance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 water quality certifications, section 404 individual permits, and section 1602 Streambed Alteration Agreements) (see **Section 4.6**, Jurisdictional Waters and Streams). Mitigation for impacts to wetlands would achieve the goals of CDFG's and Corps' "no net loss" policies described above and, therefore, would result in no cumulative contribution to impacts to jurisdictional wetlands. Overall, these mitigation measures would offset the proposed Project's direct removal of most vegetation communities in the proposed Project area. The measures also will offset potential secondary impacts to purple needlegrass grassland.

Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR (see **Subsection 4.5.6,** Mitigation Measures), the proposed Project would not result in a cumulatively considerable contribution to potential significant cumulative impacts on all of the vegetation communities and land covers in the SCRW, except for coastal sage scrub.

The California GAP vegetation (UCSB, 1999) and the project-level mapping for the Project area include approximately 174,000 acres of coastal scrub in the SCRW. Without accounting for the proposed Project, other past, present, and reasonably foreseeable future projects within the SCRW result in a loss of approximately 19,000 acres of coastal scrub since the California GAP data were compiled. Beginning well before 1998, coastal scrub had already been extensively cleared throughout much of California for various land use changes (mainly agriculture and urbanization). For example, Westman (1981) analyzed historic losses of coastal scrub state-wide and estimated that only about 15% of its original acreage was still extant at that time. Most coastal scrub occurs on relatively gentle slopes (0% to 20%) where land use conversions for agriculture and development tend to be concentrated because these lands are more developable. The SCRW has been less extensively developed than other regions in southern California and coastal scrub loss in the watershed probably has been proportionally less than Westman's (1981) state-wide estimate. Still, it is likely that much of the upland agricultural land mapped by the 1998 California GAP project in the SCRW supported coastal scrub habitat prior to these land use

conversions. The acreage of coastal sage scrub lost prior to 1998 however cannot be quantified for this analysis.

Most coastal scrub alliances and associations mapped on-site are ranked as G4S4 by CDFG (2007), meaning that they are "apparently secure" both globally and within California, "but factors exist to cause some concern; *i.e.*, there is some threat." For coastal scrub, the primary concerns are the extensive and ongoing habitat loss (Westman 1981; O'Leary 1990). Further, coastal scrub is used almost exclusively by the federally-listed threatened coastal California gnatcatcher (Atwood 1993), and many other special-status species occur regularly in coastal scrub (Davis *et al.* 1994). In addition to land use conversions, much coastal scrub vegetation has been lost due to secondary effects of population increases and land development throughout southern California. These effects include habitat fragmentation, invasive non-native species, livestock grazing, off-highway vehicles, altered fire regime, and perhaps air pollution (O'Leary 1995; Minnich and Dezzani 1998; Rundel 2007). Some coastal scrub vegetation occurs on National Forest lands, where land use management is generally compatible with habitat conservation, but these areas tend to be at its upper elevational limits, where many of the special-status species associated with coastal sage scrub are less common or absent (Stephenson and Calcarone 1999).

Based on this analysis, the proposed Project and other past, present, and reasonably foreseeable future projects would result in a cumulative loss of approximately 20,500 acres of coastal scrub in the SCRW. This loss represents about 54% of the total 37,890 acres loss of all vegetation communities in the SCRW due to past, present, and reasonably foreseeable projects, including the proposed Project; *i.e.*, most of this development in the watershed has or will take place on land dominated by coastal scrub. The proposed Project's direct (RMDP/SCP) and indirect (build-out of the Specific Plan, VCC, and Entrada planning areas) effects would result in the permanent removal of approximately 1,520 acres of coastal scrub communities, or about 35% of the 4,340 acres of coastal scrub communities present in the Project area; proportionally lower than the overall estimated loss, but still substantial. Also, when considered from a landscape level, the coastal scrub community on site represents a relatively large, intact tract within this portion of the SCRW. Due to coastal scrub's high habitat value for a variety of special-status plants and wildlife, the extensive coastal scrub losses in southern California prior to 1998, and the substantial acreage lost as a result of past, present, and reasonably foreseeable projects, including the proposed Project, the loss of 20,500 acres of coastal scrub could be a potential significant cumulative effect. The proposed Project's contribution to this loss would be cumulatively considerable.

Whether the proposed Project's cumulatively considerable contribution to the potential significant cumulative effect of coastal scrub loss in the SCRW can be reduced to a level less than significant is considered in the broader context of conservation planning for the community. In some regions of southern California, regional planning projects have been designed to limit continued losses of coastal scrub (*e.g.*, state Natural Community Conservation Planning (NCCP) and federal Habitat Conservation Plan (HCP) programs). These programs are designed to preserve large, contiguous tracts of coastal scrub and other natural vegetation communities in permanent managed open space areas and to minimize fragmentation and other secondary impacts to these preserved areas to mitigate for the losses that do occur. There is currently no similar comprehensive, large-scale

planning effort in the SCRW to ensure long-term coastal scrub conservation in large, unfragmented tracts within the watershed.

In addition, long-term secondary (off-site) impacts to coastal scrub would occur near developed areas after project build-out. These landscape-level impacts and "edge" effects include the increased risk of non-native, invasive plant and animal species (*e.g.*, Argentine ants), human disturbance (*e.g.*, trampling, illegal trails), and shortened fire intervals that could result in type conversion of coastal scrub to annual grassland. These Project-induced secondary impacts to coastal scrub are mitigated at the project-level to a level less than significant primarily through dedication of lands in the High Country SMA, River Corridor SMA, Salt Creek area, which include approximately 1,900 acres of coastal scrub, as well as preservation of smaller patches in Open Areas within or adjacent to the proposed development areas.

Despite implementation of the mitigation measures required by the Newhall Ranch Specific Plan EIR and recommended by this EIS/EIR, implementation of the proposed Project would result in a net loss of approximately 1,520 acres of coastal scrub. In the context of the extensive historical losses of coastal scrub in southern California, the estimated loss of 20,500 acres in the watershed as a result of the proposed Project and other past, present, and reasonably foreseeable future projects within the SCRW; the importance of this habitat to a variety of special-status plants and animals; and the absence of a regional conservation effort to conserve or manage remaining coastal scrub in the watershed, the proposed Project would result in a cumulatively considerable contribution to a potential significant and unavoidable cumulative loss of coastal scrub in the SCRW.

6.5.5.2.2 *Impacts to Common Wildlife Organized by Species Guilds and Other Associations*

The cumulative impact analysis for common wildlife also uses the "project list" approach for the watershed, as applied to the wildlife guilds shown in **Table 6.0-35**. For each wildlife guild or other association, the habitat relationships, as defined in **Subsection 4.5.5.2.3.4**, were analyzed in the same manner as the vegetation communities and land covers described above in **Subsection 6.5.5.2.1**.

Table 6.0-35
Summary of Cumulative Impacts to Wildlife Guilds in the Santa Clara River Watershed (GAP Data are Approximate)[1]

Wildlife Guild	Habitat Relationships[2]	Total Acres of Habitat in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project (SCP)	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including Proposed Project)	Estimated Cumulative Impact Acres in Watershed Including Proposed Project Plus Present and Reasonably Foreseeable Projects
Insect Guild; Bat Guild; and Overall General Impacts	• Coastal scrub • Chaparral • California annual grassland • Riparian • Oak and walnut woodland • Agriculture • Disturbed	836,000	5,590	32,300	37,890
Reptile--Low Mobility Guild Mammal--Low Mobility	• Coastal scrub • Chaparral • California annual grassland	747,000	3,050	31,000	34,050
Reptile and Amphibian--Semi-Aquatic Guild Bird-Riparian	• Riparian	25,000	230	800	1030
Bird-Upland Scrub and Chaparral	• Coastal scrub • Chaparral	725,000	1,980	31,000	32,890
Bird-Upland Grassland	• Non-native grassland	22,000	1,070	50	1,120
Bird-Upland Woodland	• Oak woodland	5,170	95	0	95
Mammal-High Mobility	• Coastal scrub • Chaparral • Riparian • Oak woodland	755,000	2,300	32,000	34,300

[1] Acreages were not quantified for the Aquatic Mollusk guild because impacts are site-specific; for the Fish guild because the distribution of the species in the guild is limited to the Santa Clara River; and for the Bird -- Raptor and Mammal -- Moderate Mobility guilds because habitat used by the species in these guilds is too diverse to generate a broad, watershed-scale estimate.

[2] Acreages based on California GAP Vegetation Communities (UCSB, 1999) for areas outside of the Project boundaries and on the project-level data for areas within the Project area boundaries. Acreages are based on the totals reported in **Table 6.0-34** and are rounded to nearest 1,000 acres for totals greater than 20,000 acres at watershed level and to nearest 10 acres for project-level impacts.

The Santa Clara River Watershed is Relatively Undeveloped and Has Substantial Existing and Designated Open Space Providing Habitat For Wildlife. As shown in **Table 6.0-34**, approximately 991,000 acres of the SCRW are currently undeveloped and capable of providing habitat for wildlife.[7] With regard to vegetation communities and land covers mapped in the proposed Project area that also occur elsewhere in the watershed, the watershed includes approximately 836,000 acres. The amount of undeveloped habitat for the different wildlife guilds in the SCRW ranges from approximately 5,200 acres of oak woodlands for the Bird -- Upland Woodland guild to approximately 836,000 acres for the Insect and Bat guilds.[8] This latter figure reflects the fact that insects and bats can use virtually all the undeveloped habitat in the SCRW. Of the approximately 991,000 acres of undeveloped land in the SCRW, approximately 734,000 acres are existing or classified open space (**Figure 6.0-9**), including 635,000 acres of lands designated for public use. Of the 734,000 acres of existing or classified open space, approximately 593,000 are comprised of the types of vegetation communities and land covers occurring on the proposed Project.

Cumulative Net Increase in Jurisdictional Waters and Wetlands Providing Wildlife Habitat. Waters and wetlands are critical resources for several of the wildlife guilds. The guilds most reliant on waters/wetlands throughout the SCRW include the Reptile and Amphibian -- Semi-Aquatic guild, the Fish guild, the Bird -- Riparian guild, and the Bird -- Raptor guild (primarily for raptor nesting habitat). As shown in **Table 6.0-35** (Summary of Cumulative Impacts to Wildlife Guilds in the Santa Clarita River Watershed), a small proportion of the habitat used by these guilds have been or would be affected by development in the SCRW. Also, according to the Santa Clara River Watershed Study (Dudek 2008A), mitigation measures for activities permitted by CDFG and Corps between 1988 and 2006 in Los Angeles and Ventura counties have resulted in a cumulative net increase in jurisdictional waters/wetlands in the SCRW. (See **Subsection 6.5.6.2**, Cumulative Jurisdictional Waters Impacts.) These estimated net increases are consistent with CDFG's and Corps' "no net loss" policies for wetlands discussed above. Although the Watershed Study acreages assume 100% mitigation success, and although it is likely that some of the mitigated acreage has not been successful for various reasons (*e.g.*, poor design, inappropriate soils or hydrology, poor maintenance), it is reasonable to conclude that there has been no net cumulative loss of waters/wetland acreage from agency-permitted activities in the watershed since 1988 because of the estimated net increases. However, as concluded by Ambrose *et al*. (2006), acreage losses and gains resulting from agency-permitted activities do not always reflect wetland functions and values/services, and hence, wildlife habitat value. Based on Ambrose *et al.*'s (2006) review of 143 section 401 permits across 12 regional Water Boards and subregions in California, approximately 27% of mitigation acreage consisted of drier riparian and upland habitats that were outside of jurisdictional areas. Wildlife species that rely on wetter

[7] This approximately 991,00 acres figure is derived by subtracting the number of existing development acres (47,270) from the total size of the entire SCRW (1,038,100 acres).

[8] This does not mean, however, that species in each guild actually use all of the available habitat; nor does it mean that species in each guild have been observed on each acre of available habitat. For example, agricultural and disturbed lands are considered habitat for the Insect and Bat guilds and, therefore, are included in the total acreage of habitat for these guilds; however, both insects and bats tend to concentrate activities in microhabitats within the larger landscape and, therefore, are not uniformly distributed through the 836,000 acres.

habitats, such as semi-aquatic amphibians and reptiles, may not use the drier riparian and wetland habitats to the same extent or for certain phases of their life cycle (*e.g.*, reproduction).

Although the success of past permitted activities likely has been mixed with regard to mitigation for impacts to waters and wetland functions and values/services, new projects are approved and constructed with updated technologies for protecting and restoring waters/wetlands. With these new technologies, the functions and values/services of the waters and wetlands within the SCRW are expected to be enhanced in the future. To this end, the proposed Project applicant will implement conservation measures that are designed to permanently preserve the Santa Clara River corridor and portions of tributary drainages through the proposed Project reach and to protect and manage the waters/wetlands on the proposed Project site. These conservation measures include previously incorporated mitigation measures from the Newhall Ranch Specific Plan EIR and additional mitigation measures recommended in this EIS/EIR. The River Corridor SMA is approximately 977 acres and includes approximately 332 acres of combined southern cottonwood-willow riparian forest and southern willow scrub. The River Corridor SMA provides restoration and enhancement opportunities for riparian vegetation; and all riparian vegetation permanently removed from the proposed Project will be replaced in kind at a minimum 1:1 ratio for Low Reach Value vegetation (*e.g.*, arrow weed scrub) to a 4:1 ratio for High Reach Value southern cottonwood-willow riparian forest (*e.g.*, see Mitigation Measure BIO-2 and Table 4.5-68 in **Subsection 4.5.6**, Mitigation Measures). Implementation of these mitigation measures will result in a net increase of wetland/riparian habitat and are expected to improve the overall value of the River corridor and associated aquatic, semi-aquatic, and riparian wildlife guilds. In addition, conservation measures include protection and enhancement of riparian and wetland habitat in the High Country SMA and Salt Creek area, as well as Open Area, with associated wetland mitigation plans subject to the approval of the Corps and CDFG that ensure no net loss of similar functions and values/services (see Mitigation Measures BIO-1 through BIO-16 in **Subsection 4.5.6**, Mitigation Measures). These conservation measures are also described in detail in the Newhall Ranch Resource Management and Development Plan (Dudek 2008B).

Land Use Classification and Present and Reasonably Foreseeable Projects. Similar to **Table 6.0-34** for vegetation communities and land covers, Table 6.0-35 provides a breakdown of the estimated cumulative loss of wildlife habitat (by guild) that would result from (1) the proposed Project, and (2) present and reasonably foreseeable development as set forth in the "project lists" provided by the various land use jurisdictions within the SCRW.

Present and reasonably foreseeable projects, including the proposed Project, with the exception of oak woodlands, would result in habitat losses ranging from approximately 980 acres for the Reptile and Amphibian -- Semi-aquatic and Bird -- Riparian guilds to approximately 38,000 acres for the Insect and Bat guilds. Based on the GAP data (UCSB, 1999) alone, there would be 0 acres of impacts to habitat for the Bird -- Upland Woodland outside of the Project boundaries. However, based on project-level mapping there would be 95 acres of habitat loss for this guild in the Project area. Because of the coarse scale of mapping, there are almost certainly oak woodlands on other present and reasonably foreseeable projects and, consequently, it is expected that there would be impacts to oak woodlands resulting from these projects. As discussed above, mitigation for loss of upland habitats such as coastal scrub, chaparral, and grassland due to present and reasonably foreseeable projects is uncertain. While CDFG and Corps "no net loss" policies for wetlands, and mitigation required for impacts to oaks by Los Angeles and Ventura

counties, are intended to offset impacts to these resources, some net loss of function and value for wildlife, such as semi-aquatic amphibians and reptiles, could occur even if there is no net loss of acreage. Due to the likely permanent net loss of several tens of thousands acres of upland habitats (*e.g.*, coastal scrub, chaparral, and grassland) and the potential loss of some functions and values/services of riparian, wetland, and oak woodland habitats for wildlife, the cumulative impact on wildlife guild habitats could be potentially significant.

The Proposed Project's Contribution to the Potential Cumulative Impact. The proposed Project's contribution to this potential cumulative impact, broken down by wildlife guild, ranges from 95 acres for the Bird -- Upland Woodland guild to 5,590 acres for the Insect and Bat guilds. By proportion, the proposed Project's largest contribution to the potential cumulative impact on habitat is 1,070 acres of the total 1,120 acres for the Bird -- Upland Grassland guild. Without accounting for mitigation, the proposed Project's contribution to the potential cumulative impact on wildlife guilds could be cumulatively considerable. However, the mitigation measures recommended in this EIS/EIR, when added to those imposed by the Newhall Ranch Specific Plan Program EIR, render the proposed Project's contribution "less than cumulatively considerable," as that term is used in California Code of Regulations, title 14, section 15130, subdivision (a)(3). These mitigation measures include replacing the functions and values/services of riparian vegetation communities that may be lost through construction, as well as the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA, High Country SMA, and Salt Creek area, totaling approximately 9,753 acres. Mitigation also includes compliance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 water quality certifications, section 404 individual permits, and section 1602 Streambed Alteration Agreements). These mitigation measures, as described in detail in **Subsection 4.5.5.2.3.4**, Impacts to Common Wildlife, will reduce the impacts of the direct removal of wildlife habitats in the proposed Project area. Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR, the proposed Project would not result in a cumulatively considerable contribution to potential significant cumulative impacts to wildlife guilds in the SCRW.

6.5.5.2.3 *Impacts to Wildlife Habitat Linkages, Wildlife Corridors, and Wildlife Crossings by Species Guilds*

In this subsection, the EIS/EIR evaluates, on a guild-by-guild basis, the proposed Project's contribution to potential cumulative impacts on wildlife habitat linkages, wildlife corridors, and wildlife crossings. Note that the analysis focuses on watershed-level habitat linkages rather than on a project-level movement corridors and connectivity. Because project-level data are not available for project-specific movement corridors and crossings, analysis of these data would be speculative. However, it can be assumed that other projects with broad impacts over a landscape would be expected to constrain wildlife use and distribution on site, and have a potential to block movement through certain areas, including through established wildlife corridors and crossings.

As described in **Subsection 4.5.3.4.7**, Wildlife Habitat Connectivity and Buffers, landscape habitat linkages in the SCRW consist of relatively large open space areas that (1) contain natural habitat, and (2) provide connection between at least two larger adjacent open spaces that can provide for both diffusion and dispersal of many species. Linkages can form contiguous tracts of habitat when adjacent to other

open space areas. Large open space networks can be formed in this way to connect and conserve habitat throughout entire regions (Bennett 2003).

Figure 4.5-22 shows the conceptual regional open space connectivity identified by Penrod *et al.* (2006) that would provide for landscape-scale habitat connectivity between the Santa Susana Mountains to the south and the Los Padres National Forest to the north. These conceptual linkages encompass the High Country SMA and the Salt Creek area within the proposed Project area and the Santa Clara River west of the proposed Project area. Penrod *et al.* (2006) developed this connectivity concept using a "least cost analysis," as described in **Subsection 4.5.5.2.4.2**. According to Penrod *et al.* (2006), the High Country SMA and Salt Creek area, along with regional open space conservation areas and the limitations on development imposed by initiatives such as "SOAR,"[9] constitute important components of a regional linkage design—one that would connect the Santa Monica Mountains, the San Gabriel Mountains, and the Sierra Madre Mountains.

The High Country SMA and Salt Creek area within the proposed Project area provide a key component of the east-west linkage that crosses Interstate 5 and connects to the Angeles National Forest in the San Gabriel Mountains to the east and to Ventura County SOAR open space to the southwest. They also provide a key component of the north-south linkage between the Santa Susana Mountains and the "Fillmore Greenbelt" to the northwest that further links to the Los Padres National Forest and the Angeles National Forest to the north. As described in **Subsection 4.5.5.2.4.1**, Habitat Connectivity and Wildlife Movement Background Information by Guild, most of the species in the upland habitat guilds, including Mammal — High Mobility, Mammal — Moderate Mobility, Low Mobility, and Moderate Mobility Aerial, probably use the High Country SMA and Salt Creek area extensively.

North-south movement between the Santa Susana Mountains and the "Fillmore Greenbelt" requires wildlife to cross SR-126. **Figure 4.5-32** shows the three existing crossings in Ventura County west of the proposed Project area that can be accessed by wildlife moving along the Santa Clara River. These crossings, which would not be affected by the proposed Project, are arched culverts large enough for vehicles to pass through and are large enough to convey the Mammal -- High Mobility guild species, as discussed above in **Subsection 4.5.3.4.7**. These crossings measure about 4.4 meters (14 feet, 7 inches) in height, 7.5 meters (25 feet) in width, and 51.8 meters (170 feet) in length, resulting in an openness factor of 0.65, which well exceeds the openness factor of 0.25 found by Donaldson (2005) to be adequate for white-tailed deer. The easternmost of these crossings will serve wildlife movement within and through the proposed Project area *via* the Salt Creek corridors discussed above in **Subsections 4.5.5.2.4.2** and **4.5.5.2.4.3**, as well as Tapo Canyon in Ventura County.

In addition to the High County SMA and Salt Creek area, the Santa Clara River corridor is a regionally important riparian and wetland resource, in part due to its role as a functioning wildlife corridor and habitat linkage. The River Corridor SMA (*i.e.*, those portions of the River corridor that lie within the proposed Project area) will be approximately 1,000 to 2,000 feet wide and will remain sufficiently wide after development to accommodate flood events while maintaining the existing mosaic of habitat types currently present along the river (PACE 2009). The RMDP (**Appendix 1.0**) provides for "transition"

[9] Save Open-Space and Agricultural Resources (SOAR) initiative passed by Ventura County voters in 1998 that amended the County's General Plan to limit development on agricultural, open space, and rural lands within Ventura County. See Ventura County General Plan, GOALS, POLICIES & PROGRAMS, (2008, pp. 6–8).

areas between the River Corridor SMA and development, restricts recreational uses of the River Corridor SMA, and provides for long-term management to ensure that it continues to function as a habitat linkage and movement corridor

As discussed in **Subsection 4.5.5.2.4.2**, Impacts to Wildlife Landscape Habitat Linkages, the Castaic/Hasley corridor (**Figure 4.5-40**) will also remain intact as Open Space/Open Area following implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas.

This corridor will allow for movement of many Mammal — High Mobility species (*e.g.*, coyote, mule deer, and possibly mountain lion and bobcat), and will function as live-in habitat and movement habitat for the other species guilds. The Castaic/Hasley corridor will continue to have connectivity value between the Santa Clara River and upland habitats to the northeast of the proposed Project area extending to Castaic Lake and the Angeles National Forest.

Other existing habitat areas currently function as linkage habitat in the undeveloped landscape and may be used by wildlife for movement between the Santa Susana Mountains to the south and the Los Padres National Forest to the north. Some of these linkages will be somewhat constrained by build-out of the Specific Plan area, including Potrero Canyon and Long Canyon south of the River corridor and Chiquito Canyon and San Martinez Grande Canyon north of the River (**Figure 4.5-40**).

The consideration of potential cumulative impacts to wildlife landscape habitat linkages falls under the following significance criteria as previously identified in **Subsection 4.5.4**: whether the proposed Project and present and reasonably foreseeable development would interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors (Criterion 4).

As discussed above, the Santa Clara River is an important regional habitat linkage in the SCRW. The combined High Country SMA and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and are those identified by Penrod *et al.* (2006) as important components of regional habitat connectivity. Notwithstanding the preservation of these key areas, the loss of approximately 5,590 acres associated with the proposed Project and the approximately 32,300 acres of impacts from present and reasonably foreseeable projects will continue to reduce both the size and availability of linkages and corridors in the SCRW. This is particularly true for areas adjacent to the Santa Clara River where both agricultural practices and the development of commercial and residential developments have focused.

Open space, public land, and wildlife compatible uses within the SCRW include National Forest Service lands (both the Los Padres and Angeles National Forests), other designated public ownerships (*e.g.*, BLM, State Parks), utility corridors, agricultural and pasture lands, and undeveloped private areas. The SCWR also includes commercial, industrial, and residential development. Water infrastructure including dams associated with Bouquet, Piru, and Castaic Creeks and diversion structures such as the Freeman diversion dam on the Santa Clara River are also present. The rapid expansion of population centers and urban growth in this region (particularly the Santa Clara Valley) has resulted in the continued loss of undeveloped lands, and the degradation of riparian and upland habitats that support populations of unique or rare species. Natural and wilderness areas in the SCRW, particularly near the Santa Clara River, are gradually being displaced by development, and wildlife movement corridors in the region have been

modified to the extant that the movement of wildlife is curtailed or limited in some areas (Penrod *et al.* 2006), and expanding urban population centers are degrading the habitat values in urban/wilderness edge areas.

As indicated in **Table 6.0-34**, the SCRW consists of approximately 1,038,100 acres of land and supports a variety of vegetation communities and land covers. According to the California GAP data (UCSB, 1999), approximately 47,300 acres of the watershed had been developed as of 1998. In addition, project list information for the watershed within Ventura and Los Angeles counties indicates that another 37,890 acres are expected to be developed in the foreseeable future, based on past, present, and reasonably foreseeable projects, including the proposed Project, resulting in a total of approximately 85,200 acres of watershed being developed.

Figure 6.0-8 shows that most of the approximately 99,000 acres of land converted to development land uses in the SCRW (*i.e.*, agriculture, and residential, commercial, industrial, infrastructure development) has occurred (1) in the southern portion of the watershed along the Santa Clara River, where agricultural uses dominate, and (2) in the cities of Ventura, Santa Paula, Santa Clarita, and the communities of Valencia and Acton, where urban development dominates. In the these portions of the SCRW, urbanization has resulted in alterations to the natural landscape and the fragmentation of natural vegetation communities, isolation of wildlife habitat, and the creation of discontinuous movement corridors. This is demonstrated in portions of the Santa Clara River Valley where development along the Interstate 5 corridor has narrowed the existing landscape features and now inhibits movement along much of the Valley floor. However, a large amount of relatively unobstructed and natural land still exists within this region, including large contiguous areas within the Angeles and the Los Padres National Forests and within private lands including the Forest Service lands. Development within Forest Service lands in this area is primarily limited to small residential communities on private in holdings or recreational cabins, OHV use, reservoirs and aqueducts, ranger stations, recreational areas and campgrounds, utility corridors, access roads, hiking trails, and fuel breaks.

Without accounting for past, present, or reasonably foreseeable mitigation, there could be constraints on the use of habitat linkages, wildlife corridors, and wildlife crossings in developing regions of the SCRW by present and reasonably foreseeable projects, including the proposed Project. The proposed Project will constrain the use of some regional landscape-level linkages, local wildlife corridors (*i.e.*, within the Project development area), and wildlife crossings within the developed portions of the proposed Project area and large areas of habitat loss will occur (see **Subsection 4.5.5.2.4**, Impacts to Wildlife Movement and Habitat Connectivity). It was determined that at the project-level, impacts to landscape habitat linkages and wildlife crossings, however, would be adverse but not significant and that impacts to local wildlife corridors would be significant absent mitigation. A variety of mitigation measures will be implemented that would reduce impacts to wildlife corridors to a level less than significant, including dedication of the River Corridor SMA, High Country SMA, and Salt Creek area, enhancement of an existing crossing under SR-126 west of the Project area that will convey wildlife movement form the River corridor to open space north of the Project area, controls on public access to dedicated open space areas, controls on lighting at the urban-open space interface, controls on pet, stray, and feral cats and dogs, and homeowner education about sensitive biological resources.

While much of the SCRW likely would remain undeveloped or designated as public lands, including the National Forests, urbanization of the Santa Clara River corridor as a whole is where most development is expected to occur in the future. This would result in the expansion of barriers to wildlife movement in and around the River Valley. However, based on existing information for present and reasonably foreseeable projects and the proposed Project, which are the scope of this cumulative analysis, movement through the Santa Clarita Valley will be maintained between both National Forests and private lands such as the Simi Hills, as shown in **Figure 4.5-22**, South Coast Wildlands Open Space Connectivity and Linkage and **Figure 4.5-40**, Alternative 2 Impacts to RMDP/SCP Regional Wildlife Connectivity Corridors. It was concluded in **Subsection 4.5.5.2.4.2**, Impacts to Wildlife Landscape Habitat Linkages that combined High Country SMA and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and that these habitat linkages will remain intact and functional after implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas under Alternative 2. It was for these reasons that at the project-level, it was determined that impacts to landscape habitat linkages would be adverse, but not significant. It follows, therefore, that if regional wildlife movement *via* the large habitat linkages identified by Penrod *et al*. (2006), including the River Corridor SMA, High Country SMA, and Salt Creek area, are maintained on site, the proposed Project's contribution to constraints on regional wildlife movement in the SCRW would not be cumulatively considerable. Thus, with the mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR, the proposed Project would not result in a cumulatively considerable contribution to potential significant cumulative impacts to wildlife habitat landscape linkages in the SCRW.

6.5.5.2.4 *Impacts to Special-Status Species*

The cumulative impact analysis for special-status species, as such species are defined in **Subsection 4.5.3.4.5** and **Subsection 4.5.3.4.6**, and listed in **Subsection 4.5.3.1**, also uses the "project list" approach for the watershed. This analysis is organized into five separate special-status categories:

1. State and/or Federally Listed and California Fully Protected Wildlife Species
2. California Species of Special Concern (CSC)
3. California Special Animals, California Watch List Species, Specially Protected Mammals, and CDFG Trust Resource Species
4. State and/or Federally Listed Plant Species
5. California Native Plant Society (CNPS) and Locally Regulated Plant Species

The listed and California Fully Protected Species are analyzed in the greatest detail because they have the greatest sensitivity and generally would be expected to be most affected by cumulative impacts. For each species, the habitat relationships, as defined in **Subsection 4.5.5.3**, were analyzed in the same manner as the vegetation communities and land covers described above in **Subsection 6.5.5.2.1**. Except where noted, the combined California GAP data (UCSB, 1999) and project-level data were used for the cumulative impact analyses because the analysis is within the context of the entire watershed; therefore, the impact acreages for this analysis will differ from those reported in **Subsection 4.5.5.3**.

Because of the numerous wildlife species in the two categories (1) California Species of Special Concern (CSC) and (2) Special Animals, Watch List, Specially Protected Mammals, and Trust Resources, the analyses for the two categories are generalized to the guild level (*e.g.*, Bird -- Raptor, Reptile and Amphibian -- Semi-aquatic, *etc*.). The detail of the analysis is scaled to the sensitivity of the species group. For example, CSC Bird -- Riparian species are analyzed in more detail than Special Animal Bird -- Riparian. Where the detailed analyses for the Listed and California Fully Protected Species are applicable to species in the lower sensitivity categories (*e.g.*, least Bell's vireo analysis to the CSC Bird -- Riparian guild), cumulative impacts are incorporated and summarized.

6.5.5.2.4.1 Listed and California Fully Protected Wildlife Species

This section addresses cumulative impacts the following federally and state-listed and/or California Fully Protected Species:

- arroyo toad (FE)
- American peregrine falcon (CE, CFP)
- California condor (FE, CE, CFP)
- coastal California gnatcatcher (FT)
- California red-legged frog (FT)
- golden eagle (CFP)
- least Bell's vireo (FE, CE)
- ringtail cat (CFP)
- southern steelhead (FE)
- southwestern willow flycatcher (FE, CE)
- unarmored threespine stickleback (FE, CE, CFP)
- western yellow-billed cuckoo (CE)
- white-tailed kite (CFP)

For the cumulative impact analysis of listed and California Fully Protected Species, impacts previously analyzed at the proposed project-level in detail in **Subsection 4.5.5.3**, Impacts to Special-Status Species, including impacts to individuals, loss of habitat, and secondary impacts, as well as mitigation measures to reduce these impacts to a level less than significant, are briefly and generally summarized to provide the context for the cumulative impact analysis. The reader is directed to **Subsection 4.5.5.3** for the full detail of impacts and mitigation measures as they relate to each of the species and to **Subsection 4.5.6**, Mitigation Measures, for full descriptions of all mitigation measures.

Arroyo Toad (FE). As described in the species account in **Subsection 4.5.5.3**, the arroyo toad (tadpoles only) occurrences documented in the proposed Project area are in the Santa Clara River upstream and downstream of the proposed Commerce Center Drive Bridge site and near the Valencia Water Treatment Plant (**Figure 4.5-46**, RMDP/SCP Arroyo Toad Species Occurrences). Other documented occurrences of arroyo toad in the upper SCRW (but outside the proposed

Project area boundaries) include the Santa Clara River just east of I-5; Castaic Creek, including above the reservoir (Castaic Lake); Upper San Francisquito Creek; the Santa Clara River adjacent to Castaic Junction; the Santa Clara River near the confluence of San Francisquito Creek; and the Soledad Canyon area. The arroyo toad also occurs elsewhere in the SCRW, in Sespe Creek and Piru Creek. The Sespe Creek population is in the Los Padres National Forest, primarily within the Sespe Wilderness, and is one of the largest populations in the Los Padres National Forest, with thousands of juveniles observed during years of successful reproduction (70 FR 19584). The Piru Creek population occurs both upstream and downstream of the Pyramid Reservoir in the Los Padres National Forest (70 FR 19584). The upper Piru Creek population has been expanding, likely in part due to seasonal campground closures and the elimination of suction-dredge mining (70 FR 19584). The lower Piru Creek population below Pyramid Reservoir has experienced habitat degradation due to perennial water releases, excessive flows, and invasive predators, but future releases are intended to mimic natural flows and this should benefit the arroyo toad (70 FR 19584).

In 2005, USFWS designated 11,695 acres of critical habitat for arroyo toad (substantially downsizing the 95,655 acres proposed in February 2004), and excluded the proposed Unit 6 (which contained portions of the proposed Project site) along with portions of many Southern California counties for economic reasons (70 FR 19562-19633). In 1999, USFWS published the Arroyo Southwestern Toad Recovery Plan (USFWS 1999), but the Santa Clara River was not specifically identified in the Recovery Plan as having a conservation role in the recovery strategy for the species. In the Santa Clara River watershed, six federal biological opinions were issued for the arroyo toad between 1993 and 2006 (**Table 6.0-7**), including one for the Natural River Management Plan upstream of the proposed Project.

For the arroyo toad, the cumulative impact analysis uses the same data used in **Subsection 4.5.5.3** because the California GAP data are not refined enough to portray suitable arroyo toad habitat. As reported in **Subsection 4.5.5.3**, implementation of the RMDP and build-out of the Specific Plan, VCC, and Entrada planning areas would result in the permanent loss of 59 acres (7.4%) of modeled Category 1 habitat on the proposed Project site, defined as habitat containing all the primary constituent elements used to designate critical habitat for the species (70 FR 19562). However, 25 acres (32.6%) of Category 2 habitat (habitat containing most of the primary constituent elements) and 705 acres (66.6%) of Category 3 habitat (primarily uplands adjacent to the Santa Clara River corridor that could be used for aestivation and hibernation, but which lack hydrology to support breeding) would also be permanently lost. Without accounting for past, present, or reasonably foreseeable mitigation, impacts to arroyo toad habitat in the SCRW resulting from present and reasonably foreseeable projects, including the proposed Project, could be a potential significant cumulative impact. The proposed Project's contribution to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, in close proximity to occupied arroyo toad habitat also could result in long-term secondary effects, including disruption of nocturnal activities and greater vulnerability to predation by nocturnal predators (such as owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators (see Crooks and Soulé 1999); collecting by children; degradation of habitat from increased human use (*e.g.*, trampling, trash, and off-road

vehicles) and altered fire regimes (likely too frequent fire); invasion by exotic plant (*e.g.*, giant reed, tamarisk, and pampas grass) and wildlife species (*e.g.*, Argentine ants, bullfrogs, African clawed frogs, exotic fish, and crayfish); use of pesticides; and increased risk of roadkill on roads adjacent to occupied areas. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR to offset project-level significant impacts to arroyo toad habitat will result in a large, managed open space system (see **Subsection 4.5.6**, Mitigation Measures). This open space system will also reduce long-term secondary impacts on arroyo toad habitat. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat, controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 permits), and lighting controls. Large areas of suitable habitat for this species will be protected in the River Corridor SMA. The Floodplain Hydraulics Impacts Assessment (PACE 2009) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the proposed Project area over the long term as a result of the proposed Project improvements. These hydrologic effects were also found to be insufficient to alter the amount, location, and nature of aquatic and riparian habitats within the proposed Project area and downstream into Ventura County. The technical analysis further determined that the River would retain sufficient width to allow natural fluvial processes to continue. Following build-out, the River Corridor floodplain would remain 1,000 to 2,000 feet wide and retain the mosaic of habitats, including the relatively narrow wetted channel, benches, and dry terraces that support various special-status species and meet their life history needs. These habitats and the populations of the species within and immediately adjacent to the River Corridor would not be substantially affected. A total of 738 acres (92.6%) of existing Category 1 habitat for the arroyo toad on the proposed Project site would be maintained within the River Corridor SMA.

A variety of specific mitigation measures also will be implemented by the proposed Project to avoid and reduce potential long-term secondary impacts to arroyo toad. Measures will be implemented to control human activities in the River Corridor SMA, including homeowner education and restrictions on recreational activities. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface will be downcast. Pesticides will be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system will be monitored and controlled to extent feasible. Implementation of these measures would allow this species to persist on site after development in the River Corridor SMA.

The vast majority of existing Category 1 habitat (92.6%) for the arroyo toad on the proposed Project site will be protected and managed in the River Corridor SMA and lands outside the 100-year floodplain will be conserved. This preservation and management will also reduce potential long-term secondary impacts to a level that is adverse but not significant. The arroyo toad has not been documented to breed on site, as indicated by no observations of adult toads during focused surveys. The flow regime from the wastewater treatment plant upstream of the Project site fluctuates daily and does not support hydrologic regimes consistent with breeding habitat (*i.e.*,

semi-permanent breeding pools). It is not expected that there would be a loss of an extant breeding population and no substantial loss of Category 1 habitat for this species on site. The largest populations in the SCRW occur in the Los Padres National Forest in Sespe and Piru creeks. These populations are not at risk from urban development and, with proper management, they are expected to expand in the future.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

American Peregrine Falcon (CE, CFP). The American peregrine falcon occurs occasionally in the proposed Project area. One American peregrine falcon was observed hunting along the Santa Clara River corridor near the Grapevine Mesa area within the Newhall Ranch Specific Plan area by Guthrie in July 2000 (Guthrie 2000), and an adult male was observed hunting over the Wolcott agricultural field by Bloom Biological, Inc. in late December 2007 (Bloom Biological 2008). No other occurrences of this species have been documented on site during annual bird surveys between 1988 and 2008. American peregrine falcons have never been documented nesting in the proposed Project area. This species is sensitive to human disturbance and usually nests in areas that are remote from human activities, such as cliffs, although tall buildings, bridges, or other tall man-made structures are also suitable for nesting if they are protected from human disturbance. Such features that would be suitable for nesting by the peregrine falcon are absent in the Project area; therefore, it is not expected to nest on site.

The California breeding range for the American peregrine falcon has been expanding and now includes the Channel Islands, the coast of southern and northern California, inland north coastal mountains, the Klamath Mountains, Cascade Range and the Sierra Nevada (CDFG 2005). In California, the American peregrine falcon is an uncommon breeder or winter migrant throughout much of the state. It is absent from desert areas (Zeiner *et al.* 1990A). Active nests have been documented along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. As a transient species, the American peregrine falcon may occur almost anywhere that suitable habitat is present (Garrett and Dunn 1981). One pair occurs within the Angeles National Forest (Stephenson and Calcarone 1999), and one occurs on the Vincent Thomas Bridge at the Port of Los Angeles in Los Angeles County. Wintering migrants can be seen inland throughout the Central Valley, in the western Sierra Nevada, along the coast, and occasionally on the Channel Islands (Zeiner *et al.* 1990A). As a transient species, the American peregrine falcon may occur almost anywhere that suitable habitat and prey are present (Garrett and Dunn 1981).

Based on the California GAP data (UCSB, 1999), there are approximately 103,000 acres of potentially suitable foraging habitat for the peregrine falcon within the SCRW (riparian, California annual grassland, agriculture, and disturbed land). However, this species is not expected to forage in all 103,000 acres in the SCRW. Foraging sites are often located near rivers or lakes, as well as in coastal and inland wetlands (AOU 1998; Brown 1999; Snyder 1991). It is expected that foraging by this species in the SCRW would be concentrated along the Santa Clara River and adjacent upland habitats and agricultural areas. Present and reasonably foreseeable

projects in the SCRW, including the proposed Project, would cause the loss of 4,815 acres of 103,000 acres of foraging habitat. Without accounting for past, present, or reasonably foreseeable mitigation, this could be a potential significant cumulative impact because several thousand acres of potential foraging habitat would be permanently lost and loss of habitat along the Santa Clara River would also affect the abundance and distribution of important prey such as waterfowl. The proposed Project's contribution to this potential significant cumulative impact is 3,515 acres, which could be cumulatively considerable, absent mitigation.

However, the American peregrine falcon only uses the proposed Project area for occasional foraging, but has not been observed nor is it expected to nest on site. Further, despite existing and anticipated projects in the watershed, approximately 98,000 acres of potentially suitable foraging habitat would remain in the SCRW, although most of its foraging in the watershed is expected to be concentrated within and adjacent to the Santa Clara River floodplain.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, also could result in potential significant cumulative secondary effects due to increased human activity in developed areas and adjacent open space which could disrupt foraging activities, and use of pesticides which could cause poisoning. At the watershed level these secondary effects could be a potential significant cumulative effect. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR to offset project-level significant impacts to American peregrine falcon foraging habitat will result in a large, managed open space system (see **Subsection 4.5.6**, Mitigation Measures). These mitigation measures include habitat preservation, restoration, enhancement, and management of the River Corridor SMA, High Country SMA, and Salt Creek area—areas that will form a large, contiguous open space system totaling approximately 6,300 acres comprised of riparian and upland habitats that provide foraging habitat for American peregrine falcon. This set-aside also will reduce potential long-term secondary effects, such as increased human activity, because birds would have substantial alternative habitat in which to forage. Potential secondary poisoning from pesticides would be controlled through an integrated pest management (IPM) plan.

In addition to these mitigation measures which would reduce impacts at the project-level, this species is only an occasional visitor and only documented as foraging on the Project site. This species is known to forage throughout the suitable habitat within the watershed and California. Its nesting is usually limited to areas with limited human disturbance. American peregrine falcon is known to forage within National Forest system lands within the watershed in association with rivers and lakes.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

California Condor (FE, CE, CFP). California condor populations exist in Arizona, southern California, Utah, and northern Baja California (CDFG 2005). California condors are known to exist and nest in the Sespe Condor Sanctuary within the SCRW approximately 30 miles northwest of the proposed Project area. This species is extremely mobile, and because of the extensive foraging range of this species, California condors could include the proposed Project area within the potential foraging range of the Sespe population. Surveys for the California condor were included as part of other raptor and avian species surveys that were conducted along the Santa Clara River and throughout upland areas of the Project area (Bloom Biological 2007, 2008). While California condor foraging flights have been known to take individuals over the Santa Clarita Valley, these flights are generally at high altitudes. Until April 2008, California condors had not been known to nest or land within the Project area within the last 25 years (Bloom Biological 2007, 2008). In April 2008, a California condor was observed feeding on a dead calf in a Potrero side canyon by wildlife biologist Chris Niemela (Carpenter 2008) (**Figure 4.5-5**, Listed and California Fully Protected Wildlife Species Occurrences). The USFWS also provided information to Bloom that California condors fitted with GPS transmitters had landed on Newhall Ranch on several days from April through July 2008 (Root 2008). In January 2009, up to five California condors were detected feeding on a dead calf in the middle section of Potrero Canyon south of Potrero Mesa between January 27 and 30 (Niemela 2009). A follow-up visit by Chris Niemela was conducted at the request of the USFWS to photodocument the calf carcass and site where the feeding occurred.

Critical habitat for the California condor was designated by the USFWS on September 22, 1977 (42 FR 47840-47845), however, no critical habitat was designated on the proposed Project site. The nearest critical habitat area is the Sespe-Piru Condor Area, six to seven miles north of the proposed Project site. The California Condor Recovery Plan was published by the USFWS on February 26, 1980 (USFWS 1980); however, no recovery activities were identified for the proposed Project site or nearby vicinity.

The California condor requires habitat that contains an adequate food supply (carrion), open space areas, and reliable winds and air movement to allow for long-duration soaring during foraging. Nest habitat typically includes cliff faces and, occasionally, large tree snags with cavities. Condors are not expected to nest in the Project area due to the general lack of adequate nesting habitat and likely only opportunistically forage in the Project area, as well as in other present and foreseeable future projects analyzed here for cumulative impacts. In general, these areas probably do not support large populations of large mammals (*e.g.*, mule deer) across the broad landscape area or suitable nesting sites. For these reasons, the proposed Project, in combination with other present and foreseeable future projects, is not expected to result in a potential significant cumulative impact to this species due to the loss of foraging habitat.

The risk of direct injury or mortality of individual California condors due to construction activities associated with present and reasonably foreseeable projects, including the proposed Project is low. However, construction debris, litter, leaking equipment, or road kill can attract this species to construction sites. This could subject condors to strikes by construction vehicles. Condors are curious birds and have been documented in close association with oil pumps and human activity on the Los Padres National Forest. During cleanup activities at trash sites, for example, condors have been observed sitting on guard rails adjacent to the cleanup activities. If individuals were injured or killed during construction activities, this could be a potential

significant cumulative impact because the loss of any individuals of this species likely would reduce its chance for long-term survival in the wildlife. The proposed Project's contribution to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, also could result in secondary effects to the California condor. Adverse secondary effects to condors may occur as a result of the animal's collection of microtrash (*i.e.*, broken glass, paper and plastic waste, small pieces of metal). This waste is often brought back to nest sites where young birds ingest the material. This can possibly lead to mortality of young birds. Ethylene glycol, a component in antifreeze and petroleum products can also be ingested by condors, which could possibly result in injury or mortality. Secondary impacts related to phone towers, power lines, and utility poles, could increase the potential for collisions; increased microtrash within residential and commercial areas, which has been known to attract and be ingested by California condors, causing sickness or possibly mortality; and the presence of various contaminants, such as radiator fluid, which have been known to be ingested by California condors, causing sickness or possibly mortality. At the watershed level these secondary effects could be a potential significant cumulative effect. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The California condor sporadically forages on the proposed Project site, and possibly in other present and foreseeable future project sites, but nesting is not expected to occur. As described in **Subsection 4.5.5.3.** Nest habitat typically includes cliff faces and, occasionally, large tree snags with cavities. Condors are not expected to nest in the Project area due to the general lack of adequate nesting habitat. Other past, present, and reasonably foreseeable projects also tend to be located in the lower elevations of the watershed that lack these necessary microhabitat features. It was determined above that the loss of habitat resulting from present and foreseeable future projects, including the proposed Project, would not be a significant cumulative impact. Nonetheless, potential foraging habitat is present in the upper regions of the High Country SMA and Salt Creek area and would not be affected by build-out of the Specific Plan, VCC, or Entrada planning areas. The mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR will result in a large, managed open space system (**Subsection 4.5.6**, Mitigation Measures). Generally, protection, restoration and enhancement, and management habitat in the High Country SMA and Salt Creek area will provide California condors with a large tract (5,720 acres) of relatively undisturbed habitat suitable for foraging. Although the number of cattle will be reduced on site, ongoing resource management using cattle will occur and deer herds will continue to use the High Country SMA and Salt Creek area, providing foraging opportunities for condors.

To reduce or avoid potential construction-related injury or mortality of individuals, the applicant will implement measures during construction to monitor for the presence of birds, and collect all litter, small items, vehicle fluids, and food waste from the Project area on a daily basis. Workers will be trained on the issue of microtrash; what it is, its potential effects to California condors, and how to avoid the deposition of microtrash. In the event California condors are

observed landing in the construction area, all work activities shall be suspended until the bird has left the area.

To reduce long-term secondary impacts, limited recreational usage and access restrictions within the High Country SMA, control of pets in or near open space areas, trail signage, and homeowner education regarding special-status resources in preserved natural habitat areas will help protect California condors foraging in the High Country SMA and Salt Creek area. Installation of new or relocation of existing phone and cell towers, power lines, and utility poles in the High Country SMA and Salt Creek area will be coordinated with CDFG and structures will be designed in accordance with Avian Power Line Interaction Committee (APLIC 2006) guidelines and operated with anti-perching devices to help reduce collisions and electrocutions of California condors.

In addition to these mitigation measures which will reduce Project-related construction and long-term impacts to California condor and provide foraging opportunities in the Project area (although on a more limited scale than currently exists), this species has an extremely large foraging range that spans the SCWR and beyond. California condors are frequently observed in National Forest system lands. The USFWS maintains a feeding station to provide a reliable food source for condors in Los Padres National Forest, but individuals opportunistically forage on dead cattle on large cattle ranches within the SCRW, including Newhall Ranch (Grantham 2009).

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Coastal California Gnatcatcher (FT). Focused surveys have not documented resident breeding populations of the coastal California gnatcatcher on site in surveys between 1995 and 2007, but individuals have been observed twice in the proposed Project area during the course of biological monitoring, as described in **Subsection 4.5.5.3**, Impacts to Special-Status Species. One observation was in October 2007 in the VCC planning area and the other in August 2008 east of the Del Valle Training Center (which is just outside the proposed Project boundary, north of SR-126 and west of Chiquito Canyon). Both observations were considered to be dispersing individuals because no breeding gnatcatchers have been observed in the proposed Project area and the observations were made when dispersal would be expected to be occurring. Generally, there are few documented coastal California gnatcatcher populations in the SCRW. In addition to the two individuals reported in the proposed Project area, there are occurrences of individuals approximately six miles to the east in Plum Canyon in 1999, Golden Valley Road in 2001, and Golden Valley Ranch in 1997 (**Figure 4.5-99**). The nearest observation of a coastal California gnatcatcher pair (assumed breeding pair observed in 1999) is in Chivas Canyon 3.6 miles to the south, but that location is outside the SCRW boundary and on the southern side of the Santa Susanna Mountains. The nearest relatively large breeding population is in Moorpark (15 occurrences) outside the SCRW, about 12 miles to the southwest of the proposed Project area and south of the Santa Susana Mountains

Based on these observations, the coastal California gnatcatcher is considered to be an irregular visitor in the proposed Project area in association with dispersal. Although the site appears to

provide habitat for dispersal and nesting has not been documented during protocol-level, it is unknown whether the site could support nesting populations of coastal California gnatcatcher in the future (*e.g.*, whether there could be colonization of the site by breeding individuals).

On December 19, 2007, the USFWS published the Revised Designation of Critical Habitat for the coastal California gnatcatcher (72 FR 72009-72213). The Revised Designation reduced the final critical habitat designation by 298,492 acres compared to the 2003 Proposed Rule. The Revised Designation included a re-evaluation of Unit 13 (which included the proposed Project area, and the USFWS determined that the portions of the Santa Clarita Valley including the proposed Project area, are "not essential to the conservation of the coastal California gnatcatcher." (72 FR 72013). The USFWS determined that the excluded area does not have the spatial configuration and primary constituent elements essential to the conservation of the species. Designated critical habitat (Unit 13) extends north to the southern boundary of Newhall Land that includes the High Country SMA, but the nearest proposed development zone in Potrero Canyon is approximately 2.2 miles north of the critical habitat boundary. No recovery plan for the coastal California gnatcatcher has been published.

Based on the California GAP data (UCSB, 1999), there are approximately 174,000 acres of coastal scrub habitat that support, or have the potential to support, the coastal California gnatcatcher, at least during dispersal. Because of the few and scattered observations of the species in the SCWR, however, it is likely that the vast majority of coastal scrub habitat in the watershed is not used by the coastal California gnatcatcher. This vocal species is highly detectable within its breeding range, so most important breeding locations probably have been documented. In addition, especially in the higher elevations of the watershed, temperatures are, on average, much colder and conditions are wetter. Even in the main portion of this species' range in southern California, 99% of occurrences are below 2,500 feet (65 FR 63680).

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 20,000 acres of coastal scrub, although it is not expected that the coastal California gnatcatcher uses all of this habitat. Without accounting for past, present, or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of suitable habitat, this could be a potential significant cumulative impact on habitat that is suitable for the species. Because this federally-listed species occurs sporadically in the watershed and its selection of habitat for dispersal and potentially breeding in the SCRW is not understood, the relative value of coastal scrub habitat in the watershed for this species also is not known. Even a small loss of habitat, if located in a strategic area for dispersal or breeding, could have a substantial adverse effect on the habitat use and distribution of the coastal California gnatcatcher in the SCRW if it disrupted dispersal or breeding activities. The proposed Project's contribution to this potentially significant cumulative impact is 1,520 acres of coastal scrub, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, could also result in long-term secondary impacts, including habitat fragmentation; wildfire; increased human activity; lighting; pesticides, which may cause secondary poisoning and loss of food resources; harassment by pet, stray, and feral cats and dogs and other mesopredators; and Argentine ants that may prey on nestlings. At the watershed level these secondary effects could be a potential significant

cumulative effect. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Based on existing survey information, two dispersing coastal California gnatcatcher individuals have been documented in the Project vicinity and nesting has not been observed. Approximately 154,000 acres of coastal scrub habitat would remain in the watershed, although how much of this habitat is suitable for dispersal or breeding is unknown. There is at least one breeding occurrence in the SCRW in Plum Canyon. In addition, mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR will result in a large, managed open space system (**Subsection 4.5.6**, Mitigation Measures). The proposed Project also includes large mitigation areas in the High Country SMA and Salt Creek area that will conserve approximately 1,940 acres of coastal scrub and will allow for dispersal by coastal California gnatcatchers.

Long-term secondary impacts will be minimized through several mitigation measures in addition to the preservation of 1,940 acres of suitable habitat in the High Country SMA and Salt Creek area. Lighting restrictions along the perimeter of natural areas will help reduce predation of nest sites by predators and reduce behavioral disturbances and physiological stress. Limited recreational usage and access restrictions within the High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect coastal California gnatcatchers by allowing them to nest and forage without disturbance. Controls on pesticides will reduce the chance of direct and secondary poisoning and loss of food sources.

The coastal California gnatcatcher has not been observed nesting in the Project area and only one breeding occurrence has been documented in the SCRW. Although suitable habitat is present in the Project area, it is unknown why this species does not breed on site. Dispersal through the Project area would not be precluded and this species is still relatively common in the main portion of its range, south of the Project area.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

California Red-Legged Frog (FT). The California red-legged frog has not been observed in the proposed Project area during the numerous wildlife surveys conducted since 1992. The species is believed to be absent from the proposed Project region. The San Marino Environmental Associates (SMEA 1995) report states that Thomas Haglund observed red-legged frogs in the mid-1970s in the Santa Clara River at Fillmore and that "this may represent the last sighting of this species in the Santa Clara River" (p. 37). The Museum of Vertebrate Zoology (U.C. Berkeley 2003) lists 17 specimens from Soledad Canyon (Santa Clara River channel) in its collection from as recently as 1953 (more precise locality data are unavailable). The California Academy of Sciences (CAS 2003) also lists a Soledad Canyon specimen, from 1950. The nearest specific locality upstream of the proposed Project area is approximately 15 miles away, near the confluence with Agua Dulce Creek. Jennings and Hayes (1994) and the CNDDB (CDFG 2008A)

indicate that this species still occurs in the SCRW in sites along San Francisquito Creek five to 10 miles northeast of the proposed Project area, and in tributaries to the Santa Clara River in Ventura County. The closest documented Ventura County occurrence is in Piru Creek 4.5 miles north of the community of Piru (USFWS 2002A), about seven miles northwest of the proposed Project area. San Marino Environmental Associates (SMEA 1995) also cite a personal communication from Sam Sweet reporting sighting of red-legged frogs in Piru Creek, but no date for the observation(s) is provided. San Marino Environmental Associates (SMEA 1995) suggested that it probably has a low probability of colonizing the Project site because of the relatively long distances to extant occurrences within tributaries upstream and downstream of the Project area. The only critical habitat unit upstream is the San Francisquito Creek (LOS-1) Unit, which is located approximately five miles northeast of the Project area. This distance, coupled with the existing stream conditions in San Francisquito Creek (*i.e.*, dry gaps, absence of flowing water during most of the year), likely limit the potential for this species to disperse through this area. Furthermore, existing hydrologic conditions in the Santa Clara River probably limit its potential to establish breeding sites in the Project area. California red-legged frogs generally avoid large river channels with widely fluctuating flows, because such habitat usually does not permit reproductive activity (Hayes and Jennings 1988). For example, episodic winter flooding typical of the Santa Clara River may dislodge egg masses. Further, fluctuating water levels before summer typical of the Santa Clara River could kill tadpoles before they could metamorphose. Given these characteristics, other portions of the Santa Clara River within the Project area are also not expected to provide breeding habitat for the species.

Critical habitat was originally designated for the California red-legged frog in 2006 (71 FR 19244-19346), but revised critical habitat was proposed in September 2008 to better characterize those areas containing essential features for the species (73 FR 53492-53680). Based on the proposed revised critical habitat designation, two critical habitat units are in the SCRW: the 4,231-acre San Francisquito Creek (LOS-1) Unit located approximately five miles northeast of the proposed Project area, and the 8,837-acre Piru Creek (VEN-2) Unit located seven miles northwest of the proposed Project area. These two critical habitat units were not changed in the 2008 proposed revision. Three other critical habitat units were designated in Ventura County in the proposed revision: the 2,915-acre San Antonio Creek (VEN-1) Unit; the 5,000-acre Upper Las Virgenes Canyon (VEN-3) Unit; and the eastern portion of the 145,121-acre Upper Santa Ynez River and Matilija Creek, which overlaps with the western portion of Ventura County. These three other critical habitat areas are outside the SCRW. No designated critical habitat units for the California red-legged frog include any portion of the proposed Project site. The Recovery Plan for the Red-legged Frog was published by the USFWS on May 28, 2002 (USFWS 2002B). In Recovery Unit 7, a core area is identified as the Ventura River-Santa Clara River. However, the portion of the Santa Clara River within the proposed Project area is not in this core area and is not included in the Recovery Plan (USFWS 2002B).

Given these verified records upstream and downstream of the proposed Project area and elsewhere in the SCRW, the proposed Project area is within the potential distribution of the California red-legged frog along the Santa Clara River. However, as discussed above, the California red-legged frog is not likely to colonize the site because it has limited long-distance dispersal capabilities, the distances to extant upstream and downstream locations are relatively long, and existing hydrologic conditions are not conducive to breeding. However, for the purpose

of this cumulative analysis, it is assumed that there is some potential for the species to use the Project area for dispersal and breeding.

Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 24,000 acres support California red-legged frogs or could be reasonably expected to support them. As noted above, the documented distribution of the California red-legged frog in the SCRW is very scattered and confined to a few locations.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,030 acres of 25,000 acres of riparian habitat. Without accounting for past, present, or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of riparian habitat in the SCRW could result in a potential significant impact on potential habitat for the California red-legged frog. However, as described above, the permanent loss of riparian habitat from present and reasonably foreseeable projects would be reduced by CDFG and Corps mitigation requirements consistent with their policies for no net loss of wetlands (although net functions and values/services of wetland habitats may be reduced (Ambrose *et al.* 2006)). The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which, if occupied, could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, could also result in potential long-term secondary effects, including increased human activity; habitat degradation and collection; lighting invasive species, including Argentine ant and invasive plants such as giant reed; pet, stray, and cats and feral dogs; vehicle collisions; and use of pesticides. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIS/EIR recommend extensive mitigation measures that protect riparian habitat and establish a large, managed open space system (**Subsection 4.5.6**, Mitigation Measures). These measures would reduce impacts to the California red-legged frog, if it were to colonize the Project area in the future. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat. Large areas of suitable habitat for this species will be protected in the River Corridor SMA. The Floodplain Hydraulics Impacts Assessment (PACE 2009) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the proposed Project area over the long term as a result of the proposed Project improvements (although, as noted above, existing hydrologic conditions probably are not conducive to breeding by this species).

The River Corridor SMA will provide a large, protected open space area that will help also offset long-term secondary impacts. Several specific mitigation measures will also be implemented to control human activities in the River Corridor SMA, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface will be downcast. Pesticides will be controlled through an integrated pest management

(IPM) plan. Argentine ant invasions of upland habitats in the open space system will be monitored and controlled to the extent feasible. Implementation of these measures would allow this species to persist on site after development in the River Corridor SMA if it were to colonize the site in the future.

In addition to these measures, which will reduce Project-related impacts to this species, California red-legged frog has not been documented within the Project area and the nearest known occurrences are five and seven miles away, respectively.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Golden Eagle (CFP). The golden eagle has been occasionally observed during the annual bird surveys conducted from 1988 through 2008 along the Santa Clara River within the riparian scrub and woodland habitat (see **Subsection 4.5.5.3** for details). Off site, they were also observed along the Santa Clara River east and west of the proposed Project site. No nesting has been observed in the proposed Project area. In winter 2008, one juvenile and one pair was seen in upper Potrero Canyon and it is believed that this is likely a resident pair, but no nest site has been identified to date (Bloom Biological 2008). In addition, in March 2008 a helicopter survey was conducted over Newhall Land property to search for raptor nests on cliffs and in steep canyons, with the focus on upland areas of the ranch. One active golden eagle nest was located off Newhall Land property on a north-facing cliff at the top of Dewitt Canyon, which is a drainage off Pico Canyon. In fall 2008 two golden eagles were observed resting on a rugged outcrop in the upper portion of the Salt Creek area in Ventura County (Bedford 2009). The CNDDB (CDFG 2008A) contains three records for past nest sites for the golden eagle in Los Angeles County and two records for Ventura County, but none of the occurrences are in the SCRW—four of the five are in the Santa Monica Mountains and one is in the Tehachapi Mountains. The SCRW supports a large amount of potential nesting and foraging habitat in the SCRW, especially in the Los Padres National Forest, and in the Project site, within the preserved areas of the High Country SMA and Salt Creek area.

Based on the California GAP data (UCSB, 1999), within the SCRW there are approximately 257,000 acres of suitable nesting and foraging habitat (California annual grassland, agriculture, disturbed land, coastal scrub, and oak woodland) for the golden eagle, although it cannot be assumed that golden eagles actually use all 257,000 acres. Foraging territories are related to nest locations, prey density and availability, and the openness of terrain. Even though home ranges, which probably reflect an individual's total foraging territory, can be large, individuals focus their activity in a smaller core area that provide these resources (Marzluff *et al.* 1997). Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 24,000 acres of 257,000 acres of suitable nesting and foraging habitat. It is assumed for this analysis that some of this habitat could occur in core activity areas, the loss of which could alter the individual's use of its territory and potentially cause nest abandonment. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland habitats), or the Project's individual contribution to mitigation for loss of habitat, the loss of

habitat in the SCRW potentially would result in a potential significant cumulative impact on suitable habitat for the golden eagle. The proposed Project's contribution to this potential significant cumulative impact is 4,905 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, also could result in potential long-term secondary effects, including an increased potential for collisions with phone towers, power lines, and utility poles, resulting in physical injury or death as a result of the collision or from electrocution. Reproductive success also could be affected by increased noise; lighting; pesticides that may cause secondary poisoning and loss of prey; human disturbances of nest sites; and pet, stray, and feral cats and dogs. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, managed open space system comprised of the High Country SMA, Salt Creek area, and River Corridor SMA that provides approximately 4,070 acres of suitable foraging and nesting habitat for the golden eagle. This open space system will also help protect the golden eagle from long-term secondary impacts, such as collisions with phone towers, power lines, and utility poles, and "edge effects" caused by human activity. Several specific mitigation measures for long-term secondary effects will also be implemented. Lighting restrictions along the perimeter of natural areas would help reduce impacts to potential nest sites. Limited recreational usage and access restrictions within the High Country SMA, control of pet, stray, and feral cats and dogs in or near open space areas, trail signage, and homeowner education regarding special-status resources in preserved natural habitat areas will help protect golden eagles during foraging activities and potential nest sites. Controls on pesticides (including rodenticides) will reduce the chance of accidental poisoning and potential loss of prey. Installation of new or relocation of existing phone and cell towers, power lines, and utility poles in the High Country SMA and Salt Creek area will be coordinated with CDFG and structures will be designed in accordance with Avian Power Line Interaction Committee (APLIC 2006) guidelines and operated with anti-perching devices to help reduce collisions and electrocutions of golden eagles.

In addition to these measures, which will reduce Project-related impacts to this species, golden eagle is known to occur within much of the watershed, including National Forest system lands. While this species has not been documented to nest within the Project area, the proposed Project will not impede use of the High Country SMA and Salt Creek area or other open space within the watershed for foraging or nesting.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Least Bell's Vireo (FE, CE). The least Bell vireo's breeding distribution extends to eight California counties: Imperial, Kern, Los Angeles, Riverside, Santa Barbara, San Bernardino, San Diego and Ventura (CDFG 2005). About half of the least Bell vireo in California occur at Camp Pendleton in San Diego County (CDFG 2005). The least Bell's vireo nests in moderate numbers in the SCRW. The USFWS (2006) conducted a five-year status review of the least Bell's vireo that compiled comprehensive survey data for five-year increments from 1977 to 2005, and from which the USFWS estimated least Bell's vireo territories.[10] An estimated 173 territories occurred in Los Angeles and Ventura counties as of 2006, which accounted for about 6% of the estimated total of 2,968 territories in California (USFWS 2006; **Table 4.5-55**). Of the 173 territories in Los Angeles and Ventura counties, 119 (69%) occur in the Santa Clara River population unit identified in the Draft Recovery Plan (USFWS 1998). Annual survey data have been collected for the least Bell's vireo in the proposed Project vicinity between 1988 and 2007, including the Specific Plan and VCC planning areas and a portion of the Entrada planning area, as well as adjacent areas of Newhall Land property from the Las Brisas Bridge crossing on the west in Ventura County to I-5 on the east (see details in species account in **Subsection 4.5.5.3**). Least Bell's vireo, including breeding pairs, territorial males, and/or nests, have been observed almost every year along the Santa Clara River within the Specific Plan area, and over multiple years within the VCC planning area and adjacent to the proposed Project site in Castaic Junction in riparian scrub habitat (**Figure 4.5-85**), but with yearly fluctuations in level of occupancy and breeding activity.

The USFWS made a final critical habitat designation for the least Bell's vireo on February 2, 1994 (59 FR 4845). The USFWS vireo critical habitat designation covers approximately 38,000 acres at 10 different locations in six counties in southern California: Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego. The proposed Project site includes a portion of the Santa Clara River critical habitat unit located in Ventura and Los Angeles counties (**Figure 4.5-85** Least Bell's Vireo Critical Habitat in Santa Clara River Critical Habitat Unit). The Santa Clara River unit includes all land within a 3,500-foot-wide zone along the Santa Clara River south of State Route 126 (SR-126) from a point approximately 2.3 miles east of the intersection of Main Street and SR-126 in Piru on the west to the intersection of SR-126 and The Old Road and eastward and southward along The Old Road to its intersection with Rye Canyon Road. The Santa Clara River critical habitat unit comprises approximately 4,410 acres (approximately 12%) of the total 38,000 acres of least Bell's vireo critical habitat. Of this, least Bell's vireo critical habitat within the proposed Project area totals 2,252 acres (**Figure 4.5-85**). However, 405 acres of the 2,252-acre least Bell's vireo critical habitat designation within the proposed Project area consists of primary constituent elements of vireo critical habitat. (See **Section 4.5,** Biological Resources for more detail.)

A Draft Recovery Plan for the Least Bell's Vireo (*Vireo bellii pusillus*) was published by the USFWS in 1998 (USFWS 1998). The recovery strategy focuses on two major causes of decline of the species: (1) habitat loss and degradation, and (2) brown-headed cowbird parasitism. The

[10] It should be noted that these data represent a minimum estimate of least Bell's vireo territories because they are a composite of multiple surveys covering different reaches and may exclude large stretches of suitable habitat that were not surveyed (USFWS 2006); in other words, these data do not represent a single snapshot of the entire occupied vireo range.

Draft Recovery Plan identified 14 vireo "population/metapopulation units," including the Santa Clara River population unit. The Draft Recovery Plan does not identify the geographic limits of the Santa Clara population unit, simply stating that "habitat for the [vireo] occurs in patches along much of the river, with location and quality varying from year to year as conditions in the river change following winter storm events" (USFWS 1998, p. 58).

Fourteen federal biological opinions were issued for the least Bell's vireo between 1993 and 2006 in the SCRW (**Table 6.0-7**). CDFG has recently issued four take authorizations for least Bell's vireo in the general regional vicinity of the proposed Project (**Table 6.0-8**).

Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support least Bell's vireos or could be reasonably expected to support them. Because the vireo primarily is limited to the Santa Clara River within the watershed, it is likely that a relatively large proportion of riparian habitat in the SCRW is not occupied because it does not support the primary constituent elements of vireo habitat. As described above, the reach of the Santa Clara River within the Project area consistently has supported a breeding population since surveys began in 1988 and is designated critical habitat for this species.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,030 acres of the 25,000 acres of riparian habitat within the watershed; however, the proportion of occupied least Bell's vireo habitat that could be impacted by development is probably substantially higher because most occupied habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be occupied by the vireo, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a potential significant cumulative impact on potential habitat for the least Bell's vireo. However, as described above, the permanent loss of riparian habitat from past, present, and reasonably foreseeable cumulative development would be reduced by CDFG and Corps mitigation requirements consistent with their policies for no net loss of wetlands (although net functions and values/services of wetland habitats may be reduced (Ambrose *et al.* 2006)). The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects in the SCRW, including the proposed Project, also could result in potential long-term secondary effects, including nest parasitism by cowbirds; traffic noise; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the least Bell's vireo could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the least Bell's vireo. This mitigation will result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA, that would be available for future breeding populations of least Bell's vireo. These mitigation measures also include restoration and enhancement of riparian and wetland habitat. Specific measures to reduce secondary impacts include controls on public access; invasive species controls; conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 Permits); lighting controls; pesticides controls; and cowbird trapping.

In addition to site-specific mitigation measures, and mitigation anticipated for other present and reasonably foreseeable project impacts to achieve the no net loss of riparian acreage, recent population estimates for the vireo indicate that the breeding populations are expanding both in range and size as a result of restoration and enhancement of riparian habitat and management of brown-headed cowbirds (USFWS 2006). Within the watershed breeding vireo occur both upstream and downstream of the proposed Project in areas that would not be subject to disturbance of present and reasonably foreseeable projects.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Ringtail Cat (CFP). The ringtail cat was not observed in the proposed Project area during track/scent station monitoring for mammals or during numerous wildlife surveys conducted in the Specific Plan area (see species account in **Subsection 4.5.5.3**). The nearest recent documented occurrence of ringtail cat is a 2007 observation in Elderberry Canyon approximately 0.5 mile above Castaic Dam in a narrow, rocky canyon (Huntley 2009). There are also two recorded occurrences of ringtail cat in Los Angeles County: in the Santa Monica Mountains and on the southern flank of the San Gabriel Mountains (Belluomini 1980). If this species occurs in the SCRW, it is most likely to occur in canyons and ravines associated with water sources and riparian and woodland habitats, including lower elevation oak woodlands, higher elevation coniferous forests, and juniper and pinyon woodlands. For this reason, habitat was modeled using riparian vegetation communities.

Based on the California GAP data (UCSB, 1999), habitat within the SCRW considered suitable for ringtail cats consists of approximately 25,000 acres of riparian habitat. However, habitat used by ringtail cats is strongly associated with microhabitats that include perennial water sources, rocky outcrops in canyons, tree cavities, *etc*. Although there have been few observations of ringtail cats in the region, this species could occur within suitable habitat within the watershed. It is likely that most of this suitable habitat is not occupied, probably due to a lack of habitat elements necessary for occupation, such as permanent waters sources.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,030 acres of 25,000 riparian habitat. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a potential significant cumulative impact on potential habitat for the ringtail cat. The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which, if the species were present within the Project area, could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects including increased human activity; habitat fragmentation; increased vehicle collisions; nighttime lighting; increased predation; and pesticides. If the ringtail were present, at the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) would reduce these impacts to a less-than-significant level. Specifically, approximately 1,170 acres of suitable habitat for this species will be preserved and managed in a large open space system composed of the River Corridor SMA, High Country SMA, and Salt Creek area. Several specific mitigation measures will also be implemented to reduce potential long-term secondary effects, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pesticides, including rodenticides, will be controlled through an integrated pest management (IPM) plan.

In addition to these measures, which reduce Project-related impacts, this species has not been identified in the Project area and is not expected to occur. Ringtail cat is expected to occur within the SCRW, but only in association with its required microhabitats. Where this species has been observed within the SCRW, it occurs within National Forest system lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Southern Steelhead (FE). The range of the southern steelhead is from the Santa Maria River along the San Luis Obispo-Santa Barbara County line in the north to the Tijuana River just north of the U.S.-Mexico border in the south. Their historic range within many of these coastal streams was limited by natural barriers, above which no known southern California populations of native rainbow trout or steelhead previously existed. Definitive records of southern steelhead are not available for many of the small coastal streams within the Southern ESU; however, it is believed that most of the streams were inhabited by southern steelhead. The distribution of southern steelhead within the ocean is not well known, but some evidence indicates that they remain

relatively close to the coast and even near the mouths of their natal streams which contrasts with other Pacific salmonid species that range widely in the ocean (NMFS 2007).

The southern steelhead has been recorded within the last decade in Ventura County in the Santa Clara River and the Ventura River. Within the Santa Clara River drainage, southern steelhead historically inhabited Piru Creek, Sespe Creek, Santa Paula Creek, Hopper Creek, and possible Pole Creek (Titus *et al.* n.d.). Presently, southern steelhead occur in the Santa Clara River watershed in Piru Creek between the confluence with the Santa Clara River and Santa Felicia Dam, in Sespe Creek, in Santa Paula Creek, and possibly Hopper and Pole Creeks (Stoeker and Kelly 2005). There is no historic record of steelhead use of the Santa Clara River or tributaries upstream of Piru Creek and the Dry Gap approximately five miles downstream of the Project area.

The southern steelhead was listed as federally endangered in 1997 in the Southern Evolutionarily Significant Unit (ESU) that extends from the Santa Maria River in the north southward to Malibu Creek without Critical Habitat (62 FR 43937-43954). In 2002 the range of the Southern California ESU was extended south to the United States-Mexico Border (67 FR 21586-21598). In 2005, the Final Critical Habitat Designation for the Southern California Coast ESU was determined (70 FR 37159-37204). In 2006 the endangered status of the southern steelhead was re-affirmed for 10 Distinct Population Segment (DPS) of West Coast Steelhead (71 FR 834).

In the Santa Clara River watershed, designated critical habitat includes the Santa Clara River and its tributaries from Piru Creek (below Santa Felicia Dam) to the Santa Clara River confluence and downstream to the Pacific Ocean. The upstream extent of designated critical habitat is approximately five miles downstream of the Project area in Ventura County, California.

A Recovery Plan for southern steelhead, as required by the FESA, has not been published to date. However, a Southern California ESU recovery team has been formed and is currently working on a draft Recovery Plan for southern steelhead within the Santa Clara River and the Southern California ESU. In September 2007, a Federal Recovery Outline for the DPS of southern steelhead was released (NMFS 2007).

The project-level impacts analysis presented in **Subsection 4.5.5.3** includes a characterization of existing conditions along the Santa Clara River within the Project area with respect to habitat suitability for the southern steelhead. ENTRIX (2009) conducted quantitative fish habitat surveys of the Santa Clara River and concluded that the Project reach channel is very low gradient runs and riffles and is dominated by sandy substrate with little or no riparian canopy along the flowing stream. It is not expected that southern steelhead could successfully spawn in this reach due to inadequate substrate material (*e.g.*, lack of gravel for redd development) and sub-optimum water quality conditions related to wastewater outflows from upstream of the Project reach. The River habitat for southern steelhead also lacks requisite channel structure and pool habitat necessary to support rearing. If the southern steelhead could migrate into the Project reach, requiring passage through the Dry Gap area (an area downstream of the Los Angeles County/Ventura County line where surface flows in the river are lost to the Piru groundwater basin), it would face significant challenges in successfully completing its life history cycle due to unsuitable River and tributary spawning and rearing habitat. For these reasons, the project-level analysis was conducted under the assumption that southern steelhead and its habitat for spawning and rearing are not present in

the Project area, and thus concluded that impacts to southern steelhead spawning and rearing habitat would be less than significant for the RMDP project. It was also concluded that no impacts to habitat would occur as a result of build-out of the Specific Plan, VCC, and Entrada areas. For these reasons, the proposed Project is not expected to contribute to a potential significant cumulative impact on habitat for steelhead in the SCRW that may occur as a result of downstream projects.

With respect to potential impacts on individuals, the project-level analysis assumed that vagrant southern steelhead could be found during surveys or fish exclusion activities prior to construction, although this event is considered to be very unlikely over the approximately 20-year duration of the Project due to the lack of historical records for this species upstream of Piru and the Dry Gap. As noted above, these individuals would not be expected to spawn in the Project area. The impact to southern steelhead individuals resulting from the proposed Project, therefore, was determined to be less than significant. For these reasons, the proposed Project is not expected to contribute to a potential significant cumulative impact to individual steelhead that may occur as a result of downstream projects.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, could result in potential long-term secondary effects such as hydrologic, geomorphic, and water quality impacts. In **Subsection 4.5.5.3** it was determined that the proposed Project has the potential to affect southern steelhead individuals and habitat downstream of the Project area through short- or long-term hydrologic, geomorphic, or water quality alterations of the River. These potential impacts include long-term effects associated with operation of RMDP facilities and build-out of the Project area such as physical changes in the River and increased discharges. Specific impacts include alterations in base flows, timing and duration of flood flows, biochemical changes, condition and composition of the substrate, aquatic and riparian vegetation (including exotic species), and water temperatures, as well as increased pollutants from irrigation runoff and increased runoff from roadways. Additional secondary impacts associated with increased human presence include incidental litter and trash from recreation activity; impacts such as fecal material from pet, stray, and feral cats and dogs entering the aquatic system; and increased predation by exotic predators, such as bullfrogs and non-native fish. However, due to the approximately five-mile distance from documented occurrences of southern steelhead at Piru Creek and the intervening Dry Gap, these potential secondary effects would be substantially attenuated before they could affect any downstream habitat and individuals. Therefore, the proposed Project is not expected have a considerably cumulatively contribution to potential significant secondary cumulative impacts in the SCRW.

Although the Project would not contribute to potential significant secondary impacts to the steelhead in the SCRW, and, therefore, no mitigation for secondary cumulative impacts is required, the combined mitigation required by the Newhall Ranch Specific Plan Program EIR and the mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will additionally reduce the potential for secondary impacts to southern steelhead and its habitat downstream of the Project site. Impacts such as increased chemical pollutants, sedimentation, and increased human activity will be mitigated by measures such as the protection and management of the River Corridor SMA, creation of buffer areas between the River Corridor SMA and development, water quality requirements, and restrictions on public access. PACE

(2009) found that there would be no significant impacts to water flows, velocities, depth, sedimentation, or floodplain and channel conditions downstream of the Project area over the long term as a result of the proposed Project improvements. Furthermore, the Newhall Ranch Wastewater Reclamation Plant (WRP) will be a near-zero discharge facility, and only limited discharge from the WRP to the Santa Clara River will occur during the winter months. Based on an analysis of post-development conditions within the Dry Gap (GSI Water Solutions 2008), it was determined that the future WRP discharge will not affect the seasonality (*i.e.*, ephemeral nature) of flows through the Dry Gap.

Impacts to southern steelhead habitat and vagrant individuals and downstream secondary effects would be less than significant. Potential impacts would be further reduced by a set of mitigation measures for other special-status fish that occur in the Project area (arroyo chub, Santa Ana sucker, unarmored threespine stickleback) required by the Newhall Ranch Specific Plan Program EIR and recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures). Therefore, the proposed Project would not contribute to potential significant cumulative impacts to southern steelhead in the SCRW.

Southwestern Willow Flycatcher/Willow Flycatcher (FE, CE). Breeding populations of the willow flycatcher exist in isolated meadows of the Sierra Nevada and along the Kern, Santa Margarita, San Luis Rey and Santa Ynez Rivers in southern California (CDFG 2005). Breeding populations of the southwestern willow flycatcher exist in Kern, Santa Barbara and San Diego counties and several other locations in southern California (CDFG 2005). Outside of California, breeding populations of the southwestern willow flycatcher exist in Arizona, Colorado, Nevada, New Mexico and Utah (CDFG 2005). The willow flycatcher has a sporadic breeding distribution throughout California, where three of the subspecies occur, including little willow flycatcher (*E. t. brewsteri*), *E. t. adastus* (which has no common name other than "willow flycatcher"), and southwestern willow flycatcher (*E. t. extimus*) (Craig and Williams 1998; Sedgwick 2000). The different subspecies of willow flycatcher each occupy distinct breeding ranges and have subtle differences in color and morphology (Sogge *et al.* 1997). The southwestern willow flycatcher was formerly a common summer resident throughout California, but has been extirpated from most of its historical breeding range in the state. The smallest of the breeding populations consists of approximately five pairs and the largest is approximately 50 pairs. The number of southwestern willow flycatchers in California has been estimated at approximately 200, recorded at 22 locations within 13 drainages (Finch *et al.* 2000).

The full species willow flycatcher has been detected almost every year within the River corridor in the proposed Project area during the focused bird surveys conducted from 1988 to 2007, but no nesting southwestern willow flycatchers have been confirmed on site (see species account in **Subsection 4.5.5.3**). All of the observations of willow flycatchers within the region were determined to be migrants because they were only detected once and/or early in the breeding season and June-July period when the southwestern willow flycatcher would be expected if nesting on site. The most recent nearby documented breeding locations for the southwestern willow flycatcher are from the Santa Clara River near Fillmore, downstream of the Project area. Two breeding pairs were observed in 2006 by J. Gallo, with one nest producing two successful fledglings and the other nest failing (Root 2008). Currently, the proposed Project area appears to be a migratory stop for one or more of the subspecies of willow flycatcher, but breeding

populations of the southwestern willow flycatcher could expand to the proposed Project area in the future.

On October 19, 2005, critical habitat was designated for the southwestern willow flycatcher (70 FR 60886-61009). Critical habitat in California is designated in Kern, Santa Barbara, San Bernardino, and San Diego counties, but there is no designated critical habitat in the SCRW. The Final Recovery Plan for the Southwestern Willow Flycatcher was published by the USFWS on August 30, 2002 (USFWS 2002C). The proposed Project area is located within the Coastal California Recovery Unit of the Final Recovery Plan, and establishment of new territories is part of the recovery criteria for the subspecies. Within the Santa Clara River, the reach from Bouquet Canyon Road to the Pacific Ocean, which crosses through the proposed Project area, has been identified as a Management Unit where recovery actions should be focused (USFWS 2002C).

Six federal biological opinions were issued for the southwestern willow flycatcher between 1993 and 2006 in the SCRW (**Table 6.0-7**). The CDFG has recently issued four take authorizations for southwestern willow flycatchers in the general regional vicinity of the proposed Project (**Table 6.0-8**).

Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW that provide potential habitat for migrating and nesting willow flycatchers. However, not all 25,000 acres support willow flycatchers or southwestern willow flycatchers or could be reasonably expected to support them. Based on the few documented nesting locations in the SCRW, only a small proportion of this habitat would be expected to support nesting, probably due to a lack of constituent habitat elements necessary for this species. As noted above, within the vicinity of the Project area, breeding has only been documented in the Fillmore area, located approximately 13 miles to the west of the Project area. A larger proportion of this habitat is expected to support temporarily migrating birds based on the regular observation of migrating individuals in the Project area.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,030 acres of 25,000 acres of riparian habitat within the watershed; however, the proportion of habitat potentially used for migration and nesting that could be impacted by development is probably substantially higher because most of this potential habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be used by the southwestern willow flycatcher/willow flycatcher, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a potential significant impact on potential habitat for the southwestern willow flycatcher/willow flycatcher. The proposed Project's contribution to this potential significant impact is 230 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, include nest parasitism by cowbirds; traffic noise (southwestern willow flycatcher is unlikely to nest in close proximity to bridge crossing of the Santa Clara River

due to traffic noise); nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the southwestern willow flycatcher/willow flycatcher could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIS/EIR recommend extensive mitigation measures that will protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the southwestern willow flycatcher/willow flycatcher (**Subsection 4.5.6**, Mitigation Measures). This mitigation will result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA, that would be available for migrating individuals and a breeding population of the southwestern willow flycatcher. These mitigation measures also include restoration, and enhancement of riparian and wetland habitat. Species measures to reduce potential long-term secondary impacts include controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 permits), lighting controls, pesticides controls, and cowbird trapping.

In addition to the measures described above, which reduce Project-related impacts, this species has not been observed to breed in the Project area but is known to use the Project area as a migratory stop-over. Most of the recorded breeding populations of this species occur well outside of the watershed. While typical nesting habitat (structure of riparian canopy, separation from disturbance, *etc*.) associated with this species does not occur within the Project area, the documented occurrence of the breeding population downstream in the Fillmore area suggests that expansion of the breeding population into the Project area could occur. Because of the extensive proposed riparian habitat mitigation, the proposed Project would not preclude the expansion of the breeding population onto the Project area.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Unarmored Threespine Stickleback (FE, CE, CFP). Unarmored threespine stickleback populations exist in five California counties: Los Angeles, San Bernardino, San Diego, San Luis Obispo, and Ventura (CDFG 2005). Surveys for the unarmored threespine stickleback over several years have documented the species within the Santa Clara River portion of the Project area (see species account in **Subsection 4.5.5.3**). The unarmored threespine stickleback is confined to perennial aquatic habitat in the Santa Clara River, which comprises a small portion of the wetland/riparian habitat in the River and has high temporal variability. The proposed Project area is within the Del Valle Zone of the designated essential habitat for this species

(**Figure 4.5-60**, Habitat in RMDP/SCP for Unarmored Threespine Stickleback) (USFWS 1985).[11] The species is known in two other areas of the SCRW that are also designated as essential habitat: San Francisquito Creek and Soledad Canyon.

On November 17, 1980, the USFWS proposed designating approximately 51 kilometers (31.7 miles) of streams in Los Angeles and Santa Barbara counties as critical habitat for the unarmored threespine stickleback (45 FR 76012). However, on September 17, 2002, the USFWS determined that a designation of critical habitat for unarmored threespine stickleback should not be made (67 FR 58850-58582), a determination that was upheld by the Ninth Circuit Court of Appeals in 2006 (*Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.* (9th Cir. 2006) 450 F.3d 930).

The Unarmored Threespine Stickleback Recovery Plan (Revised) was published by the USFWS on December 26, 1985 (USFWS 1985). The Recovery Plan designated three areas as very important for the survival and recovery of the species: (1) two disjunct reaches of the Santa Clara River in Los Angeles County; (2) a short reach of San Francisquito Canyon; and (3) and the lowermost 8.4 miles in San Antonio Creek in Santa Barbara County. One of the reaches in the Santa Clara River is the area from San Martinez Grande Canyon upstream to the I-5 bridge, which runs through the proposed Project site and is the same area proposed but later rejected as critical habitat (45 FR 76012, 67 FR 58850-58582).

Thirteen federal biological opinions were issued for the unarmored threespine stickleback between 1993 and 2006 in the SCRW (**Table 6.0-7**). The CDFG has recently issued three take authorizations for other species in the general regional vicinity of the proposed Project, which authorizations also discussed, but did not authorize take of, unarmored threespine stickleback (**Table 6.0-8**).

Because the unarmored threespine stickleback is confined to perennial aquatic habitat in the Santa Clara River that is subject to high temporal variability, suitable aquatic habitat was not quantified for the purpose of the impact analysis in this EIS/EIR. As described in **Subsection 4.5.5.3**, ENTRIX (2009) concluded that no long-term, permanent significant effects on unarmored threespine stickleback habitat would occur as a result of implementation of the RMDP and build-out of the Specific Plan, VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Further, there would be no impacts to unarmored threespine stickleback habitat resulting from impacts to tributaries to the Santa Clara River, due to the absence of unarmored threespine stickleback, perennial flows, and poor aquatic habitat quality. None of the tributaries have surface water connectivity with the Santa Clara River, except for Middle and Potrero canyons, which have substantial blockages (bedrock headcuts or cascades) that are impassable to fish (ENTRIX 2009).

[11] "Essential habitat" is a term that appears in the USFWS' 1985 Unarmored Threespine Stickleback Recovery Plan (Revised). It coincides with the area proposed in 1980 as unarmored threespine stickleback critical habitat. (USFWS 1985, p. 7.) In 2002, USFWS determined that the 1980 proposed designation of unarmored threespine stickleback critical habitat should not be made final. (67 FR 58580) As a result, the term "essential habitat" lacks any regulatory significance.

Some temporary impacts to habitat would occur when construction occurs directly in aquatic habitat, such as the active stream channel. Bridge construction in particular could directly affect aquatic habitat occupied by unarmored threespine stickleback through direct impacts to the flowing stream, stream diversion, and dewatering when construction is occurring within the River corridor. However, such temporary impacts would not contribute to a potential significant cumulative effect of projects in the SCRW.

Construction-related impacts on individuals (including adults and juveniles), if not mitigated, could result in a cumulatively considerable contribution to a potential significant cumulative impact in the SCRW because of the local nature and vulnerability of this species in the Santa Clara River. However, the Newhall Ranch Specific Plan Program EIR mitigation measures, as well as the mitigation measures recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures), will reduce such impacts to less than significant. These measures include pre-construction surveys for any construction activity within 300 feet of river habitat to assure that stickleback are avoided or excluded, particularly during the sensitive periods such as spawning or when juvenile fish (fry) are present. These measures also specify the methods to be used for excluded stickleback, as well as how temporary diversion channels will be constructed to assure that adequate rearing habitat is present for stickleback during construction. These measures also employ provisions for constructing permanent and temporary stream crossings in the Santa Clara River in a manner that will allow for unimpeded movement upstream and downstream. Numerous water quality measures, such as construction stormwater BMPs (*e.g.*, silt fencing, erosion control materials, sediment basins) and the installation of water quality treatment facilities are also included to minimize impacts from pollutants related to storm runoff during storm events.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including potential physical changes in the River; altered base and flood flows; biochemical, substrate, and temperature alterations; vegetative changes (*e.g.*, invasive plant species); increased human activity; impacts from pet, stray, and feral animals; and increased predation by exotic predators. Mitigation measures implemented to reduce these potential secondary impacts include protection and management of the River Corridor SMA; creation of buffer areas between the River Corridor SMA and development, water quality requirements; restrictions on public access; controls on pet, stray and feral animals; and control on invasive predators such as bullfrog and African clawed frog. Mitigation measures related to hydrology and water quality will also ensure that potential impacts to any downstream populations of the unarmored threespine stickleback are not significant.

No long-term, permanent significant effects on unarmored threespine stickleback habitat would occur as a result of implementation of the RMDP and build-out of the Specific Plan, VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. No loss of unarmored threespine stickleback individuals would occur. Potential long-term secondary impacts would be mitigated to a less-than-significant level on site.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact

due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Western Yellow-Billed Cuckoo (CE). The western yellow-billed cuckoo has occasionally been documented within the Santa Clara River corridor during surveys conducted from 1988 to 2007, although the locations of these observations were not mapped (see species account in **Subsection 4.5.5.3**). This species has been observed historically in 1979, 1981, and 1992 (Labinger *et al.* 1997); however, no observations of nesting, paired, or territorial western yellow-billed cuckoos have been documented within the proposed Project area. Currently, the proposed Project area appears to be a migratory stop for individual western yellow-billed cuckoos but may also be used for post-migratory movements. For breeding, this species primarily uses large blocks of riparian habitat, particularly cottonwood-willow riparian woodlands (66 FR 38611-38626). Large blocks of riparian habitat suitable for western yellow-billed cuckoo generally are absent from the Santa Clara River within the Project area, and likely elsewhere along the River corridor.

Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support western yellow-billed cuckoos or could be reasonably expected to support them. This species appears to be rare in the SCRW, based on the lack of documented nesting, although it probably migrates through the area on occasion. Also, as noted above, this species typically nests in large blocks of riparian habitat that are probably uncommon in the watershed.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 1,030 acres of 25,000 acres of riparian habitat within the watershed; however, the proportion of potential western yellow-billed cuckoo habitat that could be impacted by development is probably substantially higher because most potential habitat is probably in the Santa Clara River and the larger tributaries where development pressure is higher. Smaller and more remote drainages that support riparian habitat, but which is less likely to be occupied by the vireo, probably are under less development pressure. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be potential significant cumulative impact on potential habitat for the western yellow-billed cuckoo. The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including nest parasitism by cowbirds; traffic noise; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for the western yellow-billed cuckoo could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIS/EIR recommend extensive mitigation measures that will protect riparian habitat and establish a large, managed open space system, all of which would reduce impacts to the western yellow-billed cuckoo (**Subsection 4.5.6**, Mitigation Measures). This mitigation will result in the preservation and management of at least 332 acres of suitable habitat, primarily in the River Corridor SMA, that would be available for migrating individuals and a breeding population of the western yellow-billed cuckoo. These mitigation measures also include restoration, and enhancement of riparian and wetland habitat. Specific measures to reduce potential secondary impacts include controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 permits), lighting controls, pesticides controls, and cowbird trapping.

In addition to the measures described above, which reduce Project-related impacts, this species has not been observed to breed in the Project area but is known to use the Project area as a migratory stop-over. Most of the recorded breeding populations of this species occur well outside of the watershed. Typical nesting habitat (structure of riparian canopy, proximity to disturbance, *etc*.) associated with this species does not occur within the Project area.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

White-Tailed Kite (CFP). Bird surveys have been conducted in the riparian areas of the Santa Clara River and Castaic Creek from 1988 through 2007 (see species account in **Subsection 4.5.5.3**). During these surveys, the white-tailed kite has been observed primarily along the Santa Clara River, where it nests in associated riparian woodlands and forages in adjacent grasslands, open sage scrub, and agricultural fields (**Figure 4.5-78**, RMDP/SCP White-Tailed Kite Species Occurrences). It is assumed for this cumulative analysis that the white-tailed kite could occur throughout the Santa Clara River corridor, as well as other areas in the SCRW in riparian and woodland habitats associated with upland foraging areas, including agriculture, California annual grassland, and coastal scrub, and other scrub habitats.

Based on the California GAP data (UCSB, 1999), there are approximately 282,000 acres of suitable nesting and foraging habitat for the white-tailed kite (riparian, oak woodland, California annual grassland, agriculture, disturbed land, and coastal scrub habitats), although it would be incorrect to conclude that white-tailed kites actually use all 282,000 acres. White-tailed kites tend to forage in areas that are in proximity to nesting and roosting habitat (riparian and woodland habitat). For example, within the Project area, most of the observations of foraging white-tailed kites are along the Santa Clara River Corridor (**Figure 4.5-78**, RMDP/SCP White-tailed Kite Occurrences). Based on observations within the Project area, the kite is most likely to nest and forage along the Santa Clara River and adjacent uplands.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 25,400 acres of 282,000 acres of suitable nesting and foraging habitat for the white-tailed kite. Without accounting for past, present or reasonably foreseeable

mitigation (particularly for upland habitats), or the Project's individual contribution to mitigation for loss of habitat, the loss of habitat in the SCRW could be a potential significant impact on suitable nesting and foraging habitat for the white-tailed kite. The proposed Project's contribution to this potential significant cumulative impact is 5,130 acres, which would be cumulatively considerably, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including nest predation; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will establish a large, managed open space system that will protect white-tailed kite habitat and reduce the effects of long-term secondary impacts. Approximately 4,421 acres of suitable habitat for this species, including 1,546 acres of nesting habitat and 2,875 acres of foraging habitat (*i.e.,* foraging habitat within 0.5 mile of suitable nesting habitat) will be conserved in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area.

Long-term secondary impacts will be avoided and reduced through a variety of mitigation measures. Lighting restrictions along the perimeter of natural areas will help reduce predation of nest sites by predators and reduce behavioral disturbances and physiological stress. Limited recreational usage and access restrictions within the High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect white-tailed kites by allowing them to nest and forage without disturbance. Controls on pesticides will reduce the chance of direct and secondary poisoning, and loss of prey. Provision of a large, relatively undisturbed open space system providing nesting and foraging habitat away from development areas will also help mitigate for increased collisions with vehicles and man-made structures.

In addition to the measures described above, which would reduce the Project-related impacts, the proposed Project would not preclude the continued foraging and nesting by white-tailed kite along the Santa Clara River and within the preserved High Country SMA and Salt Creek area within the Project area, as well as along the Santa Clara River corridor upstream and downstream of the Project area.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

6.5.5.2.4.2 California Species of Special Concern (CSC)

This section addresses cumulative impacts to the CSC species as organized by the different wildlife guilds.

Mollusk. The mollusk guild includes one species: the undescribed species of snail. This species is not currently a CSC, but is assumed to meet the criteria for the designation for the purpose of this analysis. This undescribed species is known to occur only in the Middle Canyon Spring in the Project area and is not documented to occur elsewhere in the SCRW. Therefore, there would be no other known impacts to this species by other projects in Los Angeles and Ventura counties and, therefore, there would be no cumulative impacts.

Reptile -- Low Mobility. This guild includes coast horned lizard, coast patch-nosed snake, and silvery legless lizard. In addition to the Project area, occurrences of the coast horned lizard in the SCWR include along the Santa Clara River in Oxnard to Soledad Canyon in the east, Saugus, Fillmore, Castaic Lake area and near Sespe Creek (CDFG 2008A). Outside of the Project area, there are a few documented occurrences of the silvery legless lizard at the eastern edge of SCRW in the Leona Valley area near Lancaster and Palmdale (CDFG 2008A). These two species are expected to occur throughout the watershed in suitable habitat. There are no CNDDB occurrences reported in Los Angeles or Ventura counties for the coast patch-nosed snake, but this species is expected to occur uncommonly in suitable habitat in the SCRW.

As a group, these species use a broad variety of shrubland (scrub and chaparral), grassland, riparian, and woodland habitats, although each species is expected to primarily use a smaller subset of habitats. For example, coast horned lizard is primarily a grassland and shrubland species, the coast patch-nosed snake a shrubland species, and the silvery legless lizard a riparian and woodland species, but each could potentially occur in any of these habitat types. Based on the California GAP data (UCSB, 1999), there are approximately 777,000 acres of suitable habitat for the coast horned lizard, coast patch-nosed snake, and silvery legless as a combined group. However, it is not expected that all 777,000 acres are occupied by these species. For example, silvery legless lizards typically are only found in loose soils, coast horned lizard occur in association with native ant colonies that are its primary prey, and coast patch-nosed snakes appear to uncommon and sparsely distributed.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 35,000 acres of 800,000 acres of suitable habitat for the coast horned lizard, coast patch-nosed snake, and silvery legless lizard. With the estimated permanent loss of more than 35,000 acres of habitat and without accounting for past, present or reasonably foreseeable mitigation (particularly for upland habitats used by this guild), or the Project's individual contribution to mitigation for loss of habitat, the loss of habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to this potential significant cumulative impact is 3,380 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects to these species, including habitat fragmentation and isolation of

some local populations, making the species more vulnerable to extirpation from smaller habitat patches. In addition, the close proximity of urban development to suitable habitat for these species could result in disruption of essential behavioral activities (*e.g.*, foraging, reproduction) and greater vulnerability to several potential secondary impacts, including human-caused habitat degradation (*e.g.*, trampling of vegetation and introduction of invasive species, such as Argentine ants (primarily affecting coast horned lizard), or off-road vehicles); harassment and collection; predation by pet, stray, and feral cats and dogs; increased roadkill; and use of pesticides, which may reduce its prey or cause secondary poisoning.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, permanent open space system that will provide substantial suitable habitat to support the these species (approximately 5,687 acres for coast horned lizard, 3,724 acres for coast patch-nosed snake, and 6,058 acres for silvery legless lizard) in the Project vicinity. Implementation of these mitigation measures will result in protection, restoration and enhancement, and management of suitable habitat in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). Restoration and enhancement of habitat used by the coast horned lizard, coast patch-nosed snake, and silvery legless lizard in these areas will improve habitat quality for these species.

Several specific mitigation measures will also be implemented to reduce long-term secondary effects due to human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pesticides will be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats will be monitored and controlled to the extent feasible. Implementation of these measures will allow these species to persist on site in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Reptile and Amphibian -- Semi-Aquatic. This guild includes south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad. No south coast garter snakes have been documented in the Project area, but there are documented occurrences of south coast garter snake within the Santa Clara River downstream of the Project area. In addition to the Project area, southwestern pond turtle has been documented in various locations throughout the SCRW (specific locations are suppressed in the CNNDB database in order to protect populations), including the Los Padres and Angeles National Forests, and it is expected to occur wherever habitat conditions are suitable. The two-striped garter snake has been documented

throughout the SCRW outside the Project area, including Maple Creek north of Fillmore, south of Fillmore, Sespe Creek, Tar Creek upstream of Sespe Creek, Castaic Creek and Fish Canyon, the Santa Clara River between Salt Creek and Summer Four Crossings, Oak Spring Canyon east of Santa Clarita, and Soledad Canyon (CDFG 2008A). This species is expected to occur wherever habitat conditions are suitable. The western spadefoot toad has been documented in several locations in the SCRW, including Cruzan Mesa north of the City of Santa Clarita, west of Sand Canyon south of Santa Clarita, San Francisquito Creek, Soledad Canyon, Plum Canyon Creek, Grasshopper Canyon northwest of Castaic Lake, just east of Oak Spring Canyon south of the Santa Clara River, and north of Tapia Canyon (CDFG 2008A).

The cumulative impacts analysis for habitat impacts presented above for the California red-legged frog presented above generally is applicable to the south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad. Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW, but not all of this habitat is expected to be occupied due to a lack of all necessary habitat elements. Upland habitats adjacent to occupied riparian habitat are expected to be used for important aspects of theses species' life histories, including aestivation, hibernation, and nesting, but the acreage of these areas cannot be accurately estimated at the watershed scale.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,030 acres of the 25,000 acres of riparian habitat. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW potentially could be a potential significant cumulative impact on potential habitat for south coast garter snake, southwestern pond turtle, two-striped garter snake, and western spadefoot toad. The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which could be cumulatively considerable, absent mitigation. The proposed Project would also cause permanent loss of adjacent terrestrial habitat, such as agriculture along the Santa Clara River, that is probably used by these species for aspects of their life cycles, as well as refuge from severe flood events. It is assumed that other present and reasonably foreseeable projects affecting suitable riparian habitat would also impact adjacent upland habitat, resulting in a potential significant cumulative impact, without accounting for mitigation. The proposed Project's contribution to this potential significant cumulative impact to terrestrial habitat could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects to these species, including disruption of nocturnal activities and greater vulnerability to predation by nocturnal predators (such as owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators (see Crooks and Soulé 1999); collecting by children; degradation of habitat from increased human use (*e.g.*, trampling, trash, and off-road vehicles) and altered fire regimes (likely too frequent fire); invasion by exotic plant (*e.g.*, giant reed, tamarisk, and pampas grass) and wildlife species (*e.g.*, Argentine ants, bullfrogs, African clawed frogs, exotic fish, and crayfish); use of pesticides; and increased risk of roadkill on roads adjacent to occupied areas. At the watershed level these secondary effects could be a potential significant cumulative impact.

The proposed Project's contribution to this potential significant cumulative secondary impact could be cumulatively considerable, absent mitigation.

As discussed previously for the California red-legged frog, the Newhall Ranch Specific Plan Program EIR and this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) include extensive mitigation measures that will protect riparian habitat and establish a large, managed open space system which will reduce impacts to these species. Also, the Santa Clara River corridor hydrology and habitat conditions on site or downstream will not be significantly affected by the proposed Project (PACE 2009). As analyzed in detail for the southwestern pond turtle in **Subsection 4.5.5.3**, upland refugia will be available along the Santa Clara River, although under the proposed Project, construction of Potrero Bridge under Alternative 2 at the mouth of Potrero Canyon will block access to Potrero Canyon by southwestern pond turtle. This was considered a significant unavoidable impact under Alternative 2 at the project-level because this area may be an important refuge and nesting area.

The River Corridor SMA will provide a large, protected open space area that will help offset long-term secondary impacts. Several specific mitigation measures will also be implemented to control human activities in the River Corridor SMA, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting along the open space-urban interface will be downcast. Pesticides will be controlled through an integrated pest management (IPM) plan. Argentine ant invasions of upland habitats in the open space system will be monitored and controlled to the extent feasible. Implementation of these measures would allow these species to persist on site after development.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed (with the exception of the south coast garter snake), and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Fish. This guild includes arroyo chub and Santa Ana sucker, which primarily occur in the Santa Clara River some of its main tributaries within the SCRW. The cumulative analysis presented above for the unarmored threespine stickleback is, therefore, applied to these species.

As noted in **Subsection 4.5.5.3**, both species are considered be introduced to the Santa Clara River and associated tributaries. In addition to populations in the Project area, introduced populations of arroyo chub are present in the Santa Clara River at Agua Dulce Creek and west of Chambersburg Road south of Fillmore, and in Soledad Canyon, Santa Paula Creek, and Sespe Creek along SR-33 and at the Stone Corral Creek confluence (CDFG 2008A). In addition to populations in the Project area, introduced populations of the Santa Ana sucker are present in the Santa Clara River ranging from Arrastre Canyon approximately 2.5 miles east of SR-14 to Santa

Paula Creek, and Piru Creek, Sespe Creek, and San Francisquito Creek (CDFG 2008A; Swift *et al.* 1993; Stephenson and Calcarone 1999; NEA 2004; NatureServe 2007).

As described in **Subsection 4.5.5.3**, ENTRIX (2009) concluded that no long-term, permanent significant effects on arroyo chub and Santa Ana sucker habitat would occur as a result of implementation of the RMDP and build-out of the Specific Plan, VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Further, there would be no impacts to habitat for these species resulting from impacts to tributaries to the Santa Clara River, due to the absence of perennial flows, and poor aquatic habitat quality. For these reasons, the proposed Project would not contribute to potential significant cumulative impacts to habitat that may occur from other projects in the SCRW.

Some temporary impacts to habitat for these species would occur when construction occurs directly in aquatic habitat. Impacts to the active stream channel during bridge construction could affect stream flows, and cause stream diversions and dewatering when construction is occurring within the River corridor. However, such temporary impacts would not contribute to a potential significant cumulative effect of projects in the SCRW.

Construction-related impacts on individuals, if not mitigated, could result in a cumulatively considerable contribution to a potential significant cumulative impact in the SCRW because of the local nature and potential vulnerability of these species in the Santa Clara River. However, the Newhall Ranch Specific Plan Program EIR mitigation measures, as well as the mitigation measures recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures), will reduce such impacts to less than significant. These measures include facilities design requirements, pre-development surveys, consultation with USFWS, biological monitoring during construction, excluding fish from disturbance areas through coordination with and approval from the Corps and CDFG, and conformance with state and federal permits related to wetlands and water quality.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including potential physical changes in the River; altered base and flood flows; biochemical, substrate, and temperature alterations; vegetative changes (*e.g.*, invasive plant species); increased human activity; impacts from pet, stray, and feral animals; and increased predation by exotic predators. Mitigation measures implemented to reduce these potential secondary impacts include protection and management of the River Corridor SMA; creation of buffer areas between the River Corridor SMA and development, water quality requirements; restrictions on public access; controls on pet, stray and feral animals; and control on invasive predators such as bullfrog and African clawed frog. Mitigation measures related to hydrology and water quality will also ensure that potential impacts to any downstream populations of arroyo chub and Santa Ana sucker are not significant.

No long-term, permanent significant effects on arroyo chub and Santa Ana sucker habitat would occur as a result of implementation of the RMDP and build-out of the Specific Plan, VCC, and Entrada planning areas, because the general morphology of the Santa Clara River, adjacent rearing habitat, and high-flow riparian refugia would not be substantially altered. Potential short-term and long-term secondary impacts would be mitigated to a less-than-significant level.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Raptor. This guild includes long-eared owl, northern harrier, short-eared owl, and western burrowing owl. There are no CNDDB documented occurrences for long-eared owl, northern harrier, or the short-eared owl in the SCRW (CDFG 2008A), but based on data for the proposed Project these species are expected to occur in suitable habitat in the watershed. The long-eared owl was observed in the Project area on one occasion (Dudek and Associates 2006) and, therefore, is considered to be at least a regular migrant and/or a winter visitor to the region, with some potential to breed in the riparian and woodland habitats watershed. The northern harrier has been observed in or near the Project area infrequently during the 20 years of surveys. Most of the observations of this species were probably of wintering and migrating individuals, and these surveys are considered adequate to establish that this species is at least an occasional winter migrant in the SCRW. The short-eared owl was observed twice near the Project area (Dudek and Associates 2006; Olson 2007) two observations and it is assumed for the purpose of this analysis that the short-eared owl at least occurs in the SCRW as an occasional migrant and uses watershed for foraging. In addition to two observations of the burrowing owl in the Project area (Babcock 2007; Miller 2007), there are two other documented occurrences of western burrowing owl in the CNDDB (CDFG 2008A). The majority of documented occurrences of burrowing owl in Los Angeles County are from the Antelope Valley in the Lancaster and Palmdale areas. It is assumed for the cumulative analysis that the burrowing owl occasionally uses SCRW for wintering or during migration, but also has potential to breed in the watershed.

These species overlap in their use of foraging habitats, with grasslands, agriculture, and disturbed lands as the most common foraging habitats used by all of the species, and which are the basis for this analysis at the guild level. Based on the California GAP data (UCSB, 1999), there are approximately 78,000 acres of suitable foraging habitat these species, although based on the few observations of these species in the watershed, not all of this habitat is expected to be used for foraging. Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 3,790 acres of 78,000 acres of foraging habitat for these species. Without accounting for past, present or reasonably foreseeable mitigation (there are no standard mitigation requirements for loss of grassland, agriculture, or disturbed lands), or the Project's individual contribution to mitigation for loss of habitat, the loss of 3,790 acres of habitat in the SCRW could be a potential significant impact on suitable foraging habitat for these species. The proposed Project's contribution to this potential significant cumulative impact is 3,290 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will establish a large, managed open space system that includes approximately 995 acres of suitable foraging habitat for these species and which will reduce secondary effects. Implementation of these mitigation measures will result in protection, restoration and enhancement, and management of suitable habitat in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). Several specific mitigation measures will also be implemented to reduce long-term secondary effects due to human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pesticides will be controlled through an integrated pest management (IPM) plan.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Riparian. This guild includes summer tanager, tricolored blackbird, vermilion flycatcher, yellow-breasted chat, yellow-headed blackbird, and yellow warbler. Documented occurrence data for these species in the SCRW outside of the Project area are very sparse. There are no documented occurrences in the CNDDB for the SCRW for summer tanager, vermilion flycatcher, tricolored blackbird, or yellow-headed blackbird (CDFG 2008A). No summer tanagers have been observed during spring surveys on site, one vermilion flycatcher has been observed, and occasional yellow-headed blackbirds have been observed. No nesting vermilion flycatchers or yellow-headed blackbirds have been observed in the Project area. Tricolored blackbird has been observed on site periodically, but were documented nesting on site only in 1994. There is one occurrence each in the CNDDB (CDFG 2008A) for yellow-breasted chat and yellow warbler for the watershed approximately three miles east of Fillmore, but these two species have been commonly observed in the Santa Clara River within the Project area during spring surveys and are assumed to breed on site and elsewhere in the SCRW where there is suitable riparian habitat.

Because these species use habitats similar to those analyzed for the least Bell's vireo and southwestern willow flycatcher/willow flycatcher and would be subject to the same types of secondary impacts, the cumulative impact analysis for the two listed species is applied to the summer tanager, tricolored blackbird, vermilion flycatcher, yellow-breasted chat, yellow-headed blackbird, and yellow warbler.

Based on the California GAP data (UCSB, 1999), there are approximately 25,000 acres of riparian habitat in the SCRW. However, not all 25,000 acres support these species or could be reasonably expected to support them. Present and reasonably foreseeable projects in the SCRW,

including the proposed Project, would cause the loss of 1,030 acres of 25,000 acres of riparian habitat; however, as noted above for least Bell's vireo, these species probably are concentrated along the Santa Clara River and immediately adjacent tributaries, so the proportionate loss of occupied habitat is probably substantially higher. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of riparian habitat, the loss of 1,030 acres of riparian habitat in the SCRW could be a potential significant impact on potential habitat for the species in this guild, including potential migration habitat for the summer tanager, vermilion flycatcher, and yellow-headed blackbird, and nesting habitat for the yellow-breasted chat, yellow warbler, and tricolored blackbird. The proposed Project's contribution to this potential significant cumulative impact is 230 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including nest parasitism by cowbirds on yellow-breasted chat and yellow warbler; nighttime illumination; increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. Habitat quality for these species could be reduced by diminished water quality and invasion by exotic plant species. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The Newhall Ranch Specific Plan Program EIR and this EIS/EIR recommend extensive mitigation measures (**Subsection 4.5.6**, Mitigation Measures) that protect riparian habitat and establish a large, managed open space system, all of which will reduce impacts to these species. This mitigation will result in the preservation and management of at least 332 acres of riparian habitat, primarily in the River Corridor SMA, that would be available for future breeding populations of yellow-breasted chat and yellow warbler, and potentially tricolored blackbird. These mitigation measures include preservation, restoration, and enhancement of riparian and wetland habitat. Species measures to reduce potential long-term secondary impacts include controls on public access, invasive species controls, conformance with permits from federal and state agencies for impacts to wetlands and water quality (*i.e.*, NPDES and section 401 permits), and lighting controls.

In addition to these measures reducing impacts to these species at the project-level, these species generally have broad geographic ranges. The yellow-breasted chat and yellow warbler are expected to breed along most of the Santa Clara River and associated tributaries wherever there is suitable habitat. The summer tanager, vermilion flycatcher, and yellow-headed blackbird are expected to use suitable habitat within the SCRW on an occasional basis or during migration. The tricolored blackbird is expected to breed occasionally in suitable habitat in the SCRW, but its breeding status in the watershed is unknown and likely to be variable due to its itinerant breeding pattern.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact

due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Upland Grassland. The only CSC species in this guild is the grasshopper sparrow. This species has not been observed in the Project area, but because the site is at the edge of its summer breeding range, there is some, albeit low, potential for the species to occur. The CNDDB has one occurrence in SCRW in Tapia Canyon north of Santa Clarita.

Based on the California GAP data (UCSB, 1999), there are approximately 22,000 acres of suitable grassland habitat for the grasshopper sparrow. However, it is not expected that all 22,000 acres are occupied by this species because there is only one documented occurrence in the SCRW and it has not been observed in the Project area during numerous avian surveys.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of 1,120 acres of 22,000 acres of suitable habitat for the grasshopper sparrow. The proposed Project's contribution to this impact is 1,070 acres. Because the grasshopper sparrow has a low potential to winter or nest on site, based on negative surveys findings, at the project-level this impact was determined to be adverse but not significant (see **Subsection 4.5.5.3**). Since the proposed Project accounts for the majority of the impact of present and reasonably foreseeable projects, the cumulative effect of the present and reasonably foreseeable projects, including proposed Project, would not be significant at the watershed level.

Although the species has a low potential to occur in the Project area and on other present and reasonably foreseeable projects, without accounting for past, present, or reasonably foreseeable mitigation, these projects, including the proposed Project, could result in potential long-term secondary effects, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these long-term secondary effects could occur, because the grasshopper sparrow is unlikely to nest or winter in the watershed in large numbers, these effects would not have a significant cumulative impact.

Even though significant cumulative impacts to the grasshopper sparrow and its habitat would not occur and mitigation measures are not required, several mitigation measures for other project-level impacts to biological resources will be implemented that will further reduce any potential impacts (**Subsection 4.5.6**, Mitigation Measures). These mitigation measures include habitat preservation, restoration, enhancement, and management of the High Country SMA and Salt Creek area—areas that will form a large, contiguous open space system that includes approximately 660 acres of California annual grassland. Specific measures will also be implemented to reduce potential long-term secondary effects, including controls on human activity, pet, stray, and feral cats and dogs, lighting, and pesticides.

Bird -- Upland Scrub and Chaparral. The only CSC species in this guild is the loggerhead shrike. This species is commonly observed in the Project area and has been documented to nest on site. This species also is likely to be relatively common in scrub and chaparral habitat

throughout the SCRW. Although there are no records for this species for the watershed in the CNDDB (2008), this species has been regularly observed by biologists in the watershed.

The loggerhead shrike is considered to be primarily a scrub and chaparral species, but it also frequently forages in grassland, agriculture, and disturbed lands. Based on the California GAP data (UCSB, 1999), there are approximately 803,000 acres of suitable habitat for the loggerhead shrike. It is not expected that all 803,000 acres are occupied by this species because, although common, shrikes occur in low densities.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 36,700 acres of 803,000 acres of suitable habitat for the loggerhead shrike. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland scrub and chaparral), or the Project's individual contribution to mitigation for loss of habitat, the loss of 36,700 acres of habitat in the SCRW could be a potential significant impact on the habitat for this species. The proposed Project's contribution to this potential significant cumulative impact is 5,270 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including habitat fragmentation and reduced nest success due to nighttime lighting; noise disturbance; and harassment/disturbance by humans, especially if such disturbances occur during the nesting season; and predation by pet, stray, and feral cats and dogs as well as other mesopredators. The use of pesticides to control invertebrates and small mammals within and adjacent to open foraging areas could result in secondary poisoning and loss of prey for the species. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, permanent open space system that will provide suitable habitat to support the loggerhead shrike in the Project vicinity. Implementation of these mitigation measures will result in protection, restoration and enhancement, and management of approximately 6,100 acres of suitable habitat in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). This set-aside will also offset long-term secondary impacts, especially habitat fragmentation and vehicle collisions. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. Pesticides will be controlled through an integrated pest management (IPM) plan. Implementation of these measures will allow this species to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to loggerhead shrike at the project-level, this species remains relatively common and widespread within suitable habitat within the watershed

and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bats. This guild includes pallid bat, pocketed free-tailed bat, Townsend's big-eared bat, western mastiff bat, and western red bat. Project area surveys using the Anabat II Bat Detector documented the presence of pallid bat (including a maternity roost and a night roost in Potrero Canyon), the pocketed free-tailed bat, and western red bat. The western mastiff bat was audibly detected (its signals are directly detectable by humans). Townsend's big-eared bat was not detected during surveys, but has moderate potential to occur on site due to the large amount of suitable habitat. Documented occurrences in the CNDDB (CDFG 2008A) elsewhere in the SCRW for these species are variable and some are decades old. The pallid bat has been documented in Soledad Canyon, Castaic, Fillmore, and Santa Paula. The western mastiff bat has been documented in Piru Creek north of the lake and at the lake, and southwest of Newhall. There are no records in the CNDDB for the pocketed free-tailed bat, Townsend's big-eared bat, or western red bat. However, because comprehensive surveys for bats have not been conducted throughout the SCRW, and because these species are foraging generalists and use a variety of habitats, it is assumed that these species could occur throughout the SCRW. The main limitation for the occurrence of the species probably is a lack of day roosts sites, such as a caves, crevices, rock outcrops, tunnels, *etc*.

This cumulative analysis addresses the loss of foraging habitat for these species. As foraging generalists, they use a variety of habitats, but probably concentrate most of their foraging activity in wetland and riparian habitats. Suitable foraging habitat for bats includes coastal scrub, chaparral, grassland, riparian, oak woodland, agriculture, and disturbed land. Based on the California GAP data (UCSB, 1999), there are approximately 836,000 acres of suitable foraging habitat for bats in the SCRW. It is not expected that all 836,000 acres are used by bats for foraging because this habitat must be within typical flight distances of day roosts. For example, the pallid bat is capable of flying more than 18 miles, but most foraging occurs within about two miles of the day roost (Hermanson and O'Shea 1983).

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for these bats. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the Project's individual contribution to mitigation for loss of habitat, the loss of 38,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to this potential significant cumulative impact is 5,590 acres, which could be cumulatively considerable, absent mitigation.

In addition to loss of foraging habitat, day roosts, including maternal roosts, may be present in the SCRW and subject to potential impacts as a result of present and reasonably foreseeable projects. One documented maternal day roost and one night roost for pallid bat would be lost as a result of

the proposed Project, but there is a potential for other roosts sites in the SCRW to be impacted. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the Project's individual contribution to mitigation for loss of day roosts, the loss of roost sites could result in a potential significant cumulative impact. The proposed Project's contribution to this potential significant cumulative impact could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects resulting from increased human activity, noise, and lighting. Use of pesticides for agriculture or in landscaped areas may result in secondary poisoning and reduction of prey. Pallid bats taking prey on the ground are vulnerable to collection by humans and to predation by pet, stray, and feral cats and dogs. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The cumulative loss of foraging habitat and day roost sites, and long-term secondary impacts to these bats species will be reduced through several mitigation measures included in the Newhall Ranch Specific Plan EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures). These measures include habitat preservation, restoration, enhancement, and management of approximately 6,300 acres in the River Corridor SMA, High Country SMA, and Salt Creek area—areas that will form a large, contiguous open space system providing foraging and potential roosting habitat for bats. It is expected that the species in this guild will continue to forage in these areas after build-out of the Project area. Alternative roost sites will be created to mitigate for any day roost sites disturbed during construction, including creation of roosts under bridges and in culverts, where practicable, in consultation with CDFG. Species measures to reduce potential long-term secondary impacts include controls on public access, pet, stray, and feral cat dogs, pesticides, and lighting.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Mammal -- Low Mobility. This guild includes the San Diego desert woodrat and southern grasshopper mouse. Within the Project area, the San Diego desert woodrat is common in coastal scrub and chaparral in the Project area. The only other documented occurrence in close proximity to the SCRW is in Weldon Canyon just west of the SR-14/I-5 junction. However, this lack of data is probably more a result of few small mammal trapping programs conducted in the watershed and/or under-reporting of the species to the CNDDB. Based on it relatively frequent capture during the Newhall Ranch trapping study (Impact Sciences 2005), this species is expected

to be common throughout the watershed in suitable habitat (*i.e.*, more xeric expressions of the coastal scrub and chaparral). The southern grasshopper mouse was not documented on site during the small mammal trapping studies or pitfall trapping conducted for reptile and amphibians in the Project area and is only known from Mint Canyon (CDFG 2008A). This record dates back to 1930 and is located approximately 15 miles east of the Project area. The documented geographic range of the grasshopper mouse is east of the Project area (Zeiner *et al*. 1990B). The habitat use of these two species overlaps, where both may occur in drier, more open coastal scrub and chaparral, but the San Diego woodrat also occurs in more densely vegetated shrublands that would be unsuitable for the grasshopper mouse and the grasshopper mouse also occurs in grassland that is not used by the woodrat.

The combined habitat for these two species for the purpose of this cumulative analysis is defined as grassland, coastal scrub, and chaparral. Based on the California GAP data (UCSB, 1999), there are approximately 747,000 acres of potential habitat in the SCRW, of which approximately 725,000 acres are coastal scrub and chaparral and approximately 22,000 acres are non-native grassland. Even though the San Diego desert woodrat is relatively common, it is not expected to occur in all 725,000 acres of coastal scrub and chaparral in the SCRW because it uses more xeric forms of these habitats, whereas the dusky-footed woodrat tends to occur in more mesic forms. The southern grasshopper mouse, if present in the SCRW, is expected to be even more sparsely distributed in xeric forms of coastal scrub and chaparral and grasslands.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 34,100 acres of 747,000 acres of potential habitat, including approximately 33,000 acres of coastal scrub and chaparral and approximately 1,100 acres of grassland. Without accounting for past, present or reasonably foreseeable mitigation for these upland habitats, or the Project's individual contribution to mitigation for loss of habitat, the loss of 34,100 acres of habitat in the SCRW could be a potential significant impact on the habitat for both species. The proposed Project's contribution to this potential significant cumulative impact is 3,050 acres of the combined habitats, including 1,980 acres of coastal scrub and chaparral and 1,070 acres of grassland. The loss of these habitats on site could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including habitat fragmentation and potential isolation of local populations of the San Diego desert woodrat and southern grasshopper mouse, making the species, if present, more vulnerable to local extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in abandonment of dens and burrows; disruption of nocturnal activities; greater vulnerability to predation by nocturnal predators (*e.g.*, owls and coyotes) as a result of nighttime lighting; greater vulnerability to predation by pet, stray, and feral cats and dogs as well as other mesopredators such as raccoons, foxes, skunks, and opossums (Crooks and Soulé 1999); and vulnerability to pesticides, which may reduce insect prey and cause secondary poisoning and rodenticides that may be used to control pest rodents. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, permanent open space system that will provide suitable habitat to support the San Diego desert woodrat and southern grasshopper mouse, if present in the Project vicinity. Implementation of these mitigation measures will result in protection and management of approximately 3,488 acres of suitable habitat for the San Diego desert woodrat and approximately 2,657 acres for the southern grasshopper mouse. This open space will be conserved in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting will be downcast away from open space areas. Rodenticides will be controlled through an integrated pest management (IPM) plan. Implementation of these measures will allow these species to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to these species at the project-level, the San Diego desert woodrat has a broad geographic range and is still common in suitable habitat. It is expected to occur relatively commonly in suitable habitat on National Forest system lands and other public lands on the SCRW. The southern grasshopper mouse, if still present in the SCRW, likely occurs in low population densities in very scattered distributions. The probability of a present or reasonably foreseeable project, including the proposed Project, impacting this species is considered to be low.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Mammal -- Moderate Mobility. This guild includes American badger and San Diego black-tailed jackrabbit. Both species are present, but uncommon within the Project area. The American badger has been documented three times in the Project area through systematic surveys and anecdotal observations of dens and tracks (Impact Sciences 2005; Behrends 2006; Dudek and Associates 2006). There is only one documented occurrence for the American badger outside the Project area in the CNDDB; a location between Bear Creek and Hopper Mountain northeast of Fillmore (CDFG 2008A). However, while this species generally occurs at low abundances, observations of badgers in suitable habitat in southern California by biologists are not uncommon. It is expected to occur throughout the SCRW in suitable habitat. However, on the Angeles National Forest and other Forest System lands the distribution of American badger is not well documented (Stephenson and Calcarone 1999). This species is known to occur on portions of the Los Padres National Forest but has not been observed on many portions of the Angeles National Forest in several years (Welch 2009). The San Diego black-tailed jackrabbit was only observed in the Project area during focused mammal surveys by Impact Sciences (2005). Negative findings for this species during many other wildlife surveys suggest that it is uncommon on site. There is

only one documented occurrence for the San Diego black-tailed jackrabbit outside the Project area in the CNDDB: a location between Castaic Lake and San Francisquito Canyon (CDFG 2008A). While this species appears to be uncommon in the western portion of the watershed, it is expected to be more common in the eastern portion of the watershed because several CNDDB occurrences are from the Palmdale/Lancaster desert region just east of SCRWR. The lack of occurrence records for both the American badger and San Diego black-tailed jackrabbit probably are due to both their relatively uncommon occurrence (at least in the central and western portions of the watershed) and under-reporting to the CNDDB.

For the purpose of this cumulative analysis, suitable habitat for these two species includes agriculture, disturbed land, grassland, and coastal scrub. Based on the California GAP data (UCSB, 1999), there are approximately 252,000 acres of potential habitat in the SCRW. Because both species are uncommon in the SCRW, not all 252,000 acres are expected to be occupied.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 24,300 acres of 251,000 acres of potential habitat for the American badger and San Diego black-tailed jackrabbit. Also, past, present, and reasonably foreseeable future projects within the SCRW have tended to be concentrated in the valleys and relatively gentle foothill slopes where these species are known to occur. These patterns apply both to the land use changes addressed here a cumulative effects (*i.e.,* since the 1999 UCSB GAP project) and extensive land conversions to agricultural uses prior to 1999. These cumulative effects cause a disproportionately high loss of individuals and habitat for badgers and black-tailed jackrabbits whose habitats and distributions are primarily on gentle topography, lower foothills and canyons, or valley bottoms. Without accounting for past, present or reasonably foreseeable mitigation for these upland habitats, or the Project's individual contribution to mitigation for loss of habitat, the loss of 24,300 acres of habitat in the SCRW could be a potential significant impact on the habitat for both species. The proposed Project's contribution to this potential significant cumulative impact is 4,800 acres of the habitats, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects including habitat fragmentation; increased risk of vehicle collisions as a result of new roads and increased traffic volumes on existing roads (*e.g.,* SR-126); nighttime illumination; increased human activity and potential harassment by humans and pet, stray, and feral cats (primarily San Diego black-tailed jackrabbit) and dogs; and the use of rodenticides that could result in accidental poisoning of both species and reduction of the rodent prey base for the American badger. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, permanent open space system that will provide suitable habitat to support the American badger and San Diego black-tailed jackrabbit in the Project vicinity. Implementation of these mitigation measures will result in protection and management of approximately 3,540 acres of suitable habitat for the American badger and San Diego black-tailed jackrabbit. This

open space will be conserved in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting will be downcast away from open space areas. Rodenticides will be controlled through an integrated pest management (IPM) plan. Implementation of these measures will allow these species to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to these species at the project-level, these species occur in low densities on site, but have broad geographic ranges (*e.g.*, badger occurs virtually throughout the state), are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands, although these species are likely to occur in low densities on Forest Service lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

6.5.5.2.4.3 California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust Resource Species

This section addresses cumulative impacts to California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust Resource Species as organized by the different wildlife guilds.

Insect. This guild includes monarch butterfly and San Emigdio blue butterfly. Individual monarch butterflies have been regularly observed during focused butterfly surveys as well as during various other wildlife and plant surveys, but no wintering sites have been observed or documented in the SCRW. Due to the site's distance from the coast, it is unlikely that the Project area would be used by large numbers of overwintering adult monarch butterflies (Compliance Biology 2004). Monarch butterflies themselves have no special conservation status, but their overwintering sites are considered a sensitive resource (CDFG 2008B). Because winter sites do not occur in the Project area, there would be no impacts resulting from the proposed Project and no cumulative effects of the proposed Project on Monarch butterflies' overwintering habitat.

One San Emigdio blue butterfly was also observed in the High Country SMA at the northwestern edge of Salt Creek Canyon during the 2005 surveys. The CNDDB reports no known locations within the SCRW but Stephenson and Calcarone (1999) cite two occurrences within the SCRW, at Mint Canyon and Bouquet Canyon near Castaic. The primary location for this species is along the Mojave River near Victorville, with scattered locations in canyons along the north side of the San Gabriel Mountains near the desert's edge, and in arid areas south of Mount Abel near San Emigdio Mesa (Emmel and Emmel 1973; Murphy 1990).

Although the San Emigdio blue butterfly's geographic range is relatively large and its larval host plants (quail brush and four-winged saltbush) are common, it is a "habitat specialist," meaning that its distribution is much more localized than its host plants. It is known from only a few scattered locations range-wide. Quail brush and four-winged saltbush have wide elevational ranges, but the mixed saltbush scrub vegetation where San Emigdio blue butterfly is found generally occurs on bajadas, flats, lower slopes, playas, and valley floors (Sawyer and Keeler-Wolf 1995), where development and other land use conversions tend to be concentrated. The best-known location is outside the SCRW, along the Mojave River at the Interstate 15 crossing, near Victorville. That occurrence has declined due to surrounding urbanization (Stephenson and Calcarone 1999).

Details of the San Emigdio blue butterfly's population status at SCRW occurrences at Bouquet and Mint canyons are unknown. Due to its occurrence in small, widely scattered locations; its susceptibility to habitat loss; and the lack of known occurrences within the SCRW, ongoing development is the watershed could be a potential significant cumulative impact to the San Emigdio blue butterfly.

Vegetation clearing associated with construction of RMDP facilities and fence construction around the Potrero Preserve Area in accordance with the SCP (Appendix 1.0) would result in the removal of quail brush plants associated with the colony that occurs outside the Potrero Preserve Area. The construction of Potrero Canyon Road under Alternative 2 would fragment the only known colony on site. Even with replacement, preservation, and management of habitat for this species, as proposed (see **Subsection 4.5.5.3**), this impact would be significant and unavoidable, absent further mitigation for Alternative 2. Due to the species' rarity within the SCRW and throughout its known range, and the other conservation issues described above, a significant impact to even a single occurrence would result in a cumulatively considerable contribution to the species in the watershed. Therefore, the Project-specific impacts of Alternative 2 would be a significant and unavoidable cumulative impact to San Emigdio blue butterfly.

Alternatives 3 through 7 would largely avoid impacts to occupied habitat and unavoidable residual impacts would be reduced to a level less than significant through mitigation measures recommended in this EIS/EIR, as summarized in **Subsection 4.5.5.3** and fully described in **Subsection 4.5.6**, Mitigation Measures. Similarly, these alternatives also would not contribute considerably to a potential significant watershed-wide cumulative impact in the SCRW.

Reptile -- Low Mobility. This guild includes coastal western whiptail, rosy boa, and San Bernardino ringneck snake.

The coastal western whiptail was observed on site in the High Country SMA (Dudek and Associates 2006) and off site in Castaic Mesa (Compliance Biology 2006), but was not observed in pitfall trapping (Impact Sciences 2006). There is only one other documented occurrence for the SCRW in the CNDDB south of Soledad Canyon Road (CDFG 2008A). However, this species has only been tracked in the CNDDB in recent years, with the oldest occurrence in Ventura and Los Angeles counties dating back to 1993. This species is common observed by biologists in suitable habitat in southern California and it is expected to be relatively common in suitable habitat in the SCRW.

The San Bernardino ringneck snake and rosy boa have not been observed in the Project area and there are no documented occurrences in the CNDDB for these species (CDFG 2008A). While not commonly observed by biologists because of their low detectability during typical walkover surveys, both species are still relatively widespread and common in suitable habitat (Zeiner *et al.* 1988). There is substantial suitable habitat for these species in the Project area and elsewhere in the SCRW and both are expected to occur throughout the SCRW.

These three species overlap in their habitat use, but may also occur in habitats that are not typically used by the other species. For example, rosy boa primarily uses coastal scrub and chaparral, while the coastal western whiptail lizard and San Bernardino ringneck snake both use annual grassland and oak woodlands. Unlike the other two species, the ringneck snake also uses riparian habitats. For the purposes of this cumulative analysis for these species, the collective habitat types include riparian, grassland, coastal scrub, chaparral, and oak woodland. Based on the California GAP data (UCSB, 1999), there are approximately 777,000 acres of potential habitat in the SCRW. Because all three species probably are patchily distributed in the SCRW in association with suitable microhabitats within these broader habitat areas, not all 777,000 acres are expected to be occupied.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 35,000 acres of 777,000 acres of potential habitat for the coastal western whiptail, rosy boa, and San Bernardino ringneck snake. Without accounting for past, present or reasonably foreseeable mitigation for these habitats (particularly grassland, coastal sage scrub, and chaparral), or the Project's individual contribution to mitigation for loss of habitat, the loss of 35,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to this potential significant cumulative impact is 3,380 acres of the habitats, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including habitat fragmentation and isolation of some local populations of these species, making them more vulnerable to extirpation. In addition, over the long term, the close proximity of urban development to suitable habitat could result in disruption of essential behavioral activities (*e.g.*, foraging, reproduction) and greater vulnerability to several potential secondary impacts, including human-caused habitat degradation (*e.g.*, trampling of vegetation, introduction of invasive species, such as Argentine ants and off-road vehicles); harassment and collection; predation by pet, stray, and feral cats and dogs; increased incidence of roadkill; and use of pesticides, which may reduce their prey or cause secondary poisoning. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The required Newhall Ranch Specific Plan Program EIR mitigation measures and additional mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will result in a large, permanent open space system that will provide suitable habitat to support coastal western whiptail, rosy boa, and San Bernardino ringneck snake in the Project vicinity. Implementation of these mitigation measures will result in protection and management of

substantial suitable habitat for these species (approximately 5,687 acres for coastal western whiptail, 3,724 acres for rosy boa, and 6,047 acres for San Bernardino ringneck snake) in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting will be downcast away from open space areas. Rodenticides will be controlled through an integrated pest management (IPM) plan. Implementation of these measures will allow these species to persist on site after development in the large amount of permanent open space that will be protected and managed.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges and are relatively common, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Raptor. This guild includes Cooper's hawk, ferruginous hawk, merlin, prairie falcon, sharp-shinned hawk, and turkey vulture. The Cooper's hawk is the only species in this guild that has been documented to nest on site. The others forage on site only during the winter or during migration (ferruginous hawk, merlin, and sharp-shinned hawk) or otherwise are likely to nest off site and use the site only for foraging (prairie falcon and turkey vulture). These species are expected for nest (Cooper's hawk, prairie falcon, and turkey vulture) and/or forage throughout suitable habitat in the watershed.

As a group these species may forage in virtually all the habitats on site, including agriculture, disturbed land, grassland, coastal scrub, chaparral, riparian, and woodland. However, each of the species typically uses some subset of these habitats. For example, ferruginous hawk typically forages over open lands, such as grassland and agriculture, while Cooper's hawk primarily forages in riparian and woodland habitat and adjacent coastal scrub. Wintering or migrant sharp-shinned hawks may forage in all of the habitats listed above. For the purpose of this analysis, therefore, all of these habitats are considered to be suitable for the Bird -- Raptor guild.

Based on the California GAP data (UCSB, 1999), there are approximately 836,000 acres of suitable foraging habitat for these species in the SCRW. It is not expected that all 836,000 acres are used by all members of this guild because of the different foraging habitat preferences of the different species.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for

species in the Bird -- Raptor guild. Without accounting for past, present or reasonably foreseeable mitigation for these habitats (particularly upland habitats), or the Project's individual contribution to mitigation for loss of habitat, the loss of 38,000 acres of habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to this potential significant cumulative impact is 5,590 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including increased human activity; pesticide use resulting in loss of prey and/or secondary poisoning; harassment and predation by pet, stray, and feral cats and dogs; and increased predation by mesopredators. The larger species such as turkey vulture would have increased potential for entanglement with power lines poles, resulting in physical injury or death from electrocution. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will establish a large, managed open space system that includes substantial foraging habitat for these species, including 1,609 acres for Cooper's hawk (includes potential breeding habitat), 2,996 acres for ferruginous hawk, 3,086 acres for merlin, 1,409 acres for prairie falcon, 6,574 acres for sharp-shinned hawk, and 4,267 acres for turkey vulture. This habitat will be set aside in three main interconnected areas: the River Corridor SMA, the High Country SMA, and the Salt Creek area (**Figure 4.5-3**). This set-aside will also help mitigate long-term secondary effects by providing adequate protected open space away from the edge of development. Several specific mitigation measures will also be implemented to control human activities in open space areas, including restrictions on recreational activities and homeowner education. Pet, stray, and feral cats and dogs will be leashed or otherwise controlled in or adjacent to open space areas. All lighting will be downcast away from open space areas. Rodenticides will be controlled through an integrated pest management (IPM) plan. Installation of new or relocation of existing power lines in the High Country SMA and Salt Creek area will be coordinated with CDFG and structures will be designed in accordance with Avian Power Line Interaction Committee (APLIC 2006) guidelines and operated with anti-perching devices to help reduce collisions and electrocutions.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Riparian. This guild includes black-crowned night-heron and Nuttall's woodpecker.

The designated sensitive resource for the black-crowned night-heron is roosts or rookery sites, none of which have been documented in the Project area during the numerous avian surveys conducted in riparian habitats. Because roosts or rookery sites do not occur in the Project area, there would be no impacts resulting from the proposed Project and no cumulative effects of the proposed Project on roosts or rookery sites for this species. Therefore, this species is not addressed further in this analysis.

Nuttall's woodpecker was observed nearly every year in the Project area during riparian bird spring surveys and is considered to be common in riparian and woodland habitats on site. It is also commonly observed in riparian and woodland habitats elsewhere in southern California during biological surveys. For the purpose of this analysis, Nuttall's woodpecker is considered to be common in suitable habitat throughout the watershed.

Based on the California GAP data (UCSB, 1999), there are approximately 30,000 acres of suitable habitat for Nuttall's woodpecker in the SCRW. It is not expected that all 30,000 acres are used by this species, but because it is relatively common species in suitable habitat, it is likely to have a broad distribution in the watershed.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 1,100 acres of 30,000 acres of suitable habitat for Nuttall's woodpecker, including the proposed Project's contribution of 320 acres. Because this species is common and has a widespread distribution within its range, this cumulative impact would be adverse, but not significant.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects including noise; lighting; invasive species, such as giant reed, tamarisk, and Argentine ants; increased human activity; increased predation; and use of pesticides which could reduce prey and cause secondary poisoning. These secondary impacts would not be cumulatively significant because of this species' common occurrence in suitable habitat and widespread distribution.

Although impacts to habitat and secondary effects on Nuttall's woodpecker would not be cumulatively significant, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR for other special-status riparian birds (**Subsection 4.5.6**, Mitigation Measures) will protect riparian habitat and establish a large, managed open space system, all of which will reduce impacts to this species. This mitigation will result in the preservation and management of approximately 1,629 acres of suitable habitat for Nuttall's woodpecker. This set-aside of lands will also reduce long-term secondary effects. In addition, lighting restrictions along the perimeter of natural areas will help avoid predation of nest sites by nocturnal predators and avoid physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA and High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect this species by allowing it to nest and forage without disturbance. Controls on pesticides will reduce the chance of secondary poisoning and loss of prey. Controls on Argentine ants will help reduce impacts on young in nests.

Bird -- Upland Scrub and Chaparral. This guild includes Allen's hummingbird, Bell's sage sparrow, black-chinned sparrow, Costa's hummingbird, rufous hummingbird, and southern California rufous-crowned sparrow. The rufous-crowned sparrow is a relatively common breeding resident in the Project area. The Bell's sage sparrow has not been observed in the Project area, but two individuals were observed on the adjacent Legacy project site and the species has the potential to nest in small numbers in the Project area. The Allen's and Costa's hummingbirds are regularly observed in the Project area and have high potential to nest on site. The rufous hummingbird is regularly observed in the early spring in the Project area and is assumed to use the site during migration and to not be a breeding resident. The black-chinned sparrow has not been observed in the Project area and is considered to have a low potential to nest on site. There are no occurrence records in the CNDDB for the SCRW for any of these species (CDFG 2008A), but because most are still relatively common and are often observed by biologists where they occur, the lack of occurrences is probably due to under-reporting. It is assumed for this analysis that their occurrence in the larger watershed is comparable to their occurrence in the Project area.

As a group these species forage and nest (if a breeding resident) coastal scrub and/or chaparral throughout their ranges. However, on site, and possibly in the region, the Bell's sage sparrow is expected to occur only in chaparral (Garrett and Dunn 1981). In addition, the Allen's hummingbird, Costa's hummingbird, and rufous hummingbird also commonly forage, and Allen's hummingbird may nest, in riparian and woodland habitats. Therefore, for these three species the riparian and woodland habitats are included in this analysis.

Based on the California GAP data (UCSB, 1999), there are approximately 725,000 acres of suitable coastal scrub and chaparral habitat for black-chinned sparrow and Bell's sage sparrow and 755,000 acres of suitable coastal scrub, chaparral, riparian, and woodland habitat for Allen's hummingbird, Costa's hummingbird, and rufous hummingbird in the SCRW. It is not expected that all of these acreages are used by all of these species. Based on the Project area occurrences, the southern California rufous-crowned sparrow and the hummingbirds may be fairly common elsewhere in the SCRW, but the black-chinned sparrow and Bell's sage sparrow probably are much less common.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 33,000 acres of 725,000 acres of coastal scrub and chaparral for black-chinned sparrow and Bell's sage sparrow and approximately 34,000 acres of 755,000 acres of coastal scrub, chaparral, riparian, and woodland habitat Allen's hummingbird, Costa's hummingbird, and rufous hummingbird. Without accounting for past, present or reasonably foreseeable mitigation (particularly for upland scrub and chaparral), or the Project's individual contribution to mitigation for loss of habitat, the loss of this habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to the impact on coastal scrub and chaparral is 1,980 acres. The proposed Project's contribution to the impact on coastal scrub, chaparral, riparian, and woodland habitat is 2,300 acres. These contributions to the overall potential significant cumulative impact in the SCRW could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential

long-term secondary effects including noise; lighting; invasive plant species and Argentine ants (increasing mortality of young of breeding residents); increased human activity; increased predation; and use of pesticides which could reduce prey and cause secondary poisoning. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) will protect suitable habitat for these species and establish a large, managed open space system. The open space system will include approximately 3,487 acres of coastal scrub and chaparral for the black-chinned sparrow, 1,488 acres of chaparral for Bell's sage sparrow, and approximately 3,860 acres of coastal scrub, chaparral, riparian, and woodland habitat for the hummingbirds. This set-aside of lands will also reduce long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas will help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA and High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect these species by allowing them to nest and forage without disturbance. Controls on pesticides will reduce the chance of secondary poisoning and loss of prey. Controls on Argentine ants will help reduce impacts on young in nests.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Bird -- Upland Grassland. This guild includes only California horned lark. This species is commonly observed on site within the Santa Clara River and adjacent agricultural fields. Although this species has not been documented to nest on site, due the presence of suitable nesting habitat, it is assumed that California horned lark could nest on site. Based in frequent observations of this species in the Project area and because it is commonly observed by biologists elsewhere in southern California, it is assumed that the California horned lark commonly occurs in suitable habitat in the SCRW, including annual and native grassland, agriculture, and disturbed land.

Based on the California GAP data (UCSB, 1999), there are approximately 78,000 acres of suitable in the SCRW for California horned lark. It is not expected that all 78,000 acres are used by this species, but it is common enough and has broad enough habitat preferences, that it could occur almost anywhere in these habitats where there is available insect prey, such as freshly disced fields.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 3,790 acres of 78,000 acres of suitable habitat for the California horned lark, of which the proposed Project's contribution 3,290 acres. This is considered an adverse but not significant cumulative impact to this species because it is still common and widespread within its range and uses a variety of habitats.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, could result in potential long-term secondary effects, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these effects could occur, substantial relatively undisturbed winter foraging habitat would remain in the SCRW, which would allow the California horned lark to avoid many of these effects. Secondary effects to wintering birds would be adverse but not significant. Also, this species has not been documented to nest in the Project area, and if it did, the nesting population probably would be small. Therefore, cumulative secondary impacts to nesting birds, such as cowbird parasitism, would be adverse but not significant.

Even though impacts to the California horned lark and its habitat would not be cumulatively significant and mitigation measures are not required, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) for other project-level impacts to biological resources will be implemented that will further reduce any potential impacts. These mitigation measures also include habitat preservation, restoration, enhancement, and management of the High Country SMA and Salt Creek area—areas that will form a large, contiguous open space system that includes 995 acres of California annual grassland, agriculture, and disturbed land. This set-aside of lands will also reduce potential long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas will help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA and High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect this species by allowing it to nest and forage without disturbance.

B**ird -- Upland Woodland.** This guild includes chipping sparrow, Lawrence's goldfinch, hermit warbler, and oak titmouse. All of these species have been observed in the Project area and the chipping sparrow, Lawrence's goldfinch, and oak titmouse are considered to be breeding residents. The hermit warbler is considered to be a winter migrant. All of these species are fairly common to abundant in suitable habitat and are commonly observed by biologists during surveys in southern California. Although the primary habitat for these species is upland woodland, they also forage and nest in riparian habitats. Therefore, for the purpose of the cumulative analysis suitable habitat for these species is defined as woodland and riparian.

Based on the California GAP data (UCSB, 1999), there are approximately 30,000 acres of suitable woodland and riparian habitat in the SCRW for these species. It is not expected that all 30,000 acres are used by these species, but because they are still common to abundant within their

ranges, and based regular observations of these species in the Project area, these species area assumed to be fairly common in suitable habitat in the SCRW.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 1,100 acres of 30,000 acres of suitable habitat for these, including the proposed Project's contribution of 320 acres. Because these species are common and have widespread distributions within their range, and given the presence of substantial riparian and oak woodland vegetation communities within the proposed Project area, National Forest system lands and other designated open space within the watershed, the cumulative impact would be adverse but not significant.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including habitat fragmentation; abandonment of nests from human activity; greater vulnerability to nocturnal predators as a result of nighttime lighting; noise from roadways; nest parasitism by cowbirds; greater vulnerability to predation by pet, stray, and feral cats and dogs and other mesopredators; and loss of prey or secondary poisoning due to the use of pesticides. Although these effects could occur, substantial undisturbed habitat would remain in the SCRW, which would allow these species to avoid many of these effects. Therefore, cumulative secondary impacts to migrant (hermit warbler) and nesting birds would be adverse but not significant.

Even though impacts to these species and their habitat would not be cumulatively significant and mitigation measures are not required, the mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) for other project-level impacts to biological resources will be implemented and will further reduce any potential impacts. These mitigation measures include habitat preservation, restoration, enhancement, and management of the High Country SMA and Salt Creek area -- areas that will form a large, contiguous open space system that includes 1,560 acres of riparian and woodland habitat. This set-aside of lands will also reduce potential long-term secondary effects. In addition, for breeding residents lighting restrictions along the perimeter of natural areas will help to reduce predation of nest sites by nocturnal predators and reduce physiological stress. Limited recreational usage and access restrictions within the River Corridor SMA and High Country SMA; control of pet, stray, and feral cats and dogs in or near open space areas; trail signage; and homeowner education regarding special-status resources in preserved natural habitat areas will help protect these species by allowing them to nest and forage without disturbance.

Bats. This guild includes fringed myotis, long-legged myotis, western small-footed myotis, and Yuma myotis. The presence of the fringed myotis and Yuma myotis were confirmed in the Project area through acoustic detection (fringed myotis) and capture (Yuma myotis). The presence of long-legged myotis and western small-footed myotis was not confirmed, but bats with acoustic signatures in the 40 kHz range, which is the range for these two species, were detected on site in 2004 and 2006. Therefore, long-legged myotis and western small-footed myotis potentially occur in the Project area. There are no CNDDD records of these species elsewhere in the SCRW (CDFG 2008A). However, comprehensive surveys for these species have not been conducted throughout the SCRW. Because species are foraging generalists and use a variety of habitats (although the Yuma myotis primarily uses riparian and wetland habitats), it is assumed

that these species could occur throughout the SCRW at least in low numbers. The main limitation for the occurrence of these species probably is a lack of day roosts sites, such as a caves, crevices, rock outcrops, tunnels, *etc*.

This cumulative analysis addresses the loss of foraging habitat for these species. As foraging generalists, they use a variety of habitats, but probably concentrate most of their foraging activity in wetland and riparian habitats. Suitable foraging habitat for bats includes coastal scrub, chaparral, grassland, riparian, oak woodland, agriculture, and disturbed land. Based on the California GAP data (UCSB, 1999), there are approximately 836,000 acres of suitable foraging habitat for bats in the SCRW. It is not expected that all 836,000 acres are used by these bats for foraging because this habitat must be within typical flight distances of day roosts.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 38,000 acres of 836,000 acres of suitable foraging habitat for these bats. Without accounting for past, present or reasonably foreseeable mitigation, or the Project's individual contribution to mitigation for loss of habitat, the loss of this habitat in the SCRW could be a potential significant impact on the habitat for these species. The proposed Project's contribution to this impact is 5,590 acres, which could be cumulatively considerable, absent mitigation.

In addition to loss of foraging habitat, day roosts, including maternal roosts, may be present in the SCRW and subject to potential impacts as a result of present and reasonably foreseeable projects. Although no day roosts for these species were detected in the Project area, there is a potential for day roosts sites to be established in the Project area and to occur elsewhere in the SCRW. Without accounting for past, present or reasonably foreseeable mitigation (particularly upland habitats), or the Project's individual contribution to mitigation for loss of day roosts, the loss of roost sites could result in a potential significant cumulative impact. The proposed Project's contribution to this potential significant cumulative impact, if a day roost were impacted by construction activities, could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects resulting from increased human activity, noise, and lighting. Use of pesticides for agriculture or in landscaped areas may result in secondary poisoning and reduction of prey. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

The cumulative loss of foraging habitat and day roost sites, and long-term secondary impacts to these bats species will be reduced through several mitigation measures required by the Newhall Ranch Specific Plan EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures). These measures include habitat preservation, restoration, enhancement, and management of approximately 6,300 acres in the River Corridor SMA, High Country SMA, and Salt Creek area—areas that will form a large, contiguous open space system providing foraging and potential roosting habitat for bats. It is expected that the species in this guild will continue to forage in these areas after build-out of the Project area. Alternative roost sites will be created to mitigate for any day roost sites disturbed during construction, including creation of roosts under

bridges and in culverts, where practicable, in consultation with CDFG. Species measures to reduce potential long-term secondary impacts include controls on public access and lighting.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are likely to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; or (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Mammal -- High Mobility. This guild includes American black bear, mountain lion, and mule deer. The mountain lion and mule deer are both present in the Project area. The Project area supports about 14,300 acres (22 square miles), which is probably not large enough to encompass the entire home range of a mountain lion individual (*e.g.*, mountain home ranges in the Santa Ana Mountains range from about 32 to 86 square miles, with a mean of 43 square miles (Padley 1989, 1996)), but assuming some range overlap of individuals, the Project area could be included in the home ranges of two or three individuals. Female home ranges are generally much smaller than male ranges and have been documented to range from 20 to 60 square miles (Stephenson and Calcarone 1999). It is also important to note that the size of an individual's home range can vary from season to season and year to year, and is probably dependent on prey density and available stalking cover (Currier 1983). In areas where habitat is limited, population densities can reach 10 adults per 100 square miles (Stephenson and Calcarone 1999). Also, the Project area supports habitat for mountain lions dispersing through the region. Mule deer are common on site and currently use much of the site. American black bear has been documented to use the High Country SMA and there may be some suitable denning habitat in the High Country SMA and Salt Creek area. This species also may use the site when moving between the Santa Susana Mountains and Santa Monica Mountains to the south and the Los Padres National Forest and Angeles National Forest in the Sierra Madre Mountains to the north. All three species are considered to be relatively common to common in suitable habitat in the SCRW, but primarily use the more remote areas of the watershed north and south of the Project area.

These species use a variety of habitats, and probably are only limited in their habitat use by the amount of vegetation cover available. Of the habitats in the SCRW, they are only expected to be absent from large areas of annual grassland, agriculture, and disturbed lands that lack cover, although mule deer often forage in grassland at the edges of shrubland, riparian, and woodland habitats. For the purpose of this analysis, suitable habitat for these species is defined as coastal scrub, chaparral, riparian, and oak woodland.

Based on the California GAP data (UCSB, 1999), there are approximately 755,000 acres of suitable habitat for these species the SCRW. It is not expected that all 755,000 acres are used by all of these species. Based on the Project area occurrences, the mule deer may be relatively common in these habitats, but the mountain lion and black bear are expected to be much less common.

Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 34,000 acres 755,000 acres of these habitats. This loss of habitat could be a potential significant impact on these species in the watershed. The proposed Project's contribution to this potential significant cumulative impact on coastal scrub, chaparral, riparian, and woodland habitat is 2,300 acres, which could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including nighttime illumination of areas adjacent to open space, which could disrupt foraging and movement behavior; increased vehicle collisions at new and expanded roadways; increased encounters with humans and pet, stray, and feral dogs; and the use of rodenticides to control small mammals (*e.g.*, ground squirrels and rabbits, which are prey for mountain lion), which may reduce prey populations and possibly cause secondary poisoning of predators. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Several mitigation measures will be implemented to reduce cumulative impacts to habitat and long-term secondary effects associated with development. The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR (**Subsection 4.5.6**, Mitigation Measures) include habitat preservation, restoration, enhancement, and management of upland and riparian habitat areas in the River Corridor SMA, High Country SMA, and Salt Creek area that will form a large, contiguous open space system of about 6,300 acres that supports these species. It is expected that these species will continue to use these areas as resident and movement habitat after build-out of the Project area. The set-aside of lands also will reduce long-term secondary effects, such as increased noise, lighting, and increased human activity because individuals will have access to substantial habitat in undisturbed open space that will support their life history needs, including foraging, reproduction, movement, and dispersal. Long-term secondary effects, such as increased human activity; pet, stray, and feral dogs; lighting; and rodenticides will also be mitigated through a variety of measures associated with management of open space.

As discussed in detail in **Subsection 4.5.5.2.4.2**, Impacts to Wildlife Landscape Habitat Linkages, the proposed Project may affect regional habitat connectivity and movement by these species. The combined High Country SMA and Salt Creek area provide the most direct connections between the River corridor habitat and large upland habitat areas south of the River, and are those identified by Penrod *et al.* (2006) as important components of regional habitat connectivity. The River Corridor SMA also is an important east-west habitat linkage and intersects the north-south linkage provided by the High Country SMA and Salt Creek area. These habitat linkages will remain intact and functional after implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas. The impact of the proposed Project on regional habitat connectivity, therefore, was determined to be adverse but not significant. Other present and reasonably foreseeable projects considered in this analysis would not affect these regional habitat linkages.

In addition to these measures reducing impacts to these species at the project-level, these species have broad geographic ranges, are known to occur in suitable habitat within the watershed, and much of the watershed consists of National Forest system lands and other designated public ownership lands that provide primary habitat for these species in the SCRW.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of these species; (2) a cumulatively considerable contribution to a potential significant cumulative impact due to loss of suitable habitat; (3) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects; or (4) a cumulatively considerable contribution to a potential significant impacts to regional wildlife habitat linkages.

6.5.5.2.4.4 Listed Plant Species

San Fernando Valley Spineflower (CE). The San Fernando Valley spineflower occurs at two known locations: on Newhall Land property in Los Angeles County and on the Upper Las Virgenes Canyon Open Space Preserve (formerly Ahmanson Ranch) in Ventura County. The Upper Las Virgenes Canyon Open Space Preserve occurrence lies outside the SCRW boundary; however, it is included in this cumulative impacts analysis as it is the only other known occurrence of this species. The total cumulative area occupied by San Fernando Valley spineflower, including the Project site and the Ventura County site, is 30.84 acres. Of that total, 20.24 acres are on Newhall Land property and 10.60 acres are at Upper Las Virgenes Canyon Open Space Preserve. The Preserve land is owned by the State of California and is managed by the Mountains Recreation and Conservation Authority, and is preserved in perpetuity.

Due to San Fernando Valley spineflower's very limited known distribution, occurring on only 30.84 acres of known occupied habitat, it is susceptible to almost any habitat loss. Thus, any significant adverse impact to San Fernando Valley spineflower could be a potential significant cumulative impact.

Under Alternative 2, a total of 6.35 acres of San Fernando Valley spineflower occupied area would be lost. The remainder of known occupied habitat on the Project site would be preserved and managed, as described in the Spineflower Conservation Plan (SCP). As discussed in **Subsection 4.5.5.3**, the preserved areas would be susceptible to secondary impacts, which would be minimized or avoided through implementation of the SCP.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including hydrologic alterations and water quality impacts; accidental clearing, trampling, and grading; runoff, sedimentation, erosion and chemical and toxic compound pollution; exposure to fugitive dust; the introduction of non-native, invasive plant and animal species; increased human activity and trampling and soil compaction; and increased risk of fire. At the watershed level these secondary effects could be a potential significant cumulative impact. The proposed Project's contribution to this potential cumulative secondary impact could be cumulatively considerable, absent mitigation.

Subsection 4.5.5.3 provides a detailed description of the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and mitigation measures recommended by this EIS/EIR to mitigate impacts to the San Fernando Valley spineflower (see **Subsection 4.5.6,** Mitigation Measures). The loss of 6.35 acres of San Fernando Valley spineflower occupied area within the Project area was determined to be a significant unavoidable impact under Alternative 2, because this species is only known in two locations rangewide. It was determined that the preservation and management of 13.89 occupied acres and associated spineflower preserves (totaling 167.6 acres) would not mitigate project-related impacts to San Fernando Valley spineflower to less than significant.

Due to the species' rarity throughout its known range and the other conservation issues described above, even with the mitigation measures required by the Newhall Ranch Specific Plan EIR and mitigation measures recommended by this EIS/EIR, a significant impact to even a single occurrence would also result in a cumulatively considerable contribution to a potential significant cumulative impact. Therefore, the Project-specific impacts of Alternative 2 to San Fernando Valley spineflower would be a significant and unavoidable cumulative impact.

Under Alternatives 3 through 7, on-site loss of San Fernando Valley spineflower would be decreased so that proposed preservation, habitat enhancement, and management under the SCP would mitigate this loss to below the level of significance. On-site preservation and management prescribed in the SCP in combination with the on-going long-term preservation of the Laskey Mesa at the Upper Las Virgenes Canyon Open Space Preserve, would reduce overall cumulative impacts to San Fernando Valley spineflower. As a result, under Alternatives 3 through 7, the proposed Project would not have a cumulatively considerable contribution to any potentially significant cumulative impacts to San Fernando Valley spineflower.

6.5.5.2.4.5 California Native Plant Society (CNPS) and Locally Regulated Plant Species

Undescribed everlasting.[12] This undescribed species does not have a CNPS listing status, but is assumed to meet the criteria for designation to CNPS List 1B for purposes of this analysis. The undescribed everlasting was observed on sandy, alluvial benches along the Santa Clara River and within Hasley Canyon. This undescribed everlasting occurs from San Luis Obispo south to San Diego counties, west of the Peninsular and Transverse Ranges. Because this species is associated with sandy alluvial benches along river floodplains, it was not possible to model suitable habitat within the Project area, nor within the SCRW, based on the California GAP vegetation database (UCSB, 1999), which was compiled at a broad scale and necessarily lower precision. Therefore, cumulative impacts to this species are analyzed based on the loss of individuals of this species.

The proposed Project would result in the loss of 357 individuals of the undescribed everlasting. This species' distribution is expected to be limited to the floodplain of the Santa Clara River and the lower portions of major tributaries. It is anticipated that other present and reasonably foreseeable proposed development within the SCRW would impact occurrences of this species, although it is likely that there would be some level of avoidance of these riparian areas. This

[12] Some experts identify this species as white-headed cudweed (*Gnaphalium leucocephalum*), which is a CNPS List 2.2 species (S3.2). See the analysis of the undescribed everlasting in **Subsection 4.5.5.3** for more detail.

could be a potential significant cumulative impact for this species within the watershed. The proposed Project's contribution to the loss of individuals could be a potential significant cumulative impact, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and hydrologic alterations and water quality impacts. This could be a potential significant cumulative impact for this species within the watershed. The proposed Project's contribution to these secondary impacts could be cumulatively considerable, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommend in this EIS/EIR includes avoidance and minimization measures, including salvage of seeds and/or transplantation (see **Subsection 4.5.6,** Mitigation Measures). As required by BIO-75 and BIO-76, focused surveys to be conducted prior to the commencement of grading/construction activities within suitable habitat for the undescribed everlasting will ensure that individual plants are detected. Avoidance measures, and, if necessary, the salvage of seeds and/or transplantation of individuals identified within the disturbance area to an appropriate receptor site within the River Corridor SMA where long-term preservation is provided, shall be implemented as outlined within the undescribed everlasting mitigation and monitoring plan. In addition, mitigation measures designed to provide for the long-term maintenance of the River Corridor SMA in a natural state by restricting access and prohibiting grazing, agriculture, and recreation within the River Corridor SMA, as well as providing for the restoration and enhancement of habitat within the River Corridor SMA, will mitigate the loss of undescribed everlasting.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Undescribed sunflower. This undescribed species does not have a CNPS listing status, but is assumed to meet the criteria for designation to CNPS List 1B for purposes of this analysis. This species is only known to occur in the Middle Canyon drainage in the Project area. Therefore, there would be no other known impacts to this species by other projects in Los Angeles and Ventura counties and, therefore, there would be no cumulative impacts. For Project-only impacts on this species, see the discussion in **Subsection 4.5.5.3**.

Island mountain-mahogany. This CNPS List 4.3 species is known to occur on site within chaparral within the Specific Plan and Entrada planning areas of the Project area. Island mountain-mahogany was observed nearly every year in the Project area and is considered to be common in chaparral vegetation communities on site. This species has been documented in chaparral throughout Los Angeles and Ventura counties, including the Channel Islands (except San Clemente Island) (CNPS 2007; Hickman 1993). Island mountain-mahogany is fairly common in suitable habitat throughout the watershed.

As described in **Table 6.0-36**, Summary of Cumulative Impacts to CNPS and Locally-Regulated Plant Species in the Santa Clara River Watershed, based on the California GAP data (UCSB, 1999), there are approximately 550,000 acres of chaparral in the SCRW, although island mountain mahogany are not expected to occur in all 550,000 acres. For example, within the Project area, island mountain-mahogany was found primarily in chaparral at the base of north-facing slopes. Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 12,500 acres of 550,000 acres of chaparral. This could be a potential significant cumulative impact for this species within the watershed. The proposed Project's contribution to this potential significant cumulative impact is 460 acres. This loss of habitat would not be a cumulatively considerable contribution to a potential significant cumulative impact because of this species' widespread distribution within its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. These secondary impacts would not be a significant cumulatively impact because of this species' widespread distribution within its range, and the configuration of large tracts of chaparral within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Late-flowered mariposa lily. Within the Project area**,** this CNPS List 1B.2 species is only known to occur in the High Country SMA. Implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to late-flowered mariposa lily. Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species and increased human activity, trampling, and plant collecting. This could be a potential significant cumulative impact for this species within the watershed. Project implementation could result in such secondary impacts by recreational visitors in the High Country SMA, but these secondary impacts would be minimal because even if flowers were picked or a plant trampled, the underground bulb would remain. The proposed Project would not considerably contribute to a potential significant cumulative secondary impact in the watershed. For Project-only impacts on this species, see the discussion in **Subsection 4.5.5.3**.

Mainland cherry. This species does not have a CNPS listing status but is designated as special-status by the County of Los Angeles. Mainland cherry (*Prunus ilicifolia* ssp. *ilicifolia*, a subspecies of holly-leaf cherry) was observed nearly every survey year (2002 through 2007) within chaparral and big sagebrush scrub within the Specific Plan, VCC, and Entrada planning areas within the Project area. Mainland cherry is an occasional component of chaparral and big sagebrush scrub vegetation communities on site. This species ranges throughout the central and southern Coast Ranges and from Napa County southward to Baja California (Hickman 1993; McMurray 1990). Mainland cherry is an occasional component in suitable habitat throughout the watershed.

Based on the California GAP data (UCSB, 1999), there are approximately 556,000 acres of chaparral and big sagebrush scrub in the SCRW, although mainland cherry is not expected to occupy all 556,000 acres (see **Table 6.0-36**). For example, within the Project area, mainland cherry was found primarily in chaparral and big sagebrush scrub in association with ephemeral and/or intermittent stream channels (river wash). Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 12,000 acres of 556,000 acres of chaparral and big sagebrush scrub. This could be a potential significant cumulative impact for this species within the watershed. The proposed Project's contribution to this potential significant cumulative impact is 460 acres. This contribution would not be cumulatively considerable because this species is relatively common and widespread throughout the SCRW.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. This would not be a significant cumulative impact for this species within the watershed because this species is relatively common and widespread throughout the SCRW. In addition, the configuration of large tracts of preserved chaparral and big sagebrush scrub within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Oak Trees. Oak trees are designated as special-status by the County of Los Angeles. Oak trees were observed every year within the Specific Plan, VCC, and Entrada planning areas within the Project area. Oak trees are the dominant species in oak woodland and oak/grass vegetation communities on site, as well as occasional components of other vegetation communities on site. The oak species observed on site (coast live oak, Valley oak, scrub oak, Alvord oak, and interior live oak) have been documented throughout much of California and (for coast live oak) southward to Baja California (Hickman 1993; McMurray 1990).

The combined direct and indirect permanent loss of individual oak trees resulting from implementation of the RMDP and the SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would total 1,370 individuals (5.9% of the oak trees in the Project area). It is anticipated that present and reasonably foreseeable projects in the SCRW would impact other occurrences of these species. Although oak woodlands were not mapped for any of the projects listed as past, present, or reasonably foreseeable in the California GAP database (UCSB, 1999) due to the coarse scale of mapping, the fact that oaks occur in the proposed Project area (despite not occurring in the GAP data) suggests that oaks probably occur at least in small numbers on other project sites. This could be a potential significant cumulative impact for these species within the watershed. The proposed Project's contribution to the cumulative loss of individual oak trees could be cumulatively considerable, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; increased human activity that may result in littering, vandalism, and increased susceptibility to diseases, and trampling and soil compaction;

and an increased risk of fire. The Project's contribution to these impacts in the watershed would not be a significant cumulative impact because the configuration of large tracts of oak woodland vegetation communities within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR includes avoidance and minimization measures (see **Subsection 4.5.6,** Mitigation Measures). The applicant will implement several mitigation measures to avoid, minimize, and mitigate impacts to individual oak trees and their associated habitat. The proposed mitigation encompasses a three-part strategy that incorporates (1) planting replacement trees, per the requirements of CLAOTO and previously incorporated measure SP-4.6-48; (2) additional replacement ratios recommended in this EIS/EIR for impacts to oak trees and oak woodlands where they occur within stream channels falling under CDFG and Corps jurisdiction, per 1600 and 404 (BIO-2); and (3) additional measures recommended in this EIS/EIR for tree replacement or woodland restoration/enhancement to mitigate for oak trees and woodland occurring in uplands outside CDFG and Corps jurisdiction (BIO-22). General procedures to avoid and minimize impacts to oak trees during construction will be implemented and a qualified biologist will be present during construction in order to avoid inadvertent impacts to biological resources outside of the grading area, further reducing impacts to the species.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Oak-leaved nemophila. This CNPS List 4.3 species was known to occur from Tuolumne County south through Kern County (CNPS 2007). Occurrences on the Project site are the southernmost recorded occurrences of the species. Oak-leaved nemophila was found in several locations within oak woodland within the Specific Plan area. Oak-leaved nemophila is assumed to occur as an occasional component of oak woodlands within the Specific Plan area. For the purpose of this analysis, oak-leaved nemophila is considered to be an occasional component of oak woodlands throughout the watershed. It is anticipated that present and reasonably foreseeable projects in the SCRW would impact occasional occurrences of this species.

Based on the California GAP data (UCSB, 1999), there are approximately 5,170 acres of oak woodland vegetation communities in the SCRW (see **Table 6.0-36**). Based on the project-level mapping, 95 acres (out of 1,168 acres) of oak woodland vegetation communities on site would be impacted by the proposed Project. Given the presence of oak woodland vegetation communities within the proposed Project area, National Forest system lands and other designated open space within the watershed (UCSB, 1999), the impact to occasional individuals would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. These secondary effects would not be a significant cumulative impact because the configuration of large

tracts of oak woodland vegetation communities conserved within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Ojai navarretia. Within the RMDP and SCP Project area, this CNPS List 1B.1 species is only known to occur in the Salt Creek area. Implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to Ojai navarretia, Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species and increased human activity, and trampling. This could be a potential significant cumulative impact for this species within the watershed. Project implementation could result in such secondary impacts by recreational visitors in the Salt Creek area, but these secondary impacts would be minimal. The proposed Project would not considerably contribute to a potential significant cumulative secondary impact in the watershed.

Parish's sagebrush. This species does not have a CNPS listing status but is designated as special-status by the County of Los Angeles. Parish's sagebrush occurs within big sagebrush scrub within the Specific Plan and Entrada planning areas of the Project area. Parish's sagebrush occurs along coastal ranges in Baja California and southern California, extending inland to regions south of the Great Basin (Shultz 2006A, 2006B). It is considered regionally rare by local botanists (Meyer 2007). When observed in the Project area, Parish's sagebrush was found primarily intermixed with common big sagebrush within big sagebrush scrub. For the purpose of this analysis, Parish's sagebrush is considered to be a minor component of big sagebrush scrub throughout the watershed.

Based on the California GAP data (UCSB, 1999), there are approximately 5,000 acres of big sagebrush scrub in the SCRW (see **Table 6.0-36**). Based on the GAP data, present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 19 acres of 5,000 acres of big sagebrush scrub (this is likely a significant underestimate, however, due to the coarse mapping scale of the GAP data). Although the California GAP database does not include big sagebrush scrub within the proposed Project area, the project-level mapping indicates that 91.3 acres of big sagebrush scrub are present on site. The proposed Project would impact 70 acres of the big sagebrush scrub on site. It is anticipated that occasional individuals of this species would be impacted by other present and reasonably foreseeable projects. Given the presence of big sagebrush scrub within the National Forest system lands and other designated open space within the watershed, the impact to occasional individuals of Parish's sagebrush would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary effects would not be significant because of the limited amount of big sagebrush scrub within the SCRW.

Peirson's morning-glory. This CNPS List 4.2 species is known to occur on site within chaparral, coastal scrub, and grassland vegetation communities within the Specific Plan, VCC, and Entrada planning areas of the Project area. Peirson's morning-glory was observed nearly every year in the Project area and is common in chaparral, coastal scrub, and grassland vegetation communities on site. This species has been documented in Los Angeles County in the northern San Gabriel Mountains and adjacent Mojave Desert (Antelope Valley) (CNPS 2007; Hickman 1993). In the Liebre Mountains northeast of the Project Area and largely within the SCRW, it is "widespread and locally common" in grasslands, open shrublands, and woodlands (Boyd 1999).

Based on the California GAP data (UCSB, 1999), there are approximately 747,000 acres of chaparral, coastal scrub, and grassland vegetation communities in the SCRW (see **Table 6.0-36**). Present and reasonably foreseeable projects in the SCRW, including the proposed Project, would cause the loss of approximately 34,000 acres of 747,000 acres of chaparral, coastal scrub, and grassland. This could be a potential significant cumulative impact. The proposed Project's contribution to this potential significant cumulative impact is 3,050 acres. This contribution would not be a significant cumulative impact because of this species' widespread distribution within its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary impacts would not be significant because of this species' widespread distribution within its range. In addition, the configuration of large tracts of chaparral, coastal scrub, and grassland vegetation communities within the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Table 6.0-36
Summary of Cumulative Impacts to CNPS and Locally-Regulated Plant Species in the Santa Clara River Watershed[1]

Species	Habitat Relationships[2]	Total Acres of Habitat in Watershed	Permanent Direct and Indirect Impact Acres of Proposed Project	Total Impact Acres in Watershed From Present and Reasonably Foreseeable Projects (Not Including Proposed Project)	Estimated Cumulative Impact Acres in Watershed after Accounting for Proposed Project Plus Present and Reasonably Foreseeable Projects
island mountain-mahogany	• Chaparral	550,300	460 (<0.1%)	12,000 (2.1%)	12,460 (2.3%)
mainland cherry	• Big sagebrush scrub • Chaparral	556,000	460 (<0.1%)	12,000 (2.1%)	12,460 (2.3%)
oaks	• Oak woodland	5,170	95 (1.8%)	0 (0.0%)	95 (1.8%)
oak-leaved nemophila	• Oak woodland	5,170	95 (1.8%)	0 (0.0%)	95 (1.8%)
Parish's sagebrush	• Big sagebrush scrub	5,000	0 (0.0%)	19 (0.4%)	19 (0.4%)
Peirson's morning-glory	• Coastal scrub • Chaparral • Non-native grassland	747,000	3,050 (0.4%)	31,000 (4.1%)	34,050 (4.5%)
southern California black walnut	• California walnut woodland	3,627	0 (0.0%)	0 (0.0%)	0 (0.0%)
southwestern spiny rush	• Permanently flooded lacustrine habitat	5,000	0 (0.0%)	0 (0.0%)	0 (0.0%)

Notes:

[1] Acreages were not quantified for the undescribed sunflower because impacts are site-specific. Acreages were not quantified for undescribed everlasting, late-flowered mariposa lily, Ojai navarretia, Plummer's mariposa lily, and slender mariposa lily because the project-level analysis was based on impacts to individuals rather than habitat.

[2] Acreages based on California GAP Vegetation Communities (UCSB, 1999) and project-level mapping within Project boundaries.

Plummer's mariposa lily. Within the Project area, this CNPS List 1B.2 species is only known to occur in the High Country SMA. Therefore, implementation of the RMDP and SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would not result in any direct or indirect impacts to Plummer's mariposa lily and would not contribute to any cumulative impacts in the watershed. Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, could, however, result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and plant collecting; and wildfire. This could be a potential significant cumulative impact for this species within the watershed. At the project-level, because this species only occurs in the High Country SMA and away from trails, human-related effects such trampling and collecting are unlikely to occur. Project implementation could cause secondary impacts to the species from a more frequent fire regime, but these impacts likely would be limited because this species also has a positive response to wildfire (*e.g.*, bulbs tend to flower in higher numbers following wildfire, which introduces large quantities of mineral nutrients (as ash) into the soil). The proposed Project, therefore, would not considerably contribute to potential significant cumulative secondary impacts in the watershed. For Project-only impacts on this species, see the discussion in **Subsection 4.5.5.3**.

Slender mariposa lily. This CNPS List 1B.2 species is known to occur on site within grassland and coastal scrub within the Specific Plan and Entrada planning areas of the RMDP and SCP Project area. Slender mariposa lily was observed nearly every year in the Project area and is locally abundant in some parts of the Project area. This species has been documented in the southern San Gabriel Mountains and Liebre Mountains of eastern Los Angeles County and the Santa Susana Mountains in western Los Angeles and Ventura counties (CNPS 2007; Boyd 1999).

The combined direct and indirect permanent loss of slender mariposa lily cumulative occupied area and individuals resulting from implementation of the RMDP and the SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would total 72 acres (35.0% of cumulative mapped occupied habitat) and 30,645 individuals (46.4% of plants censused on site). It is anticipated that present and reasonably foreseeable projects in the SCRW would impact other occurrences of this species, though these impacts have not been documented or quantified due to a lack of specific information. This could be a potential significant cumulative impact to this species within the watershed. The proposed Project's contribution to this potential significant cumulative impact is 72 acres and 30,645 individuals, which could be a significant cumulative impact, absent mitigation.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased risk of fire; and increased human activity, collecting, trampling, and soil compaction. These secondary impacts could be a significant cumulative impact, absent mitigation.

The mitigation required by the Newhall Ranch Specific Plan Program EIR and recommended in this EIS/EIR includes avoidance and minimization measures (see **Subsection 4.5.6,** Mitigation

Measures). The applicant will implement several mitigation measures to avoid, minimize, and mitigate impacts to individuals. A slender mariposa lily habitat replacement/enhancement program is outlined within the Draft RMDP Slender Mariposa Lily Mitigation and Monitoring Plan (Dudek 2007), which describes how the applicant will successfully restore/enhance slender mariposa lily habitat and re-establish slender mariposa lily locations at appropriate receptor sites within the High Country SMA, Salt Creek area, and San Martinez Grande area where opportunities for long-term preservation are provided. While implementation of the proposed Project would result in impacts to a maximum of 72 acres of cumulative occupied area are within the development footprint, the mitigation and monitoring program mitigates impacts to slender mariposa lily cumulative occupied area at a ratio of 1:1 through successfully restoring/enhancing slender mariposa lily habitat and re-establishing slender mariposa lily locations in the High Country SMA, Salt Creek area, and other sites as appropriate. A minimum of 133 acres of slender mariposa lily cumulative occupied area will be conserved in the RMDP and SCP Project boundaries. These conserved acres include 73 acres of occupied habitat in the Salt Creek area, 30 acres in the High Country SMA and at least 28 acres in the San Martinez Grade area.

Long-term secondary impacts to slender mariposa lily, such as the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; increased human activity, trampling, and soil compaction; and increased risk of fire would be minimized by restricting access to, grazing within, and recreational usage of the High Country SMA; providing for transition areas along the High Country SMA; providing drainage guidelines; requiring conformance with NPDES and RWQCB permit provisions; requiring the implementation of a wildfire fuel modification plan; placing restrictions on domestic animals in proximity to open space areas; by providing trail signage and homeowner education; and placing restrictions on plant palettes proposed for use on landscaped slopes.

For the reasons set forth above, the proposed Project would not result in: (1) a cumulatively considerable contribution to a potential significant cumulative impact on individuals of this species; or (2) a cumulatively considerable contribution to a potential significant cumulative impact due to secondary effects.

Southern California black walnut. This CNPS List 4.2 species is known to occur on site as the dominant species of California walnut woodland, which is only known to occur in the High Country SMA and Salt Creek area within the Project area. Southern California black walnut has also been observed as an uncommon component within other vegetation communities within the Project area, including oak woodlands, coastal scrub, and chaparral. Implementation of the RMDP/SCP and build-out of the Specific Plan, VCC, and Entrada planning areas would not result in direct or indirect impacts to the 27 acres of California walnut woodland on site. Individual southern California black walnut trees are uncommon in other vegetation communities, but implementation of the RMDP/SCP and build-out of the Specific Plan, VCC, and Entrada planning areas is expected to result in the removal of occasional individual southern California black walnut trees that exist in vegetation communities other than California walnut woodland.

Based on the California GAP data (UCSB, 1999), there are approximately 3,600 acres of California walnut woodland in the SCRW. Although the California GAP database does not include California walnut woodland within the proposed Project site, the project-level mapping indicates 27 acres of California walnut woodland are present on site. The proposed Project would not impact California walnut woodland on site. It is anticipated that present and reasonably foreseeable projects, including the proposed Project, in the SCRW would result in the removal of occasional individual southern California black walnut trees that exist in vegetation communities other than California walnut woodland. For example, Boyd observed this species as occasionally occurring in scrub and woodland within lower Bouquet Canyon, and scarcely occurring at other sites in lower elevations to the west and south (Boyd 1999). Given the presence of California walnut woodland within the National Forest system lands and other designated open space within the watershed, the impact to occasional individuals of southern California black walnut would not be a significant cumulative impact.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; increased human activity, trampling, and soil compaction; and increased risk of fire. Cumulative impacts due to secondary effects would not be significant because of this species' widespread distribution within its range. In addition, the configuration of California walnut woodland in the SCRW results in a relatively low ratio of edge to core habitat and, therefore, reduces the chance of edge-related secondary impacts.

Southwestern spiny rush. This CNPS List 4.2 species was observed on site along secondary channels and low terraces along the Santa Clara River within the Specific Plan area of the RMDP and SCP Project area. Southwestern spiny rush occurs in San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties, and southward into Baja California; the distribution of this species possibly extends east into Imperial County and Arizona as well (CNPS 2007). This species is considered locally and regionally rare by local botanists and has been documented from 10 vouchered collections from Los Angeles County, half of which are on Santa Catalina Island (Magney and Hoskinson 2007). This species was observed in 2006 in Violin Canyon adjacent to the Angeles National Forest and Interstate-5 (I-5), south of Templin Highway and Paradise Ranch, eight miles north of Castaic, in Los Angeles County. Southwestern spiny rush was observed in 2007 near the western bank of Castaic Creek above the Castaic power plant. This species was observed in 2005 and 2006 in Piru Creek (below Frenchman's flat) and Oso Creek (Huntley 2009). Southwestern spiny rush was observed along Castaic Creek upstream of the confluence of Castaic Creek and Fish Creek, and this species is locally common in Grasshopper Canyon (Boyd 1999). Based on these observations, southwestern spiny rush is considered to be an occasional component in suitable habitat throughout the watershed.

This species is associated with perennially wet areas (perennial streams, seeps, marshes, *etc*.) within riparian habitat. The California GAP data (UCSB, 1999) includes approximately 25,000 acres of mapped riparian habitat but does not identify the very small subset of perennially wet habitat where southwestern spiny rush may occur. It is anticipated that present and reasonably

foreseeable projects in the SCRW would result in the removal of occasional individual southwestern spiny rush that exist in perennially wet habitat within the watershed. However, this plant is known to occur within National Forest system lands that would not be subject to the same level of impact associated with present and reasonably foreseeable projects on private lands in the SCRW. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within the watershed and its range.

Without accounting for past, present, or reasonably foreseeable mitigation, present and reasonably foreseeable projects, including the proposed Project, also could result in potential long-term secondary effects, including the introduction of non-native, invasive plant species; hydrologic alterations and water quality impacts; and increased human activity, trampling, and soil compaction. Impacts to this species would not be cumulatively significant because of this species' widespread distribution within its watershed and its range.

6.5.5.3 Summary of Cumulative Impacts to Biological Resources

The cumulative impact analysis for biological resources resulted in four different cumulative impact determinations:

1. The proposed Project's contribution to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects, including the proposed Project, would be cumulatively considerable and unavoidable under Alternative 2, even after considering mitigation required by the Newhall Ranch Specific Plan EIR and the mitigation measures recommended in this EIS/EIR. No feasible additional mitigation measures applicable to Alternative 2 could be identified that would reduce the considerable contribution to a potential significant impact to a level less than cumulatively considerable under this alternative. Reasons for these unavoidable impacts include:

   (a) extensive loss and fragmentation of the resource within the Santa Clara River watershed; and

   (b) substantial on site habitat loss and fragmentation of a resource with a very limited distribution on site and/or geographic range.

2 The proposed Project's contribution to a potential cumulative impact in the watershed resulting from present and reasonably foreseeable projects, including the proposed Project, could be cumulatively considerable, absent mitigation. Implementation of the mitigation measures required by the Newhall Ranch Specific Plan and the mitigation measures recommended in this EIS/EIR would reduce the Project's contribution to cumulative impacts to a level less than cumulatively considerable.

3. The proposed Project's contribution to a potential cumulative impact in the watershed resulting from present and foreseeable projects, including the proposed Project, would not be cumulatively considerable. This determination was made where the resource affected by the proposed Project comprises a very small proportion of the resource impacts in the watershed.

4. Past, present, and reasonably foreseeable projects, including the proposed Project do not result in potential significant watershed-level impacts. This determination was made when the resource is still common to abundance it its geographic range and/or substantial habitat for the species would remain in the watershed.

Table 6.0-37 provides a summary of the cumulative impacts determinations for biological resources, as organized by vegetation communities and land covers, wildlife resources (including common wildlife organized by guilds, federally- and state-listed threatened and endangered and California Fully Protected species, California Species of Special Concern organized by guilds, California Special Animals, Watch List species, Specially Protected Mammals, and CDFG Trust Resources organized by guilds, and landscape-level habitat linkages, wildlife corridors, and wildlife crossings), and plant resources (federally-listed species and CNPS and locally-regulated species).

Table 6.0-37
Summary of Cumulative Impact Determinations for Biological Resources

Cumulative Impact Determination	Biological Resource	Project's Contribution Cumulatively Considerable After Mitigation
Project's contribution to potential cumulative impact would be cumulatively considerable and unavoidable (Alternative 2 only)	**Vegetation Communities** • coastal scrub communities -- extensive loss and fragmentation in the Santa Clara River watershed **Wildlife** • San Emigdio blue butterfly -- fragmentation of only known colony in Project area **Plants** • San Fernando Valley spineflower -preservation and management of 13.89 occupied acres and associated spineflower preserves would not mitigate Project-related impacts to less than significant.	Yes

Project's contribution to potential cumulative impact in watershed could be cumulatively considerable, absent mitigation	**Vegetation Communities/Land Covers**
	• riparian communities
	• California annual grassland, agriculture, disturbed land, and developed Land
	• chaparral communities
	• oak woodland communities
	• purple needlegrass
	• California walnut woodland
	Wildlife
	• common wildlife
	• wildlife habitat linkages, corridors, and crossings
	• federal and state-listed threatened and endangered and California Fully Protected species
	  • arroyo toad (FE)
	  • American peregrine falcon (CE, CFP)
	  • California condor (FE, CE, CFP)
		No

Table 6.0-37
Summary of Cumulative Impact Determinations for Biological Resources

Cumulative Impact Determination	Biological Resource	Project's Contribution Cumulatively Considerable After Mitigation
	• coastal California gnatcatcher (FT) • California red-legged frog (FT) • golden eagle (CFP) • least Bell's vireo (FE, CE) • ringtail cat (CFP) • southwestern willow flycatcher (FE, CE) • unarmored threespine stickleback (FE, CE, CFP) • western yellow-billed cuckoo (CE) • white-tailed kite (CFP) • all California Species of Special Concern (with exception of undescribed snail and grasshopper sparrow) • California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust Resource Species • Reptile -- Low Mobility guild • Bird -- Raptor guild • Bird -- Upland Scrub and Chaparral guild • Bat guild • Mammal -- High Mobility guild **Plants** • undescribed everlasting • oak trees • slender mariposa lily	
Project's contribution to potential cumulative impact in watershed would not be cumulatively considerable	**Wildlife** • federal-listed endangered species • southern steelhead **Plants** • island mountain-mahogany • late-flowered mariposa lily • mainland cherry • Ojai navarretia • Peirson's morning-glory • Plummer's mariposa lily	n/a
Past, present, and reasonably foreseeable future projects would not result in significant cumulative watershed-level impacts; the Project's contribution would not be	**Wildlife** • California Species of Special Concern • undescribed snail • grasshopper sparrow • California Special Animals, Watch List Species, Specially Protected Mammal, and CDFG Trust	n/a

Table 6.0-37
Summary of Cumulative Impact Determinations for Biological Resources

Cumulative Impact Determination	Biological Resource	Project's Contribution Cumulatively Considerable After Mitigation
cumulatively considerable	Resource Species • monarch butterfly • Bird -- Riparian guild • Bird -- Upland Grassland guild • Bird -- Upland Woodland guild **Plants** • undescribed sunflower • oak-leaved nemophila • Parish's sagebrush • southern California black walnut • southwestern spiny rush	

There were three cumulatively considerable and unavoidable impacts under Alternative 2: (1) impacts to coastal scrub communities; (2) impacts to San Emigdio blue butterfly; and (3) impacts to San Fernando Valley spineflower.

Impacts would be cumulatively considerable, absent mitigation, for a majority of other biological resources, including: vegetation communities other than coastal scrub; common wildlife as a whole; most of the federally- and state-listed threatened and endangered and all California Fully Protected species; wildlife habitat linkages, corridors, and crossings; most California Species of Special Concern; many California Special Animals, Watch List species, Specially Protected Mammals, and CDFG Trust Resources; and three special-status plants. The mitigation measures required by the Newhall Ranch Specific Plan Program EIR and mitigation measures recommended by this EIS/EIR (**Subsection 4.5.6,** Mitigation Measures) would reduce impacts to these resources to a level less than cumulatively considerable. To offset loss vegetation communities and habitat for species, these mitigation measures generally include the dedication and maintenance of existing natural lands in the Open Area, River Corridor SMA, High Country SMA, and Salt Creek area, totaling approximately 9,753 acres. For riparian resources, these measures include replacing the functions and services of riparian communities that may be lost through construction. For both wildlife and plant species, mitigation includes measures to control for long-term secondary effects, including controls on public access to dedicated open space areas; controls on pet, stray, and feral cats and dogs; termination of grazing activities (except for the purpose of resource management); controls on invasive plant and animal species (including Argentine ants, brown-headed cowbirds, bullfrogs, African clawed frogs, and crayfish); controls on pesticides (including rodenticides); controls on hydrological alterations and water quality; and controls on nighttime lighting; fencing and signage; homeowner education about sensitive resources; and design of aboveground utilities (phone and cell towers, power lines, and utility poles) in the High Country SMA and Salt Creek area to reduce collisions and electrocutions of raptors.

It was determined that the proposed Project's contribution to potential significant cumulative impacts at the watershed level would not be cumulatively considerable for most special-status biological resources, including southern steelhead and several special-status plants. In addition, it was determined that significant cumulative impacts to a majority of wildlife and plant species at the watershed level would not occur. Although the proposed Project's contribution would not be cumulatively considerable in these cases, the mitigation measures described above would reduce on site impacts to these resources.

In summary, although the proposed Project would include significant impacts to biological resources absent mitigation, the mitigation measures required by the Newhall Ranch Specific Plan Program EIR and the recommended Project-specific mitigation measures proposed in **Section 4.5**, Biological Resources (see **Subsection 4.5.6**, Mitigation measure), of this EIS/EIR would avoid, substantially lessen, or mitigate these impacts to below a level of significance. However, the proposed Project, in combination with other past, present and reasonably foreseeable projects within the SCRW, would result in significant cumulative impacts to three biological resources. Despite project-specific mitigation, the proposed Project would result in a cumulatively considerable contribution to significant impacts on the coastal scrub community, the San Emigdio butterfly, and the San Fernando spineflower that cannot be avoided, substantially lessen, or mitigated to below a level of significance under Alternative 2.

6.5.6 Jurisdictional Waters and Streams

6.5.6.1 Summary of Project Jurisdictional Waters and Streams Impacts

The following table summarizes the impacts of the proposed Project on jurisdictional waters and streams, as discussed in greater detail in **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR.

Table 6.0-38
Summary of Proposed Project Jurisdictional Waters and Streams Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. The Project would result in a substantial adverse effect on federally protected wetlands or a substantial change to state-protected streambeds through direct removal, filling, hydrologic interruption, loss of functions or services, or other means.	SW-1 SW-2 SW-3 SW-6 SW-7	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. The Project would result in a permanent net loss of CDFG jurisdictional streams or waters of the United States.	SW-3.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 3. The Project would result in a permanent net loss of stream/wetland functions or services.	No mitigation required.	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS

Table 6.0-38
Summary of Proposed Project Jurisdictional Waters and Streams Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 4. The Project would result in substantial adverse construction impacts within Corps or CDFG jurisdictional areas through temporary removal, filling, hydrologic interruption, loss of functions or services, or other means.	SW-4	NRSP	SI	M
		VCC	NI	NI
		Entrada	NI	NI

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.6-35**.

6.5.6.2 Cumulative Jurisdictional Waters Impacts

6.5.6.2.1 *Methodology for Assessing Cumulative Jurisdictional Waters Impacts*

Cumulative jurisdictional waters impacts were assessed using the List Method discussed in **Subsection 6.3.1**. As set forth in **Subsection 6.4**, the geographic scope of analysis for impacts to jurisdictional waters is the Santa Clara River watershed, including a review of Corps section 404 permits, and CDFG section 1603 agreements in the watershed. (See also, Santa Clara River Watershed Study (Dudek 2008), included in **Appendix 4.5** of this EIS/EIR.)

6.5.6.2.2 *Discussion of Cumulative Jurisdictional Waters Impacts*

A study by Dudek and Associates (2008) measured cumulative impacts to aquatic resources in the Santa Clara River watershed by the number of past projects processed and approved by the Corps and CDFG that impact state and federal jurisdictional waters. The study was based on a list of Streambed Alteration Agreements issued by CDFG and Nationwide and Individual section 404 permits issued by the Corps within the watershed between 1988 and 2006. The information provided in the permits and related documents included: (1) acreages of temporary and permanent impacts to jurisdictional wetlands and waters of the state and/or U.S.; (2) mitigation measures; (3) net loss or gain of jurisdictional waters/wetlands; and (4) special-status species impacted by a project.

Dudek reviewed the Corps and CDFG permit files and compiled information in each of the following categories wherever possible: permit number, applicant, project description, temporary impacts to waters or wetlands, permanent impacts to waters or wetlands, total mitigation, net gain/loss of waters of the U.S. or CDFG jurisdictional streams, permit type, related actions, presence of special-status species, mitigation, and any relevant notes. To calculate the net gain/loss of waters/wetlands for a particular project, the total permanent impacts were subtracted from the total mitigation (*e.g.*, if a project

permanently impacted two acres of wetlands/waters and mitigation was six acres, the net gain of the project was four acres). There were cases where it was unclear whether the mitigation was entirely defined as jurisdictional waters/wetlands, such as preserving 40 acres through a conservation easement but without indicating whether all 40 acres were jurisdictional. In these cases, Dudek utilized the mitigation shown in the lists provided by the agencies or the best available information provided in the permit file. If there was no specific mitigation acreage listed or found in the permit and related documents, mitigation was not credited to the project.

The variability of the information in the permit files did not allow for the Dudek study to conduct a precise quantitative description and analysis of cumulative impacts of projects on jurisdictional areas. However, the analysis is based on the best available information.

6.5.6.2.2 *Summary of Past Corps Permitting Activity*

During the period from 1988 to 2006, the Corps issued a total of 228 section 404 permits on the Santa Clara River. This included 44 Individual Permits, 119 Nationwide Permits, 50 Regional General Permits, and 14 additional authorizations (subnotifications) issued under the NRMP, a long-term, Individual Permit issued to the Valencia Company, a subdivision of Newhall Land, in 1998 (see **Figure 6.0-10**). Nationwide Permits were the most common permits issued, and accounted for 52 percent of all section 404 permits issued during this period, followed by Regional General Permits (22 percent), Individual Permits (19 percent), and Permits issued under the NRMP (six to seven percent).

1998 and 2005 were years in which major El Niño events occurred, and those years showed peaks in the number of authorizations granted and a corresponding trend with respect to acreages of jurisdictional areas impacted. This is likely due to the fact that flood events in those years necessitated repairs and maintenance of existing facilities.

Considering all permit types together, the Corps issued an average of 12.6 permits per year during the 19-year period between 1988 and 2006. However, the number of permits issued per year has not remained constant across this time period, and has fluctuated between a low of two permits issued per year in 1988 and 1990 and a high of 56 permits issued in 2005. As shown in **Figure 6.0-11** below, the number of permits issued annually has been gradually increasing, beginning with a substantial jump between 1997 and 1998. The average number of permits issued per year increased from 4.5 during the period from 1988 to 1997, to 20.3 during the period between 1998 and 2006. Although the Corps' approval of the NRMP has contributed to this trend, **Figure 6.0-11** clearly illustrates that the number of permits issued per year has been increasing over time, and that this trend would exist even absent NRMP-related authorizations.

Summary of Past Permanent Impacts Authorized Through Section 404 Permits

In total, the Corps authorized 149 acres of permanent impacts and 480 acres of temporary impacts to waters of the U.S. between 1988 and 2006.[13] This included 15 acres of permanent impacts to wetlands. The amount of permanent fill (including fill of wetlands and non-wetland waters of the U.S.) authorized

[13] Note that temporary impacts, due to their nature, do not result in a cumulative change in the acreage of waters, but this information is provided for context. (Criterion 4.)

per year (combining all permits) averaged 6.4 acres per year between 1988 and 1997, and 9.5 acres per year between 1998 and 2006. A graph showing acres of impact authorized per year, as well as mitigation acreage, is presented in **Figure 6.0-12**.[14] A line expressing the cumulative "running total" effect on waters of the U.S. (defined as the acreage of waters created through mitigation minus the acreage of waters permanently impacted) for the period between 1988 and 2006 is also shown, and illustrates that the acreage of compensatory mitigation required of 404 permit applicants exceeded the acreage of waters impacted during that period.

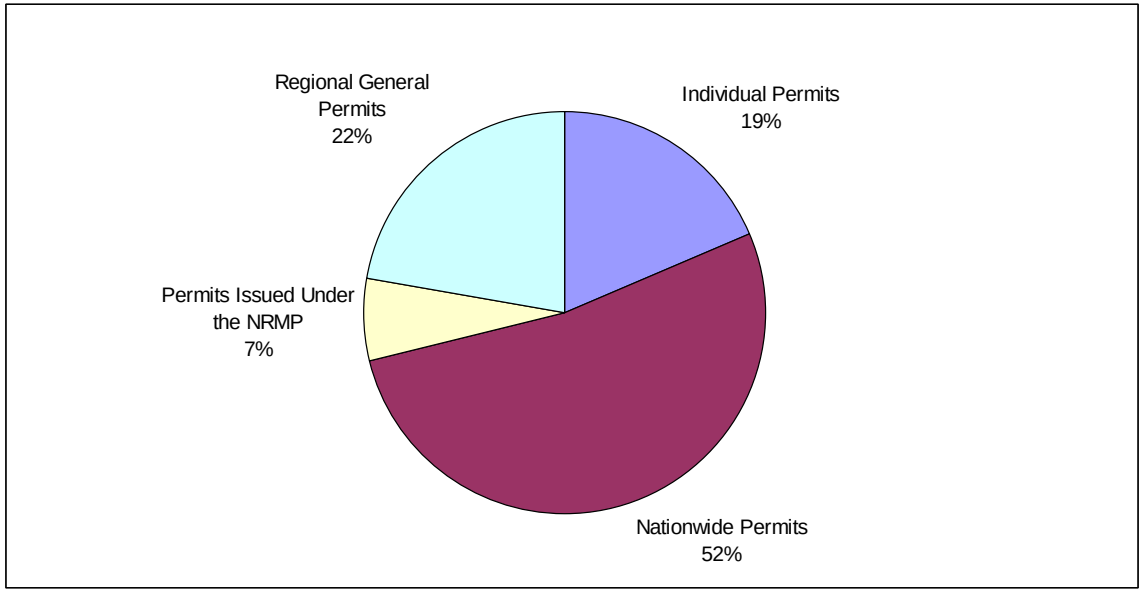
The distribution of permanent impacts authorized by the Corps over time can best be described as a punctuated equilibrium. During most years the permanent impact acreage was fairly low, although certain years (1998 and 2005, in particular) showed higher impact acreages authorized. This increase in impact acreages is likely due to the increase in activities following large storm events, which occurred in both 1998 and 2005.

6.5.6.2.2 *Summary of Past CDFG Permitting Activity*

In the period between 1988 and 2006, CDFG issued a total of 464 Streambed Alteration Agreements authorizing impacts within the Santa Clara River watershed. A total of 342 acres of permanent impacts and 295 acres of temporary impacts were authorized.[15] The CDFG permit data evaluated in the Dudek (2008) study show that over the past 19 years there has been a substantial cumulative net gain in mitigation acreage required over acreage impacted (**Figure 6.0-13**). In other words, based on these data, given mitigation ratios, there are more acres of CDFG jurisdictional streams today than there were in 1988, by approximately 276 acres. Data from CDFG permits show that since 1988, mitigation acreages exceeded impact acreages (or were less than one acre short) in every year except 1989, 1992, 1998 and 1999 (14 out of 19 years). The cumulative running total line on **Figure 6.0-13** shows the cumulative effect of CDFG permitting on the acreage of CDFG jurisdictional streams (the "running total," counting acres permanently impacted as debits and acres created through mitigation as credits), and illustrates the fact that CDFG permitting within the Santa Clara River watershed for the period between 1988 and 2006 has not resulted in a cumulative loss of streams.

[14] Note: Permits issued are ascribed to the year of application.

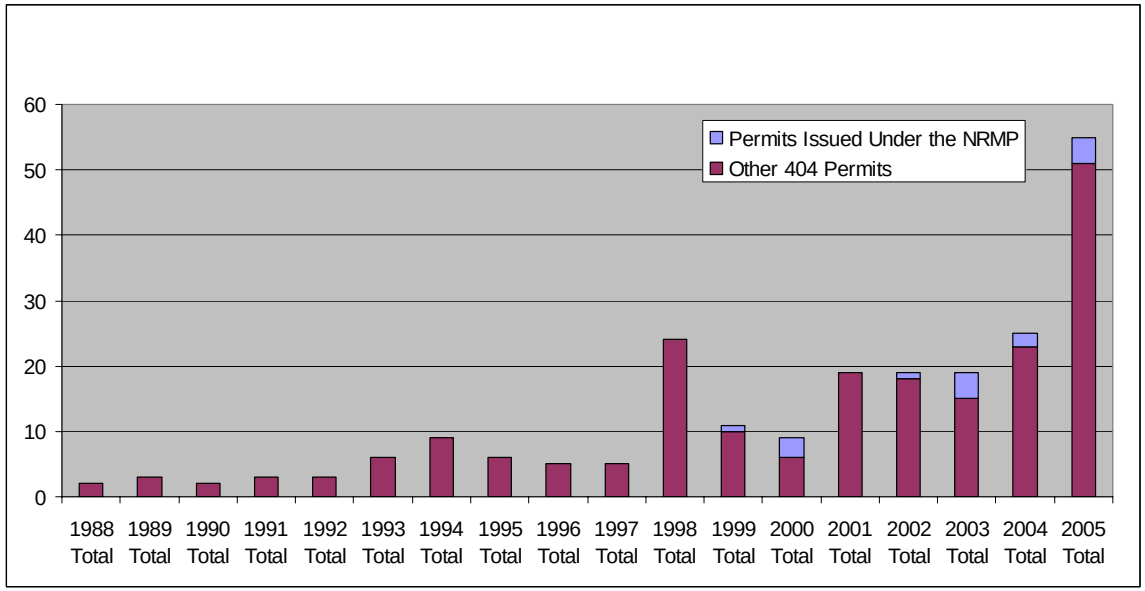
[15] Note that temporary impacts, due to their nature, do not result in a cumulative change in the acreage of waters, but this information is provided for context. (Criterion 4.)



SOURCE: CORPS 2006, URS 2009

FIGURE 6.0-10

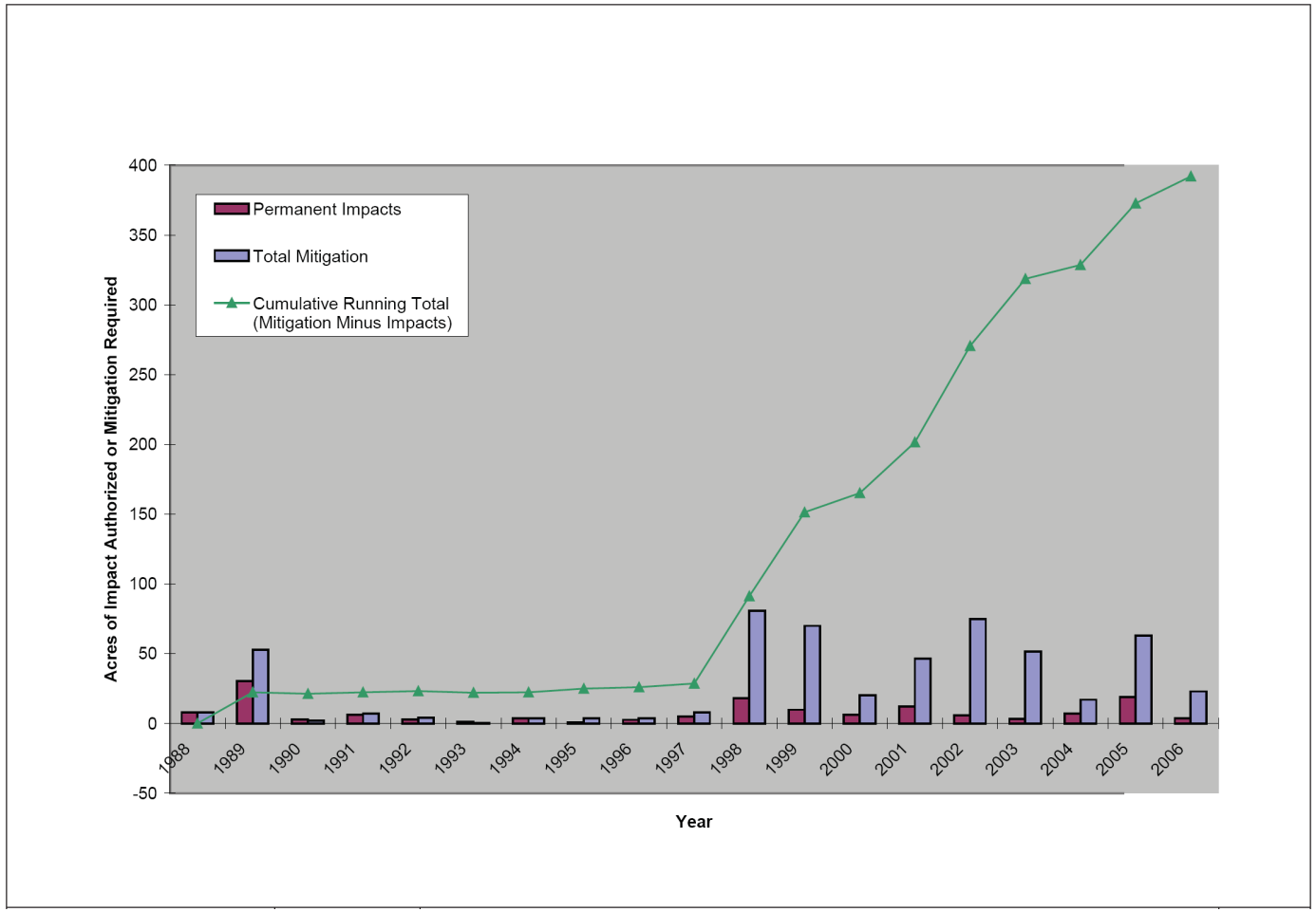
Section 404 Permits Issued by Type, Santa Clara River Watershed (1988-2005)



SOURCE: CORPS 2006, URS 2009

FIGURE 6.0-11

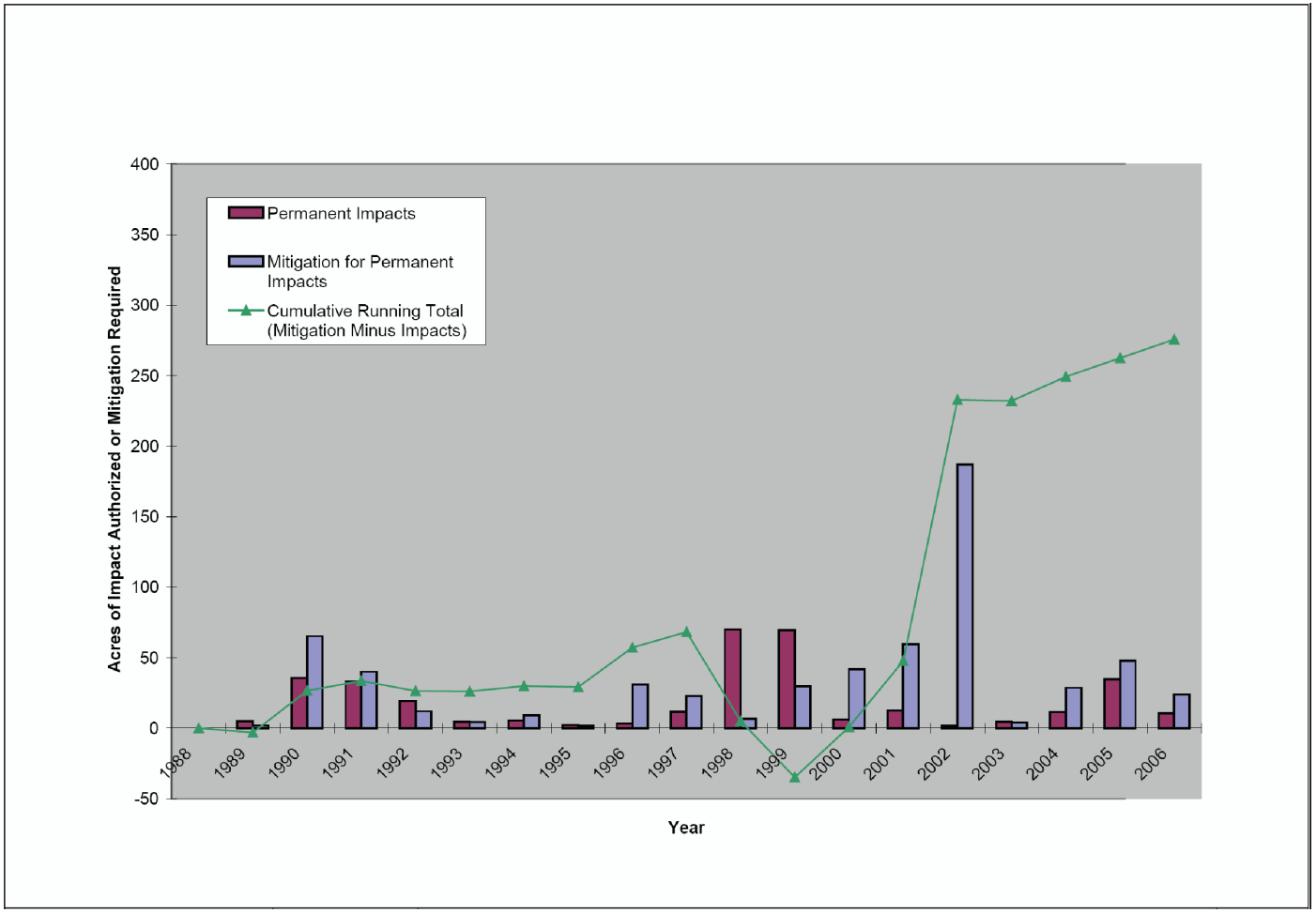
Section 404 Permits Issued by Year, Santa Clara River Watershed (1988-2006)



SOURCE: CORPS 2008

FIGURE 6.0-12

Cumulative Impacts and Mitigation from Corps 404 Permits (1988-2006)



SOURCE: DUDEK – 2008

FIGURE 6.0-13

Cumulative Impacts and Mitigation from CDFG Streambed Permits (1988-2006)

Cumulative Impact Contribution of the Proposed Project

As described in **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR, the proposed RMDP would include state and federal permits authorizing the placement of fill material within waters of the U.S. and CDFG jurisdictional streams for construction of project components. Within waters of the U.S., the total amount of permanent fill authorized would total 82.3 acres, along with 27.24 acres of temporary impacts authorized. Within CDFG jurisdictional streams, the Project would involve permanent impacts to 124 acres, and temporary impacts to an additional 75.3 acres. However, the proposed Project would also create new jurisdictional areas in the amounts of 80.66 acres (Corps) and 153.4 acres (CDFG), which would substantially offset these impacts. Thus, the net proposed Project impact, absent mitigation, would be 1.65 acres of permanent impacts to Corps jurisdiction, 27.24 acres of temporary impacts to Corps jurisdiction, and 75.3 acres of temporary impacts to CDFG jurisdiction. The project would not result in a overall net permanent impact on CDFG jurisdictional streams, as the new streambed acreage created by the project would exceed the acreage permanently impacted by about 30 acres.[16] The mitigation measures proposed in **Section 4.6** would mitigate the impacts of the proposed Project by creating additional jurisdictional wetlands in the Salt Creek and Potrero Canyon drainages on site. These measures would ensure that the acreage of Corps and CDFG jurisdictional areas created, including waters of the U.S., wetlands, and streams, would exceed the acreage impacted. Project-specific mitigation measures would also require that temporary impact zones be restored following construction and revegetated with native plant species. Given this, the proposed Project would not contribute to any cumulative loss of jurisdictional waters or streams. (Criteria 1 and 2.)

With regard to the condition of jurisdictional areas on site, the proposed Project would involve a net increase of 35.68 HARC AW-Score Units, as described in the Hybrid Assessment of Riparian Condition (**Appendix 4.6**, URS, 2008a). Therefore, the proposed Project would not considerably contribute to a cumulatively significant loss of riparian condition in the Santa Clara River watershed. (Criterion 3.)

Past, Present, and Reasonably Foreseeable Future Projects

The past permitted activities with a potential cumulative impact on jurisdictional waters were discussed above. A list of past, present, and reasonably foreseeable future projects within the Santa Clara River watershed, not including the proposed Project, that could potentially result in impacts upon jurisdictional waters and streams is presented in **Table 6.0-39**. Where available, existing environmental documentation for the projects below was reviewed, and a determination was made as to the likelihood that these projects would contribute incrementally to significant impacts as defined by the criteria set forth in **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR. Based on available information, as indicated on **Table 6.0-39**, about 12 projects (or groups of projects) would have significant or potentially significant impacts

[16] **Section 4.6** includes separate quantifications of impacts to the river mainstem and the tributaries, and also discusses mitigation ratios that address, among other things, temporal loss of riparian functions and values, resulting in a post project net increase of jurisdictional bed, bank and channel and riparian vegetation. Due to the watershed-level scope of this cumulative impacts analysis and the long span of time covered by the past, present, and reasonably foreseeable future projects analyzed herein, the analysis of the proposed Project's potential contribution to cumulative effects considers river mainstem and tributary impacts together and is based on a mitigation ratio of 1:1.

under Criterion 1 prior to mitigation, 11 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 2 prior to mitigation, 11 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 3 prior to mitigation, and 10 projects (or groups of projects) would have significant or potentially significant impacts under Criterion 4 prior to mitigation. However, the available information for future projects was not detailed enough to determine the acreages of jurisdictional waters that would be impacted by these projects. By evaluating the permitting trends presented in **Subsections 6.5.6.2.1** and **6.5.6.2.2**, above and extrapolating these trends to predict future impacts, it can be estimated that Corps permitting is likely to authorize approximately 7.84 acres per year of permanent impacts, and that CDFG permitting is likely to authorize approximately 18 acres per year of permanent impacts. Based on these estimates, during the 20-year life of the proposed Project (including build-out of the Specific Plan, VCC and Entrada planning areas), the Corps and CDFG would likely authorize approximately 157 acres of permanent impacts to waters of the U.S. and 360 acres of permanent impacts to jurisdictional streams within the Santa Clara River watershed. However, it should be noted that the above estimates are based on data from 1988 to 2005 only, and the current economic downturn could cause fewer projects to be proposed by the regulated public and the number of permits issued could decrease accordingly. Alternatively, flooding associated with years of extraordinary rainfall could result in damage to flood control, erosion control, and other facilities constructed in jurisdictional areas, and the number of permits issued could peak due to maintenance needs.

Based on a review of available information regarding identified cumulative Corps and CDFG permits and other cumulative development projects, impacts to jurisdictional waters from these projects are significant when viewed in connection with the effects of other past, present, and reasonably foreseeable future projects. Prior to mitigation, the incremental jurisdictional waters impacts of the proposed Project would be cumulatively considerable (Criteria 1 through 4).

Table 6.0-39
Cumulative Projects with Related Impacts to Jurisdictional Waters and Streams

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-38)			
		Criterion 1	Criterion 2	Criterion 3	Criterion 4
1	Ritter Ranch	SU	ND	ND	ND
2	Centennial	ND	ND	ND	ND
3	Adams Canyon	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND
5	Legacy Village	PS	PS	PS	PS
6	Tesoro Del Valle	PS	PS	PS	PS
7	Tapia Ranch	PS	PS	PS	PS
8	Whittaker Bermite/Porta Bella Project	ND	ND	ND	ND
9	West Creek/West Hills Project	ND	ND	ND	ND
10	Westridge	ND	ND	ND	ND
11	North Valencia Specific Plan No. 1	M	M	M	M
12	RiverPark	ND	ND	SU	ND
13	Natural River Management Plan	M	M	ND	NS
14	Recycled Water Master Plan (CLWA)	NS	NS	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	PS	PS	PS	PS
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely	Likely
	Consolidated Ventura County Projects	Likely	Likely	Likely	Likely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely	Likely
	Summary Corps (404) Permits	Unlikely	Unlikely	Unlikely	Unlikely
	Summary of CDFG (1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely

Notes:
NA = Not applicable
ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document
NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and source documents for that table.

6.5.6.3 Cumulative Mitigation Measures for Jurisdictional Waters and Streams

Although the proposed Project would include some impacts to waters and streams absent mitigation, the Project-specific mitigation measures proposed in **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR would mitigate these impacts to a less-than-significant level. After incorporation of the Project-specific mitigation measures identified in this EIS/EIR, the proposed Project would not result in a cumulatively considerable contribution to any impact on jurisdictional waters, and cumulative impacts would be less than significant with mitigation.

6.5.6.4 Summary of Cumulative Jurisdictional Waters and Streams Impacts and Mitigation

Table 6.0-40
Summary of Project Contribution to Cumulative Jurisdictional Waters and Streams Impacts

Significance Criteria (See Table 6.0-38)	Planning Area	Impacts of Proposed Project Before Mitigation	Impacts of Proposed Project After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	RMDP	SI	M	Yes	SW-1, SW-2 and SW-3	No
	Entrada	SI	M			
	VCC	SI	M			
Criterion 2	RMDP	SI	M	Yes	SW-1, SW-2 and SW-3	No
	Entrada	SI	M			
	VCC	SI	M			
Criterion 3	RMDP	NS	NS	No	NA	NA
	Entrada	NS	NS			
	VCC	NS	NS			
Criterion 4	RMDP	SI	M	NA	NA	NA
	Entrada	NI	M			
	VCC	NI	M			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.7 Air Quality

6.5.7.1 Summary of Project Air Quality Impacts

The following table summarizes the air quality impacts of the proposed Project, as discussed in greater detail in **Section 4.7** of this EIS/EIR.

Table 6.0-41
Summary of Proposed Project Air Quality Impacts

Significance Criteria	Applicable Mitigation Measures	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Conflict with or obstruct implementation of the applicable air quality plan.	None required.	NS	NS
Criterion 2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.	Specific Plan measures from **Table 4.7-1**; AQ-1 through AQ-16	SI	SU
Criterion 3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	See **Subsection 6.5.7.3** below.	See **Subsection 6.5.7.2** below.	See **Subsection 6.5.7.2** below.
Criterion 4. Expose sensitive receptors to substantial pollutant concentrations.	Specific Plan measures from **Table 4.7-1**; AQ-1 through AQ-16	SI	SU
Criterion 5. Create objectionable odors affecting a substantial number of people.	None required.	NS	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.7-52.**

6.5.7.2 Cumulative Air Quality Impacts

6.5.7.2.1 *Methodology for Assessing Cumulative Air Quality Impacts*

Cumulative air quality impacts were assessed using the Plan Method as discussed in **Subsection 6.3.2**, above. As set forth in **Subsection 6.4**, the geographic scope of analysis for Air Quality is the South Coast Air Basin.

6.5.7.2.2 *Discussion of Cumulative Air Quality Impacts*

As discussed above, unlike many of the other resource categories that were analyzed utilizing the "list" approach, Air Quality was analyzed using the "plan" approach. The plan approach provides a basin-wide context for cumulative air impacts, and was deemed to be more accurate for this resource category based on the size and long-term nature of the Project.

Subsection 4.7.8 of this EIS/EIR addresses the first significance criterion, whether the proposed Project conflicts with or obstructs implementation of the applicable air quality plan, in an inherently cumulative fashion, because the conformity analysis takes into account all other basin emissions. That section concluded that the proposed Project does not result in significant impacts under this criterion. Thus, the proposed Project also does not contribute to a significant cumulative impact with respect to implementation of the air quality plan (Significance Criterion 1).

Subsections 4.7.4 through **4.7.7** of this EIS/EIR address the construction and operational impacts of the proposed Project, localized significance thresholds, and health risk assessment, and conclude that the proposed Project would result in significant unavoidable impacts related to the exceedances of air quality standards (for pollutants VOC, NOx, CO, PM10, and PM2.5) and exposure of sensitive receptors to substantial pollutant concentrations (for pollutants PM10, PM2.5, and NOx). (See conclusions in **Subsection 4.7.9**.) Other large projects in the area are expected to have similar types of impacts given the overall impacted nature of air quality in the South Coast Air Basin. Therefore, impacts related to exceedances of air quality standards and exposure of sensitive receptors to substantial pollutant concentrations are cumulatively significant, and the proposed Project's contribution to this impact is considered cumulatively considerable (Significance Criteria 2 and 4).

With respect to Criterion 3, the SCAQMD's CEQA Air Quality Handbook identifies methods to determine the cumulative significance of land use projects. (SCAQMD, 1993.) These methods are different than the methodology for construction and operational impacts used throughout the other sections of this EIS/EIR, in which all foreseeable future development within a given service boundary or geographical area is predicted and its impacts measured. The SCAQMD staff has suggested that the emissions-based thresholds in **Table 4.7-7** be used to determine if a project's contribution to regional cumulative emissions is cumulatively considerable.[17] In addition, the relevant methods for determining cumulative impacts in the CEQA Air Quality Handbook, which are based on performance standards and

[17] Personal communication of Steve Smith, Program Supervisor, SCAQMD, Diamond Bar, California, with David Deckman, Impact Sciences, April 19, 2006.

emission reduction targets necessary to attain the federal and state air quality standards identified in the AQMP, are also evaluated.

The SCAQMD's approach towards assessing cumulative impacts is based on the AQMP's forecasts of attainment of ambient air quality standards inclusive of growth in population, employment, and vehicle miles traveled. The 2003 and 2007 AQMPs were prepared to accommodate growth, to reduce the high levels of pollutants within the South Coast Air Basin, to meet state and federal air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. Projects found to be consistent with the growth assumptions upon which the AQMP forecasts are based are deemed to be consistent with the AQMP and would not impede attainment of the ambient air quality standards. Once fully developed and occupied, the proposed Project, as well as the other projects being proposed and developed in the area, are expected to be within the growth forecasts contained in the Growth Management Chapter of the Southern California Association of Government's (SCAG) Regional Comprehensive Guide and Plan (RCGP), which forms the basis for the land use and transportation control portions of the SCAQMD's AQMP. The RCGP serves as a regional framework for decisionmaking for the growth and change that is anticipated during the next 20 years and beyond. The Growth Management Chapter of the RCGP contains population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and reflect local plans and policies that shall be used by SCAG in all phases of implementation and review. The RCGP states that the overall goals for the region are to: (1) reinvigorate the region's economy; (2) avoid social and economic inequities and the geographical isolation of communities; and (3) maintain the region's quality of life. Thus, from this perspective, the proposed Project is not expected to jeopardize attainment of state and federal ambient air quality standards.

An additional analysis that evaluates the proposed Project's cumulative impacts is based on performance standards that are recommended in the SCAQMD's CEQA Air Quality Handbook and that are appropriate for the proposed Project. As specified in the CEQA Air Quality Handbook, the ratio of a project's VMT or average daily trips (ADT) to anticipated VMT or ADT in the city or county in which the project is located is compared to the ratio of the project population to the anticipated population in the same city or county (SCAQMD, 1993, p. A9-126). If the growth of VMT or ADT is less than the population growth, then a project is not considered to have a significant cumulative air quality impact. The relevant values are shown in **Table 6.0-42**. As shown in **Table 6.0-42**, this criterion has been exceeded and, therefore, the Project would have a significant cumulative impact on air quality under this criterion (Significance Criterion 3).

Table 6.0-42
Comparison of Growth of VMT to Population Growth

	Vehicle Miles Traveled	Population
Proposed Project	2,072,644	57,850
Los Angeles County	240,260,320	11,624,789
Ratio of Project to Los Angeles County	0.00863	0.00498

Source: Estimated project VMT from URBEMIS 2007 output data (see **Appendix 4.7-1** of this EIS/EIR). Estimated VMT in the South Coast Air Basin portion of Los Angeles County in 2030 project build-out year) as determined by EMFAC2007. Estimated aggregated population in the South Coast Air Basin portion of Los Angeles County in 2030. "City Projections." [Online] [April 28, 2005]. <http://scag.ca.gov/ forecast/index.htm>.

While the Project's operational emissions would exceed the SCAQMD thresholds of significance, these emissions are relatively small in comparison to the regional VOC, NO_x, CO, SO_x, and PM_{10} emissions in the South Coast Air Basin. **Table 6.0-43** shows a comparison of the Project's indirect operational emissions to the total emissions in the South Coast Air Basin. As shown in the table, the operational emissions would be much less than one percent of the daily emissions in the South Coast Air Basin.

Table 6.0-43
Comparison of Project Emissions to South Coast Air Basin Emissions

	VOC (lbs/day)	NOx (lbs/day)	CO (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Indirect Project Operational Emissions[1]	2,759	1,314	11,145	31	5,134	997
South Coast Air Basin Emissions[2]	1,164,400	996,400	4,723,800	117,200	645,600	237,200
Project Percent of SCAB Emissions	0.22%	0.13%	0.22%	0.03%	0.80%	0.42%

Note:

[1] The Project operational emissions are the highest of the winter or summer emissions shown in **Table 4.7-15**.

[2] The South Coast Air Basin emissions were obtained from the ARB website (http://www.arb.ca.gov/app/ emsinv/emssumcat.php). These emissions are the inventory of all sources, including natural sources, for 2020, which is the latest year for which an estimated inventory is available.

In summary, while the proposed Project is consistent with the growth projections in the AQMP and constitutes a relatively small contribution to the regional emissions, the Project emissions and VMT growth would exceed other thresholds indicating cumulative impacts. In particular, because the South Coast Air Basin is a nonattainment area for ozone and PM_{10}, the Project's construction and operational emissions contribute to the cumulative air quality impacts in the Basin and would be significant under this criterion. In addition, as shown in **Table 6.0-42** above, the growth of VMT would exceed the population growth in the regional area. Based on these determinations, the proposed Project, in conjunction with other development in the Basin would result in significant cumulative air quality impacts (Air Quality Significance Criterion 3).

Subsection 4.7.5.2.2 concludes that the proposed Project would not result in significant impacts from odors because sources of odors would be controlled based on the requirements of County Department of Health Services, SCAQMD permit requirements for air filtration and food storage and disposal, and SCAQMD Rule 402. Therefore, potential cumulative odor impacts would be less than significant (Air Quality Significance Criterion 5).

In sum, based on a review of available information the incremental effects of the proposed Project under Criteria 1 and 5 are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative air quality impacts under Criteria 1 and 5 are less than significant, and the proposed Project's incremental contribution to cumulative impacts under those criteria is less than cumulatively considerable (Criteria 1 and 5). However, for Criteria 2, 3, and 4, air quality impacts are significant when viewed in connection with the effects of other past, present, and reasonably foreseeable future projects. Even with mitigation, the incremental air quality impacts of the proposed Project under Criteria 2, 3, and 4 would be cumulatively considerable (Criteria 2 through 4).

Cumulative development projects identified in the Santa Paula, Fillmore and surrounding unincorporated areas of Ventura County are located in the South Central Coast Air Basin. Therefore, cumulative development in Ventura County would not result in or contribute to potential cumulative air quality impacts in the South Coast Air Basin or in the Project area.

6.5.7.3 Cumulative Air Quality Mitigation Measures

Feasible mitigation measures have been incorporated into this air quality impact analysis to reduce Project-specific construction and operational emissions. No mitigation measures beyond those outlined in this EIS/EIR have been identified. The mitigation measures identified to reduce the Project-level impacts would also reduce the Project's contribution to cumulative significant air quality impacts, however, the Project's short- and long-term air emission impacts would be cumulatively significant and unavoidable (Criteria 2, 3, and 4). Other projects in the South Coast Air Basin would likely be required to implement similar mitigation; however, the cumulative air quality impacts would still be unavoidably significant under Criteria 2, 3, and 4.

6.5.7.4 Summary of Cumulative Air Quality Impacts and Mitigation

Table 6.0-44
Summary of Project Contribution to Cumulative Air Quality Impacts and Mitigation

Significance Criteria (See Table 6.0-41)	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NS	NS	No	NA	NA
Criterion 2	SI	SU	Yes	Specific Plan measures listed in **Table 4.7-1** and AQ-1 through AQ-16	Yes
Criterion 3	SI	SU	Yes	Specific Plan measures listed in **Table 4.7-1** and AQ-1 through AQ-16	Yes
Criterion 4	SI	SU	Yes	Specific Plan measures listed in **Table 4.7-1** and AQ-1 through AQ-16	Yes
Criterion 5	NS	NS	No	NA	NA

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.8 Traffic

6.5.8.1 Summary of Project Traffic Impacts

The proposed Project is forecast to generate approximately 409,000 ADT after build-out. Project-related construction activities would generate an additional approximately 1,000 ADT during the peak construction year. The following table summarizes the traffic impacts of the proposed Project, as discussed in greater detail in **Section 4.8** of this EIS/EIR.

Table 6.0-45
Summary of Proposed Project Traffic Impacts

Significance Criteria	Applicable Mitigation Measures	Impacts Before Mitigation	Impacts After Mitigation
Arterial Roadways			
Criterion 1. Proposed Project would cause a Los Angeles County roadway segment to go from LOS A-E to LOS F, and a Ventura County roadway segment to go from LOS A-D to LOS E.	TR-5, TR-7, TR-8, TR-10, TR-11, TR-12, TR-13, TR-14, TR-15, TR-16, TR-17, TR-18	SI	M
Criterion 2. Proposed Project would increase the v/c ratio at an existing deficient condition location by .01 or more.	TR-8	SI	M
I-5 Segments			
Criterion 3. Proposed Project would cause or contribute to a v/c >1.0 and increase the v/c by .020 or more.	TR-10, TR-11, TR-12, TR-13, TR-14, TR-15, TR-16, TR-17, TR-18	SI	M

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.8-30**; **Subsection 4.8.10**.

6.5.8.2 Cumulative Traffic Impacts

6.5.7.2.1 *Methodology for Assessing Cumulative Traffic Impacts*

As discussed above in **Subsection 6.3.1**, unlike many of the other resource categories that were analyzed utilizing the "list" approach, traffic was analyzed using the "plan" approach for greater accuracy. The study area for potential traffic impacts of the Project and the context for the discussion of cumulative traffic conditions is described above in detail in **Section 4.8**. The study area generally includes the immediate vicinity of the Project site and the surrounding roadways within Los Angeles and Ventura Counties that potentially could be significantly impacted by traffic generated by the Project, and extends to the west into Ventura County and east into the Santa Clarita Valley, east of San Fernando Road. The north and south boundaries encompass the existing and future urbanized areas of Valencia, Castaic, Santa Clarita, and the northern San Fernando Valley. Portions of the study area are in the city of Santa Clarita and Ventura County, and the remaining portion is in unincorporated Los Angeles County south into the San Fernando Valley and the City of Los Angeles. (See **Figures 4.8-1** and **4.8-2**.) Thus, the plan approach provides a broad context for cumulative traffic impacts, and was deemed to be more accurate than the list approach for this resource category based on the size and long-term nature of the Project.

The traffic forecasts used in the analysis reflect a long-range time frame due to the long-term build-out projected for the proposed Project. The analysis assumes build-out of the city of Santa Clarita General

Plan and the County of Los Angeles Santa Clarita Valley Area Plan and completion of the associated County Master Plan of Highways and the city of Santa Clarita Circulation Element, plus active pending General Plan amendments. Likewise, for the Ventura County portion of the study area, the traffic forecasts assume build-out of the Ventura County General Plan, as well as the General Plans for the nearby cities of Fillmore, Ventura, and Moorpark. The traffic analysis includes a comparison of long-range build-out conditions without the Project to future traffic conditions with the Project. The analysis addresses impacts to the surrounding arterial roadways, state highways, and freeway system. These long-range traffic forecasts were produced using the Santa Clarita Valley Consolidated Traffic Model (SCVCTM). For Ventura County, a long-range subarea version of the Ventura Countywide Traffic Model (VCTM) was utilized. Descriptions of each of these models are found in **Section 4.8**. The cumulative impact scenario was discussed in **Section 4.8**, in the context of RMDP and SCP secondary impacts, and included these cumulative traffic models.

6.5.7.2.2 *Cumulative Traffic Conditions*

Tables 4.8-4 and **4.8-4A** show how the cumulative traffic generation for the Santa Clarita Valley is projected to double from 1.6 million ADT to 3.2 million ADT by 2030, an increase of 1.6 million ADT. The traffic generation for Ventura County is projected to increase from 5.1 million ADT to 6.7 million ADT by 2025, an increase of 1.6 million ADT.

Over the same timeframe, the current long-range highway plans for the Santa Clarita Valley and Ventura County portions of the study area, as illustrated in **Figures 4.8-8**, **4.8-8A**, and **4.8-9**, would include the roadway system expected to be in place by build-out of the land uses depicted in **Tables 4.8-4** and **4.8-4A**. Build-out of the Los Angeles County/Santa Clarita Valley plan, as it specifically relates to the Project site, is detailed in **Figure 4.8-10**. Expansion of local bus systems would likely occur as development occurs. As noted at **Subsection 4.8.5.3**, the bus routes are regularly evaluated and routes are added and/or modified as warranted. An extension of the Metrolink commuter rail line along the SR-126 corridor to Ventura County is part of Ventura County's long-range transit plans as noted at **Subsection 4.8.5.3**.

With implementation of the proposed Project and projected future growth in the region, several study area roadway and freeway segments in the Los Angeles County portion of the Santa Clarita Valley are forecast to exceed the roadway's ADT capacity (roadways with a v/c greater than 1.0 and, in the case of freeway segments, cumulative development (including the proposed Project) increases v/c by .020 or more) under long-range cumulative traffic conditions. As shown below on **Table 6.0-46**, cumulative development would result in significant impacts within Los Angeles County on two arterial roadway segments and two freeway segments. Absent mitigation, the proposed Project would also contribute to already deficient conditions on one additional arterial segment and nine freeway segments, thus resulting in a cumulatively considerable contribution to significant cumulative impacts for these 14 road segments. Thus, based on a review of available information the incremental effects of the proposed Project are significant prior to mitigation when viewed in connection with the effects of other past, present, and foreseeable future development. Cumulative traffic impacts under Criteria 1 through 3 are significant prior to mitigation, and the proposed Project's incremental contribution to cumulative impacts is cumulatively considerable (Criteria 1 through 3).

Table 6.0-46
Cumulative Significant Impact Roadway Segments in Los Angeles County
(Including Proposed Project)

Location	Pre-Mitigation			Post-Mitigation		
	Lanes	V/C	Volume Density	Lanes	V/C	Volume Density
The Old Road north of Magic Mtn /Los Angeles/Off-site	6	1.02[1]	n/a	6A	0.85	n/a
Rye Cyn east of The Old Road /Los Angeles/Off-site	6	1.07[1]	n/a	6A	0.89	n/a
Via Princessa east of Santa Clarita /Los Angeles/Off-site	6	1.22[2]	n/a	8	0.92	n/a
I-5 south of Parker (NB) /Los Angeles/Off-site	8	1.025[4]	<45.0	8M+ 2 HOV	.082	28.7
I-5 south of Hasley (SB) /Los Angeles/Off-site	8	1.138[5]	>45.0[3]	8M+ 2 HOV	0.91	33.0
I-5 south of SR-126 (SB) /Los Angeles/Off-site	8	1.150[5]	>45.0[3]	8M+ 2 HOV	0.84	33.7
I-5 south of Rye Canyon (SB) /Los Angeles/Off-site	8	1.263[5]	>45.0[3]	8M+ 2 HOV	0.92	41.4
I-5 south of Magic Mtn (SB) /Los Angeles/Off-site	8	1.225[5]	>45.0[3]	8M+ 2 HOV	0.98	43.1
I-5 south of Valencia (SB) /Los Angeles/Off-site	8	1.250[5]	>45.0[3]	8M+ 2 HOV	0.91	31.2
I-5 south of McBean (SB) /Los Angeles/Off-site	8	1.200[5]	>45.0[3]	8M+ 2 HOV	0.96	36.2
I-5 south of Lyons (NB) /Los Angeles/Off-site	8	1.050[5]	>45.0[3]	8M+ 2 HOV	0.76	30.1
I-5 south of Lyons (SB) /Los Angeles/Off-site	8	1.113[5]	>45.0[3]	8M+ 2 HOV + 1T (SB)	0.80	30.1
I-5 south of Calgrove (NB) /Los Angeles/Off-site	8	1.025[4]	>45.0[3]	8M+ 2 HOV + 2T	0.73	29.7
I-5 south of Calgrove (SB) /Los Angeles/Off-site	8	1.100[5]	>45.0[3]	8M+ 2 HOV + 2T	0.71	29.7

Notes:
A = Augmented HOV = High Occupancy Vehicle lanes NB = Northbound
SB = Southbound T = Truck lane
[1] Project results in a v/c > 1.0.
[2] Project contributes to a v/c > 1.0.
[3] Project contributes to a volume density >45.0 passenger cars/mile/lane.
[4] Project results in a v/c >1.0 and increases v/c by .020 or more.
[5] Project contributes to a v/c >1.0 and increases v/c by .020 or more.
Source: **Tables 4.8-7**, 4.**8-28** and **4.8-29**.

6.5.8.3 Cumulative Traffic Mitigation Measures

The SCVCTM and VCTM traffic models accounted for all concurrent and applicable projects that could be considered for cumulative impacts during the traffic model development. As discussed above, these models identified the roadway segments that would be deficient under cumulative conditions, including the proposed Project. Thus, as discussed in **Subsection 4.8.9**, the mitigation measures identified for the

proposed Project (Measures TR-5, TR-7, TR-8, TR-10, TR-11, TR-12, TR-13, TR-14, TR-15, TR-16, TR-17, and TR-18) represent the applicable cumulative mitigation measures for the proposed Project pursuant to the fair-share percentages identified in **Table 4.8-20**. As shown in **Tables 4.8-21** and **6.0-447** (below), implementation of these proposed mitigation measures (TR-5, TR-7, TR-8, TR-10, TR-11, TR-12, TR-13, TR-14, TR-15, TR-16, TR-17, TR-18) would reduce the Project's contribution to cumulative traffic impacts to a less-than-cumulatively considerable level, and thus, cumulative traffic impacts would be less than significant with mitigation (Criteria 1 through 3). It is anticipated that other cumulative projects that are developed in the project region would also be required to pay their fair-share to established regional roadway improvement programs, thereby reducing their contribution to cumulative traffic impacts to a less-than-significant level.

6.5.8.4 Summary of Cumulative Traffic Impacts and Mitigation

Table 6.0-47
Summary of Project Contribution to Cumulative Traffic Impacts

Significance Criteria (See Table 6.0-44)	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Arterial Roadways					
Criterion 1	SI	M	Yes	TR-5, TR-7	No
Criterion 2	SI	M	Yes	TR-8	No
I-5 Segments					
Criterion 3	SI	M	Yes	TR-10, TR-11, TR-12, TR-13, TR-14, TR-15, TR-16, TR-17, TR-18	No

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

NA = Not applicable

6.5.9 Noise

6.5.9.1 Summary of Project Noise Impacts

The following table summarizes the noise impacts of the proposed Project, as discussed in greater detail in **Section 4.9** of this EIS/EIR.

Table 6.0-48
Summary of Proposed Project Noise Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would expose people to noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. (See Significance Criteria 7 through 13 below.)	SP-4.9-1 through SP 4.9-17, NOI-1	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. Project would expose people to excessive ground-borne noise levels or vibration.	NOI-1	NRSP	SI	M
		VCC	NS	NS
		Entrada	SI	M
Criterion 3. Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity.	SP-4.9-5 through SP 4.9-17	NRSP	SI	SU
		VCC	SI	SU
		Entrada	SI	SU
Criterion 4. Project would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity.	SP-4.9-1 through SP 4.9-4	NRSP	SI	SU
		VCC	SI	M
		Entrada	SI	M
Criterion 5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure to people residing or working in the Project area to excessive levels of noise.	No mitigation required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 6. For a project within the vicinity of a private airstrip, exposure to people residing or working in the Project area to excessive levels of noise.	No mitigation required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 7. Exposure of occupants of the proposed Project or occupants of off-site uses to Project-related construction noise levels in excess of the Los Angeles County Noise Ordinance standards for construction noise.	SP-4.9-1 through SP 4.9-4	NRSP	SI	SU
		VCC	NS	NS
		Entrada	SI	M
Criterion 8. Construction activity, including vibratory and impact pile driving, causing a PPV of above 0.01 in/sec at sensitive receptor location and/or between 0.2 and 2.0 in/sec at nearby structures for any length of time.	NOI-1	NRSP	SI	M
		VCC	NS	NS
		Entrada	SI	M
Criterion 9. Exposure of on-site exterior frequent use areas for noise-sensitive receptors to noise levels above the normally acceptable levels identified in the State Land Use Compatibility Guidelines utilized by Los Angeles County (*i.e.*, 60 dB(A) CNEL for single-family, 65 dB(A) CNEL for multi-family, and 70 dB(A) CNEL for schools and parks uses); or exposure	SP-4.9-5 through SP 4.9-13, SP 4.9-17	NRSP	SI	M
		VCC	SI	M

Table 6.0-48
Summary of Proposed Project Noise Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
of residences located within mixed-use/commercial areas (*i.e.*, residences with no backyards or parks as an exterior frequent use area), to interior noise levels above 45 dB(A).		Entrada	SI	M
Criterion 10. Exposure of occupants of the proposed Project to noise levels originating on or off site that are above the Los Angeles County Noise Ordinance standards identified in **Tables 4.9-5** and **4.9-6** for the types of uses proposed.	SP-4.9-5 through SP 4.9-13, SP 4.9-17	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 11. Exposure of off-site sensitive receptors to an increase of 5 dB(A) or greater in noise level from Project-related activities, even if levels remain within the same land use compatibility classification (*e.g.*, noise levels remain within the normally acceptable range). (State Land Use Compatibility Guidelines for uses within unincorporated Los Angeles County, and under City of Santa Clarita Guidelines for Noise and Land Use Compatibility for uses within the City of Santa Clarita.)	SP-4.9-5 through SP 4.9-13, SP 4.9-17	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 12. Exposure of off-site sensitive receptors to an increase of 3 dB(A) or greater in noise level from Project-related activities, which results in a change in land use compatibility classification (*e.g.*, noise levels change from normally acceptable to conditionally acceptable). (State Land Use Compatibility Guidelines for uses within unincorporated Los Angeles County, and under City of Santa Clarita Guidelines for Noise and Land Use Compatibility for uses within the City of Santa Clarita.)	SP-4.9-5 through SP 4.9-13, SP 4.9-17	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 13. Exposure of off-site sensitive receptors to an increase in noise levels greater than one dB(A) where existing noise levels are already considered unacceptable under the State Land Use Compatibility Guidelines for uses within unincorporated Los Angeles County, and under City of Santa Clarita Guidelines for Noise and Land Use Compatibility for uses within the City of Santa Clarita.	SP-4.9-5 through SP 4.9-13, SP 4.9-17	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.9-23**; **Subsections 4.9.5**, and **4.9.6.2**.

6.5.9.2 Cumulative Noise Impacts

6.5.9.2.1 *Methodology for Assessing Cumulative Noise Impacts*

Cumulative noise impacts were assessed using the Plan Method discussed above in **Subsection 6.3.2**. The geographic scope of this analysis is the same as that for cumulative traffic impacts, and is set forth above in **Subsection 6.5.8.2.1**.

6.5.9.2.2 *Discussion of Cumulative Noise Impacts*

Cumulative noise impacts would primarily occur as a result of increased traffic on local roadways, *e.g.* SR-126, due to the proposed Project and other developments in the Santa Clarita Valley, as identified in **Section 4.8**, Traffic, of this EIS/EIR. Cumulative traffic impacts are analyzed using a "plan" approach in **Subsection 6.5.8**. This cumulative noise impacts analysis uses the same "plan" approach because cumulative noise impacts relevant to this Project occur due to cumulative traffic impacts, discussed in detail below. (Significance Criteria 1, 3, 11, 12, 13.)

Because the proposed Project area is not located within an airport land use plan or in the vicinity of a private airstrip, no impacts would occur under Significance Criteria 5 and 6, and thus no cumulative analysis of those criteria is required by CEQA or NEPA. Non-traffic sources of construction and operational noise and vibration impacts are generally not cumulatively considerable, because they are localized in nature, particularly given the size and topography of the Project area and the relative distance between the proposed Project and other past, present and future projects. (Significance Criteria 2, 4, 7, 8.) Cumulative noise impacts might also occur in the vicinity of Entrada due to the interface of existing development with construction activities on Entrada. (Significance Criteria 1 and 3.) In addition, once Entrada is developed, such Entrada developed areas could be subject to cumulative noise impacts resulting from the existing adjacent development including Magic Mountain amusement park and the I-5 freeway. (Significance Criteria 1, 11 and 12.) The impacts of non-Project noise sources upon on-site residents are evaluated in **Section 4.9** of this EIS/EIR and do not contribute to an additional cumulative impact because the resulting noise impacts for Criteria 9 and 10 only occur to the proposed Project by definition under the criterion (Significance Criteria 9, 10.). Thus, the only potential cumulatively significant noise impacts would result under Noise Significance Criteria 1, 3, 11, 12, or 13.

As discussed in **Section 4.8** above, long-range traffic forecasts were produced using the SCVCTM. For Ventura County, a long-range subarea version of the VCTM was utilized.

As discussed in **Subsections 4.9.5** and **4.9.5.2.2**, a project's off-site noise impacts are considered significant if project activities result in: an increase of five dB(A) or greater, even if there is no change in land use compatibility classification (Significance Criterion 11); an increase of three dB(A) or greater, if there is a change in land use compatibility classification (Significance Criterion 12); or an increase in noise levels greater than one dB(A), where existing noise levels are already considered unacceptable under the State Land Use Compatibility Guidelines for uses in unincorporated Los Angeles County, and under city of Santa Clarita Guidelines for Noise and Land Use Compatibility for uses within the city of Santa Clarita (Significance Criterion 13). An impact that is significant under Criteria 11, 12, and/or 13, is

also considered to be significant under Criteria 1 and 3. Because of the aggregated nature of traffic noise impacts, these same significance criteria apply to cumulative impacts.

The noise levels that would be generated by cumulative traffic volumes adjacent to noise sensitive land uses are identified in **Table 6.0-49.** The classification items and cumulative CNEL increases noted in bold are areas which exceed thresholds of significance.

Table 6.0-49
Predicted Proposed Project Cumulative Roadway Noise Levels at Noise Sensitive Locations[1]

Roadway Segment (Land Use)	Noise Sensitive Land Use	Existing CNEL (2006)	Existing LU Compatibility Classification	Future Conditions CNEL	Future Conditions plus Proposed Project CNEL	Cumulative Increase CNEL[3]	Classification Change[4]	Project dB Contribution[5]
MCBEAN PARKWAY								
e/o I-5	California College of the Arts	67	CA	67	68	1	N	1
e/o Tournament Road	Single-Family Residential	69	CA	70*	71	2	Y	1
e/o Tournament Road	Church of Latter Day Saints	68	CA	70	70	2	Y	<1
s/o Valencia Boulevard	Single-Family Residential	70	NU	71	71	1	N	<1
s/o Valencia Boulevard	Multi-Family Residential	71	NU	72	72	1	N	<1
s/o Valencia Boulevard	Hospital	63	NA/CA	64	64	1	N	<1
n/o Newhall Ranch Road	Single-Family Residential	67	CA	68	68	1	N	<1
SR-126								
w/o Commerce Center Drive	Travel Village RV Park	71	**NU**	73	77	**6**	**Y**	**4**
w/o Potrero Valley Road	Ventura County (Agriculture)	72	NA/CA	73	73	1	N	<1
VALENCIA BOULEVARD								
e/o Tourney Road	Single-Family Residential	66	CA	68	68	2	N	<1
e/o Tourney Road	Multi-Family Residential	68	CA	70	70	2	Y	<1
w/o McBean Parkway	Multi-Family Residential	75	CU	76	76	1	N	<1
w/o Magic Mountain Parkway	Valencia Library	73	**NU**	74	75	**2**	N	1

Table 6.0-49
Predicted Proposed Project Cumulative Roadway Noise Levels at Noise Sensitive Locations[1]

Roadway Segment (Land Use)	Noise Sensitive Land Use	Existing CNEL (2006)	Existing LU Compatibility Classification	Future Conditions CNEL	Future Conditions plus Proposed Project CNEL	Cumulative Increase CNEL[3]	Classification Change[4]	Project dB Contribution[5]
NEWHALL RANCH ROAD								
w/o Hillsborough Way	Single-Family Residential	66	CA	69	69	3	N	<1
w/o Hillsborough Way	Park	68	**NA/NU**	71	71	**3**	N	<1
w/o Bouquet Canyon Road	Multi-Family Residential	68	CA	71	71	**3**	**Y**	<1
MAGIC MOUNTAIN PARKWAY								
w/o San Fernando Road	Multi-Family Residential	69	CA	75	75	**6**	**Y**	<1
ORCHARD VILLAGE DRIVE								
s/o McBean Parkway	Single-Family Residential	71	**NU**	76	77	**6**	**Y**	1
s/o McBean Parkway	Pinecrest School	69	CA	72	72	3	Y	<1
s/o Wiley Canyon Road	Single-Family Residential	72	**NU**	75	75	**3**	**Y**	<1
LYONS AVENUE								
e/o Wiley Canyon Road	Single-Family Residential	71	NU	72	72	1	N	<1
e/o Wiley Canyon Road	Elementary School	66	CA	66	67	1	N	1
e/o Orchard Village Drive	Church/School	75	NU	76	76	1	N	<1
SAN FERNANDO ROAD/BOUQUET CANYON ROAD								
s/o Placerita Canyon Road	Mixed Residential	77	**CU**	79	79	**2**	N	<1
ROCKWELL CANYON ROAD								
n/o McBean Parkway	Single-Family Residential	63	CA	67	67	4	N	<1

Table 6.0-49
Predicted Proposed Project Cumulative Roadway Noise Levels at Noise Sensitive Locations[1]

Roadway Segment (Land Use)	Noise Sensitive Land Use	Existing CNEL (2006)	Existing LU Compatibility Classification	Future Conditions CNEL	Future Conditions plus Proposed Project CNEL	Cumulative Increase CNEL[3]	Classification Change[4]	Project dB Contribution[5]
WILEY CANYON ROAD								
n/o Lyons Avenue	Single-Family Residential	70	**NU**	74	74	**4**	N	<1
n/o Lyons Avenue	Day Care Facility	73	**NU**	76	76	**3**	N	<1
e/o Tournament Road	Single-Family Residential	69	CA	74	74	**5**	**Y**	<1
THE OLD ROAD								
s/o Magic Mountain Parkway	Multi-Family Residential	63	NA/CA	65	65	2	N	<1
WESTRIDGE PARKWAY								
n/o Old Rock Road	Single-Family Residential	56[2]	NA/CA	56	62	**6**	N	**6**

Notes:

n/o = north of, e/o = east of, s/o = south of, w/o = west of, n/a = not available.

NA Land uses currently experience a normally acceptable noise level under the county's or the city's guidelines.

CA Land uses currently experience a conditionally acceptable noise level under the county's or the city's guidelines.

NU Land uses currently experience a normally unacceptable noise level under the county's or the city's guidelines.

CU Land uses currently experience a clearly unacceptable noise level under the county's or the city's guidelines.

1 All numbers are rounded to the nearest first decimal point.

2 This noise level is based upon noise monitoring performed by Impact Sciences, Inc. staff on April 30, 2007. Noise monitoring data are provided in **Appendix 4.9** of this EIS/EIR

3 Cumulative noise increase is calculated by subtracting Existing CNEL from Future Conditions plus Proposed Project CNEL, both pre-mitigation.

4 This column indicates with a "Y" or "N" whether there is a noise and land use compatibility classification change between existing conditions and cumulative plus proposed Project conditions.

5 Project noise contribution is calculated by subtracting Alternative 1 (No Action/No Project Alternative) CNEL from proposed Project CNEL.

Source: **Table 4.9-12**; **Figures 4.9-2** and **4.9-3**.

As shown in **Table 6.0-49** above, a significant Cumulative Criterion 11 noise impact would occur along the following roadway segments because adjacent noise-sensitive land uses would experience an increase of 5.0 dB(A) or more:

- SR-126 west of Commerce Center Drive;
- Magic Mountain Parkway west of San Fernando Road;
- Orchard Village Drive south of McBean Parkway;
- Wiley Canyon Road east of Tournament Road; and
- Westridge Parkway north of Old Rock Road.

Project incremental noise contribution at each of these locations would be one dB(A) or less, except at Travel Village RV Park, where the Project would contribute up to four dB(A), and at single-family residences along Westridge Parkway north of Old Rock Road, where the Project would contribute up to six dB(A). Implementation of Specific Plan Mitigation Measure 4.9-14 would reduce cumulative noise impacts on Travel Village RV Park (SR-126 west of Commerce Center Drive). Implementation of Specific Plan Mitigation Measure 4.9-6 would reduce cumulative noise impacts to residential uses on Westridge Parkway north of Old Rock Road, however, no feasible mitigation program exists to reduce cumulative noise impacts along the Westridge Parkway north of Old Rock Road or along the remainder of the roadway segments to less than significant. The Project's contribution to these noise impacts would be cumulatively considerable, and cumulative noise impacts would be significant even after mitigation.

A significant Cumulative Criterion 12 noise impact would occur along the following roadway segments because there would be a noise increase of three dB(A) or more with a corresponding change in land use compatibility classification:

- SR-126 west of Commerce Center Drive;
- Newhall Ranch Road west of Bouquet Canyon Road;
- Magic Mountain Parkway west of San Fernando Road;
- Orchard Village Drive south of McBean Parkway;
- Orchard Village Drive south of Wiley Canyon Road; and
- Wiley Canyon Road east of Tournament Road.

Project incremental noise contribution at each of these locations would be one dB(A) or less, except at Travel Village RV Park, where the Project would contribute up to four dB(A). Implementation of Specific Plan Mitigation Measure 4.9-14 would reduce cumulative noise impacts on Travel Village RV Park (SR-126 west of Commerce Center Drive) by requiring that once noise levels at Travel Village reach 70 dB(A) the applicant must construct a noise abatement barrier. No feasible mitigation program exists to reduce cumulative noise impacts along the remainder of the roadway segments to less than significant. The project's contribution to these noise impacts would be cumulatively considerable, and cumulative noise impacts would be significant even after mitigation.

A significant Cumulative Criterion 13 noise impact would occur along the following roadway segments because noise levels at these locations are already either normally or clearly unacceptable, and cumulative plus Project conditions would result in a one dB(A) or greater increase in noise levels:

- McBean Parkway south of Valencia Boulevard;
- SR-126 west of Commerce Center Drive;
- Valencia Boulevard west of McBean Parkway;
- Valencia Boulevard west of Magic Mountain Parkway;
- Orchard Village Drive south of McBean Parkway;
- Orchard Village Drive south of Wiley Canyon Road;
- Lyons Avenue east of Wiley Canyon Road;
- Lyons Avenue east of Orchard Village Drive;
- San Fernando Road/Bouquet Canyon Road south of Placerita Canyon Road; and
- Wiley Canyon Road north of Lyons Avenue; and

Project incremental noise contribution at each of these locations would be one dB(A) or less, with the exception of SR-126 west of Commerce Center Drive. Implementation of Specific Plan Mitigation Measure 4.9-14 would reduce cumulative noise impacts on Travel Village RV Park (SR-126 west of Commerce Center Drive). No feasible mitigation program exists to reduce cumulative noise impacts along the remainder of the roadway segments to less than significant. The Project's contribution to these noise impacts would be cumulatively considerable, and cumulative noise impacts would be significant even after mitigation.

Thus, there are significant cumulative noise impacts due to traffic noise, and the proposed Project makes a cumulatively considerable contribution to these impacts (Criteria 1, 3, 11, 12, 13).

6.5.9.3 Cumulative Noise Mitigation Measures

As discussed above, cumulative traffic from other (non-Project) development as well as the proposed Project will result in cumulative noise impacts along roadway segments. Implementation of Specific Plan Mitigation Measures 4.9-6 and 4.9-14 (See **Table 4.9-1** in **Section 4.9** of this EIS/EIR), and implementation of similar measures for the Entrada planning area, would reduce the proposed Project's incremental contributions to cumulatively significant noise impacts, but no feasible mitigation program exists to reduce cumulative noise impacts to a less-than-significant level (Criteria 1, 3, 11, 12, 13). Thus, cumulative noise impacts remain significant and unavoidable after mitigation.

6.5.9.4 Summary of Cumulative Noise Impacts and Mitigation

Table 6.0-50
Summary of Project Contribution to Cumulative Noise Impacts

Significance Criteria (See Table 6.0-48)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	SI	M	Yes	SP-4.9-6 and 4.9-14	Yes
	VCC	SI	M			
	Entrada	SI	M			
Criterion 2	NRSP	SI	M	No	NA	NA
	VCC	NS	NS			
	Entrada	SI	M			
Criterion 3	NRSP	SI	M	Yes	SP-4.9-6 and 4.9-14	Yes
	VCC	SI	M			
	Entrada	SI	M			
Criterion 4	NRSP	SI	SU	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 5	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 6	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 7	NRSP	SI	SU	No	NA	NA
	VCC	NS	NS			
	Entrada	SI	M			
Criterion 8	NRSP	SI	M	No	NA	NA
	VCC	NS	NS			
	Entrada	SI	M			

Table 6.0-50
Summary of Project Contribution to Cumulative Noise Impacts

Significance Criteria (See Table 6.0-48)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 9	NRSP	SI	M	No	None required	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 10	NRSP	SI	M	No	None required	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 11	NRSP	SI	M	Yes	SP-4.9-6 and 4.9-14	Yes
	VCC	SI	M			
	Entrada	SI	M			
Criterion 12	NRSP	SI	M	Yes	SP-4.9-6 and 4.9-14	Yes
	VCC	SI	M			
	Entrada	SI	M			
Criterion 13	NRSP	SI	M	Yes	SP-4.9-6 and 4.9-14	Yes
	VCC	SI	M			
	Entrada	SI	M			

Notes:

SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.10 Cultural Resources

6.5.10.1 Summary of Project Cultural Impacts

The following table summarizes the cultural resources impacts of the proposed Project, as discussed above in greater detail in **Section 4.10** of this EIS/EIR.

Table 6.0-51
Summary of Proposed Project Cultural Resources Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Cause a substantial adverse change in the significance of a historical resource as those terms are defined in state CEQA Guidelines section 15064.5.	None required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 2. Cause damage to a unique archaeological resource pursuant to CEQA Guidelines section 15064.5.	CR-1 CR-2 CR-3 CR-4 CR-5	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 3. Disturb any human remains, including those interred outside formal cemeteries.	CR-1 CR-2 CR-3 CR-4 CR-5	NRSP	SI	M
		VCC	NI	NI
		Entrada	NI	NI
Criterion 4. Have the potential to eliminate important examples of the major periods of California history or prehistory.	CR-1 CR-2 CR-3 CR-4 CR-5	NRSP	SI	M
		VCC	NI	NI
		Entrada	NI	NI
Criterion 5. Adversely affect a historic property by altering the characteristics that qualify the property for inclusion on the NRHP in a manner that would diminish the integrity of the property.	CR-1 CR-2 CR-3 CR-4 CR-5	NRSP	SI	M
		VCC	NI	NI
		Entrada	NI	NI

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.10-9**.

6.5.10.2 Cumulative Cultural Impacts

6.5.10.2.1 *Methodology for Assessing Cumulative Cultural Resources Impacts*

Cumulative cultural resources impacts were assessed using the List Method discussed in **Subsection 6.3.1**, above. The geographic scope of this analysis is set forth in **Subsection 6.4**, above.

6.5.10.2.2 *Discussion of Cumulative Cultural Resources Impacts*

NEPA and CEQA do not require analysis of cumulative impacts where the proposed Project itself does not result in any impacts. (40 C.F.R. § 1508.7; 14 Cal. Code Regs., tit. 14, § 15130, subd. (a)(1).) As discussed above in **Section 4.10**, there is no impact under cultural resources Criterion 1. Therefore, no analysis of cumulative impacts is required for Criterion 1. For Criteria 2 through 5, although cultural resources tend to be site-specific and are assessed on a site-by-site basis, as shown in **Table 6.0-52**, below, 4 to 8 of the cumulative projects or groups of projects have involved or would involve significant impacts to cultural resources. Therefore, the impact to cultural resources in the region is considered to be potentially cumulatively significant, and the proposed Project's contribution is considered to be cumulatively considerable prior to mitigation.

In areas of the project site where cultural resources are known to exist, impacts would be avoided or mitigated as described in **Section 4.10**. The proposed Project would facilitate build-out of County-approved developments on the Specific Plan and VCC planning areas, and an applied-for project in the Entrada planning area. Project-level EIRs, including site-specific cultural resources surveys, are being prepared for each phase of the Specific Plan and Entrada; in addition, an EIR was previously certified for the VCC site, which included a cultural resources analysis, and the County will require a subsequent EIR in conjunction with parcel map approval for the remaining undeveloped portion of VCC. (See **Subsection 4.10.1**.)

Table 6.0-52
Cumulative Projects with Related Impacts to Cultural Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-50)				
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	Ritter Ranch	M	SU	ND	ND	ND
2	Centennial	ND	ND	ND	ND	ND
3	Adams Canyon	ND	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND	ND
5	Legacy Village	NS	NS	ND	ND	ND
6	Tesoro Del Valle	NS	NS	ND	ND	ND
7	Tapia Ranch	NS	NS	ND	ND	ND
8	Whittaker Bermite/Porta Bella Project	M	M	ND	ND	ND
9	West Creek/West Hills Project	NS	NS	ND	ND	ND
10	Westridge	ND	ND	ND	ND	ND
11	North Valencia Specific Plan No. 1	ND	ND	ND	ND	ND
12	RiverPark	M	M	ND	M	ND

Table 6.0-52
Cumulative Projects with Related Impacts to Cultural Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-50)				
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
13	Natural River Management Plan	M	M	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	M	M	M	ND	ND
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	NS	NS	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	NS	NS	ND	NS	ND
	Consolidated City of Santa Clarita Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated Los Angeles County Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated Ventura County Project	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Santa Paula Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.10.3 Cumulative Cultural Mitigation Measures

Mitigation measures such as CR-4 and CR-5 can and should be included in the project-level analysis for Entrada. Mitigation similar to CR-1 to CR-5 could be adopted for other cumulative development projects to protect cultural resources. To the extent that other cumulative projects have caused or may cause cultural resource impacts, NEPA, CEQA, and Corps requirements, where applicable, mandate mitigation for significant cultural impacts. After application of this mitigation, the cumulative impacts would be less than significant. As discussed in **Subsection 4.10.7**, mitigation for cultural resources impacts was already adopted as part of the Specific Plan and VCC approvals. In addition, **Subsection 4.10.7.4** includes additional mitigation measures CR-1 to CR-5 for the proposed Project to minimize potential impacts to cultural resources. With adoption of these measures, the proposed Project's contribution to the cumulative impact is rendered less than cumulatively considerable, and cumulative cultural resources impacts are less than significant.

6.5.10.4 Summary of Cumulative Cultural Impacts and Mitigation

Table 6.0-53
Summary of Project Contribution to Cumulative Cultural Resource Impacts

Significance Criteria (See Table 6.0-51)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 2	NRSP	SI	M	Yes	CR-1 to CR-5	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 3	NRSP	SI	M	Yes	CR-1 to CR-5	No
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 4	NRSP	SI	M	Yes	CR-1 to CR-5	No
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 5	NRSP	SI	M	Yes	CR-1 to CR-5	No
	VCC	NI	NI			
	Entrada	NI	NI			

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

6.5.11 Paleontological Resources

6.5.11.1 Summary of Project Paleontological Impacts

The following table summarizes the paleontological resource impacts of the proposed Project, as discussed in greater detail in **Section 4.11** of this EIS/EIR.

Table 6.0-54
Summary of Proposed Project Paleontological Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Directly or indirectly destroy a unique paleontological resource or site.	PR-1 PR-2	NRSP	SI	M
	PR-3 PR-4 PR-5	VCC	SI	M
	PR-6 PR-7	Entrada	SI	M

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required

Source: **Table 4.11-9**.

6.5.11.2 Cumulative Paleontological Impacts

6.5.11.2.1 *Methodology for Assessing Cumulative Paleontological Resources Impacts*

Cumulative paleontological resources impacts were assessed using the List Method discussed in **Subsection 6.3.1**, above. The geographic scope of this analysis is set forth in **Subsection 6.4**, above.

6.5.11.2.2 *Discussion of Cumulative Paleontological Impacts*

Although paleontological resources tend to be site-specific and are assessed on a site-by-site basis (See Cal. Code Regs., tit. 14, § 15130, Subd. (B)(2)), 7 of the cumulative projects, or groups of projects, have involved or would involve significant or potentially significant impacts to paleontological resources prior to mitigation. Therefore, the impact to paleontological resources in the region is considered to be potentially cumulatively significant.

In areas of the Project site where paleontological resources are known to exist, impacts would be avoided or mitigated as described in **Section 4.11**. The proposed Project would facilitate build-out of County-approved developments on the Specific Plan and VCC planning areas, and an applied-for project in the Entrada planning area. In addition, information pertaining to the existing conditions as they relate to paleontological resources of the Newhall Ranch Specific Plan area is presented in the Newhall Ranch Specific Plan Program EIR, which is summarized above in **Subsection 4.11.1.1**. The Specific Plan area

was divided into 24 geographic zones that were investigated during geological surveys conducted by R.T. Frankian & Associates in 1994. These surveys produced both current land use and soil descriptions. In addition, RMW Paleo completed a paleontological study for the Newhall Ranch Specific Plan area in October 1994. This information, in conjunction with the information gathered on rock formations, surficial deposits, seismic potential, and groundwater, assisted in the determination of the impacts of the proposed Project on paleontological resources. Under mitigation measure PR-4, because fossils were discovered during the course of the 1994 field survey, pre-grading salvage is required in several areas as presented in the 1994 Paleontological Technical Report prepared by RMW. Project-level EIRs, including site-specific paleontological resources surveys, are being prepared for each phase of the Specific Plan and Entrada, and an EIR was previously certified for the VCC site, which included a paleontological resources analysis, and the County will require a subsequent EIR in conjunction with parcel map approval for the remaining undeveloped portion of VCC. (See **Subsection 4.11.1**.) Based on a review of available information regarding the identified cumulative projects, the incremental effects of the proposed Project are significant prior to mitigation when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative paleontological impacts are significant prior to mitigation, and the proposed Project's incremental contribution to cumulative impacts is cumulatively considerable (Criterion 1).

Table 6.0-55
Cumulative Projects with Related Impacts to Paleontological Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-53)
		Criterion 1
1	Ritter Ranch	M
2	Centennial	ND
3	Adams Canyon	ND
4	Valencia Industrial Center	ND
5	Legacy Village	NS
6	Tesoro Del Valle	NS
7	Tapia Ranch	NS
8	Whittaker Bermite/Porta Bella Project	ND
9	West Creek/West Hills Project	NS
10	Westridge	ND
11	North Valencia Specific Plan No. 1	ND
12	RiverPark	M
13	Natural River Management Plan	ND
14	Recycled Water Master Plan (CLWA)	M
15	Santa Clara River Enhancement and Management Plan	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND
17	Chiquita Canyon Landfill Expansion	NS
	Consolidated City of Santa Clarita Projects	Likely
	Consolidated Los Angeles County Projects	Likely

Table 6.0-55
Cumulative Projects with Related Impacts to Paleontological Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-53)
		Criterion 1
	Consolidated Ventura County Projects	Unlikely
	Consolidated City of Fillmore Projects	Unlikely
	Consolidated City of Santa Paula Projects	Unlikely
	Summary Corps (section 404) Permits	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely
	Summary Federal Take Authorizations	Unlikely
	Summary CDFG Take Authorizations	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.11.3 Cumulative Paleontological Mitigation Measures

Mitigation measures similar to PR-1 through PR-7 will be included in the project-level analysis for the Specific Plan. Similar measures can and should be applied to Entrada and VCC as appropriate. Mitigation similar to PR-1 to PR-7 could be adopted for other cumulative development projects to protect paleontological resources. To the extent that other cumulative projects have caused or may cause paleontological resource impacts, NEPA, CEQA, and Corps requirements, where applicable, mandate mitigation for significant paleontological impacts. After application of this mitigation, the cumulative impacts should be less than significant, and with application of Mitigation Measures PR-1 through PR-7, the proposed Project's contribution will be less than cumulatively considerable, and cumulative paleontological impacts will be less than significant.

6.5.11.4 Summary of Cumulative Paleontological Impacts and Mitigation

Table 6.0-56
Summary of Project Contribution to Cumulative Paleontological Resource Impacts

Significance Criteria (See Table 6.0-54)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
	NRSP	SI	M			
Criterion 1	VCC	SI	M	Yes	PR-1 to PR-7	No
	Entrada	SI	M			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.12 Agricultural Resources

6.5.12.1 Summary of Project Agricultural Impacts

The following table summarizes the agricultural resources impacts of the proposed Project, as discussed above in greater detail in **Section 4.12** of this EIS/EIR.

Table 6.0-57
Summary of Proposed Project Agricultural Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program, to non-agricultural use.	AG-1 AG-2	NRSP	SI	SU
		VCC	SI	SU
		Entrada	NI	NI
Criterion 2. Project would conflict with existing zoning for agricultural use or a Williamson Act contract.	No feasible measures available	NRSP	NI	NI
		VCC	NI	NI
		Entrada	SI	SU
Criterion 3. Project would involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use.	No additional measures required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
Source: **Table 4.12-16**.

6.5.12.2 Cumulative Agricultural Impacts

6.5.12.2.1 *Methodology for Assessing Agricultural Resources Impacts*

Cumulative agricultural resources impacts were assessed using the Plan Method discussed in **Subsection 6.3.2**, above. The geographic scope of this analysis is set forth in **Subsection 6.4**, above.

6.5.12.2.2 *Discussion of Cumulative Agricultural Resources Impacts*

Conversion of agricultural land to urban uses has occurred in Los Angeles and Ventura Counties. The Farmland Mapping and Monitoring Program of the California Department of Conservation has been cataloguing important farmland in California since 1984. Important farmland category definitions are found in **Subsection 4.12.3.1.2**. The following table shows the net change in acreages in those categories between 1984 and 2006 in Los Angeles and Ventura Counties.

Table 6.0-58
Los Angeles and Ventura County Farmland Acreage Changes by Category

Category	Los Angeles County				Ventura County			
	2006 Acreage	1984-2006 Net Acreage Change	Average Annual Acreage Change	2004-2006 Net Acreage Change	2006 Acreage	1984-2006 Net Acreage Change	Average Annual Acreage Change	2004-2006 Net Acreage Change
Prime Farmland	32,610	-7,449	-339	-608	45,430	-11,708	-532	-1,762
Farmland of Statewide Importance	1,024	7	0	-5	34,231	-5,686	-258	-747
Unique Farmland	1,024	598	27	-95	28,581	5,603	255	-493
Subtotal	**34,658**	**-6,844**	**-312**	**-708**	**108,242**	**-11,791**	**-535**	**-3,002**
Farmland of Local Importance	8,973	-10,402	-473	289	16,717	4,362	198	-99
Grazing Land	228,730	-1,033	-47	-96	199,004	-13,775	-626	917
Total	**272,361**	**-18,279**	**-831**	**-515**	**323,963**	**-21,204**	**-963**	**-2,184**

Note: These acreage changes include conversions from one category of farmland to another, and also reflect refinements to acreage calculations based on the use of digital soil survey data and improved digital imagery over time.

Sources: California Department of Conservation, 1984-2006 Land Use Summary: Los Angeles County, Ventura County; California Department of Conservation, 2004-2006 Farmland Conversion Report.

As shown in **Table 6.0-58**, between 2004-2006, there was a net decrease of about 700 acres of prime farmland, unique farmland, and farmland of statewide importance in Los Angeles County, and an approximately 3,000-acre net decrease of these farmland types in Ventura County. However, from 1984 to 2006, Los Angeles County converted 6,844 acres, and Ventura County converted 11,791 acres, of prime, unique, or statewide importance farmlands. In addition, according to Los Angeles County annual agricultural crop reports for the five years between 2001 and 2005, approximately 539 acres of cultivated land have been converted to other uses, which represents a 2.23 percent decrease in agricultural lands during that five-year period. (http://acwm.co.la.ca.us/scripts/publications.htm.)

The Los Angeles County Board of Supervisors determined that implementation of the Specific Plan would result in significant unavoidable project and cumulative impacts on agricultural resources (conversion of prime/unique agricultural land), and that such impacts could not feasibly be mitigated to less-than-significant levels. (Los Angeles County Board of Supervisors on May 27, 2003.) In addition, approval of the proposed Project by the lead agencies would not change the County's long-standing trend of converting agricultural land resources to urban uses to accommodate growth in the region.

Table 6.0-58, above shows the conversion of agricultural land in Los Angeles and Ventura counties since the Department of Conservation began tracking such conversion in 1984, and it is likely that cumulative urban development pressures exist, and will continue to exist, in the region with or without implementation of the proposed Project.

To determine more specific impacts to farmlands in the vicinity of the Project, the following analysis of cumulative effects to farmlands includes all portions of the Santa Clara River watershed within Los Angeles and Ventura Counties, and totals 1,034,666 acres. Land use plans and data from adopted zoning

ordinances (where land use plans were not available) from eight jurisdictions, including Los Angeles County, Ventura County, and six incorporated cities, were overlain spatially onto farmland maps provided by the state's Farmland Mapping and Monitoring Program (FMMP). Areas containing prime, statewide important, or unique farmland (hereinafter "important farmland") were intersected with the land use plans using GIS software, and areas where planned development areas *(i.e.,* areas with residential, commercial or industrial land use designations/zoning) overlapped these farmlands were calculated as impacts. For the purposes of calculating the impacts to important farmlands caused by build out of the areas planned/zoned for development, the following assumptions were made:

- Where important farmland overlapped parcels designated as open space or agriculture, no impact to the existing agricultural resource would occur.

- Where important farmland overlapped any other land use designation or zoning category, the existing farmland would be converted to non-agricultural use.

According to the California State FMMP 2006 GIS[18] data, the existing acreages of important farmland within the area evaluated total 40,189 acres. The vast majority of this acreage (38,206 acres, or approximately 95% of the total) is located within Ventura County, with only a small percentage (1,992 acres, or approximately five percent of the total) located in Los Angeles County. In both counties, most of the mapped important farmlands are located on unincorporated County lands, with only a relatively small proportion occurring within the boundaries of incorporated cities. Existing acreages by farmland type and jurisdiction are presented in **Table 6.0-59**, below.

Build out of the land uses identified in the land use plans and zoning ordinances of the eight jurisdictions evaluated would convert 2,282 acres (approximately ten percent) of Prime Farmland, 279 acres (approximately four percent) of Farmland of Statewide Importance, and 605 acres (approximately six percent) of Unique Farmland to non-agricultural land uses within the study area. Acreages that would be converted are presented by farmland type and by jurisdiction in **Table 6.0-59** below. In total these conversions would affect 3,157 acres of important farmland, or approximately eight percent of important farmlands within the study area. Of the mapped important farmlands to be converted, 1,654 acres (approximately 52 percent) are located within Los Angeles County, and the remaining 1,512 acres (approximately 48 percent) are located in Ventura County. Thus, although lands within Los Angeles County comprise only five percent of the important farmlands within the study area, they account for more than half of the acreage that would be converted to non-agricultural uses through build out of planned urban development. This fact is indicative of the differing economies between these two counties; Los Angeles County is heavily urbanized and has seen a steady decline in agricultural uses for the past several decades, while Ventura County still contains substantial productive agricultural areas and has enacted measures, such as the SOAR ordinance, to protect such areas from conversion to urban uses.

[18] GIS Data Downloaded from ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/2006/.

Table 6.0-59
Existing Mapped Important Farmlands by Type Within the Santa Clara River Hydrologic Unit

Jurisdiction	Prime Farmland (Acres)	Farmland of Statewide Importance (Acres)	Unique Farmland (Acres)	Total Important Farmland (Acres)
Unincorporated Los Angeles County	1,264	187	410	1,861
City of Palmdale	0	0	0	0
City of Santa Clarita	129	0	2	131
Los Angeles County Subtotal	**1,393**	**187**	**412**	**1,992**
Unincorporated Ventura County	19,892	6,360	9,541	35,793
City of Santa Paula	130	1	90	221
City of Fillmore	298	43	19	360
City of Oxnard	189	12	2	203
City of Ventura	882	613	135	1,630
Ventura County Subtotal	**21,391**	**7,029**	**9,787**	**38,207**
Total Important Farmland within Santa Clara River Hydrologic Unit	**22,784**	**7,216**	**10,199**	**40,199**

Source: California State Farmland Mapping and Monitoring Program (FMMP) 2006 GIS data and **Appendix 6.0**.

Table 6.0-60
Anticipated Conversion of Important Farmland to Non-Agricultural Uses in the Study Area

Jurisdiction	Impacts to Prime Farmland (Acres)	Impacts to Farmland of Statewide Importance (Acres)	Impacts to Unique Farmland (Acres)	Total Impacts to Important Farmlands (Acres)
Unincorporated Los Angeles County[1]	1,138	106	343	1,587
City of Palmdale	0	0	0	0
City of Santa Clarita	65	0	2	67
Los Angeles County Subtotal	**1,203**	**106**	**345**	**1,654**
Unincorporated Ventura County	75	24	91	190
City of Santa Paula	89	1	90	180
City of Fillmore	281	39	12	332
City of Oxnard	189	12	2	203
City of Ventura	444	98	65	607
Ventura County Subtotal	**1,078**	**174**	**260**	**1,512**
Total Important Farmland within Santa Clara River Hydrologic Unit	**2,281**	**280**	**605**	**3,166**

Notes:
[1] Includes proposed Project.

Source: **Appendix 6.0**.

Given that implementation of the proposed Project would directly facilitate the conversion of approximately 140 acres of prime farmland, unique farmland, and farmland of statewide importance to nonagricultural uses, and would indirectly facilitate the conversion of an additional 793 acres of prime, unique, and farmland of statewide importance to nonagricultural uses, the proposed Project's contribution to the conversion of such land in the region is considered cumulatively considerable under Significance Criterion 1, and impacts related to conversion of such lands is cumulatively significant.

Regarding Criterion 2, potential cumulative agricultural impacts related to conflicts with Williamson Act contracts do not exist here. A zoning conflict issue does exist at Entrada related to the establishment of a spineflower preserve, which would preclude future agricultural operations in an area with an agricultural zoning designation. However, potential cumulative impacts related to conflicts with existing zoning are less than significant because such conflicts are addressed on a site-specific basis for other projects by the appropriate land use planning agencies. As such, potential zoning inconsistency impacts do not have the potential to result in significant cumulative environmental effects.

NEPA and CEQA do not require analysis of potential cumulative impacts where the proposed Project itself does not result in any impacts. (40 C.F.R. § 1508.7; Cal. Code Regs., tit., 14, § 15130, subd. (a)(1).) Therefore, no analysis of cumulative impacts is required for Criterion 3.

6.5.12.3 Cumulative Agricultural Mitigation Measures

Given that implementation of the proposed Project would directly and indirectly facilitate the conversion of prime farmland, unique farmland, and farmland of statewide importance to nonagricultural uses, the proposed Project's contribution to the conversion of such land in the region is considered cumulatively considerable. **Section 4.12** proposes mitigation measures AG-1 and AG-2 for the mitigation of the proposed Project's impacts with respect to the conversion of these important farmlands. Those mitigation measures are as follows:

AG-1 Newhall Land shall enter into a MOU with the CDFG to develop a phasing plan for the discontinuation of existing agricultural operations located throughout the Specific Plan site.

AG-2 Newhall Land shall dedicate a permanent agricultural conservation easement for 138 acres of agricultural land located in the Salt Creek conservation area and on adjoining agricultural lands.

Section 4.12 concludes, however, that the impacts of the proposed Project with respect to conversion of prime farmland, unique farmland, and farmland of statewide importance would remain significant and unavoidable.

Mitigation measures AG-1 and AG-2 would also help to reduce the proposed Project's contribution to cumulative impacts related to the loss of important farmlands. Other projects in the vicinity could incorporate a mitigation measure similar to AG-2 to reduce their incremental contributions to these impacts. However, these cumulative impacts related to conversion of agricultural lands would remain significant and unavoidable.

6.5.12.4 Summary of Cumulative Agricultural Impacts and Mitigation

Table 6.0-61
Summary of Project Contribution to Cumulative Agricultural Resources Impacts

Significance Criteria (See Table 6.0-57)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP VCC Entrada	NI NI NI	NI NI NI	Yes	AG-1 AG-2	Yes
Criterion 2	NRSP VCC Entrada	NI NI NI	NI NI NI	No	NA	NA
Criterion 3	NRSP VCC Entrada	NI NI NI	NI NI NI	NA	NA	NA

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.13 Geology and Geologic Hazards

6.5.13.1 Summary of Project Geologic Impacts

The following table summarizes the geology and geologic hazards impacts of the proposed Project, as discussed above in greater detail in **Section 4.13** of this EIS/EIR.

Table 6.0-62
Summary of Proposed Project Geologic Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1a. Exposure of people or structures to substantial adverse effects involving rupture of a known earthquake fault.	Appropriate Specific Plan Mitigation Measures. No additional measures required.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 1b. Exposure of people or structures to potential substantial adverse effects involving strong seismic ground shaking.	Appropriate Specific Plan Mitigation Measures. No additional measures required.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 1c. Exposure of people or structures to potential substantial adverse effects involving landslides.	Appropriate Specific Plan Mitigation Measures. No additional measures required.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. Substantial soil erosion or the loss of topsoil.	Appropriate Specific Plan Mitigation Measures. No additional measures required.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criteria 3-4. Project location on a geologic unit or soil that is unstable or expansive, or that would become unstable as a result of the project, and potentially result in, lateral spreading, subsidence, liquefaction, or collapse.	Appropriate Specific Plan Mitigation Measures. No additional measures required.	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 6. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	None required.	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 7. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use map.	None required.	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required

Source: **Table 4.13-4**.

6.5.13.2 Cumulative Geologic Impacts

6.5.13.2.1 *Methodology for Assessing Cumulative Geologic Resources Impacts*

Cumulative geologic resources impacts were assessed using the List Method discussed in **Subsection 6.3.1**, above. The geographic scope of this analysis is set forth in **Subsection 6.4**, above.

6.5.13.2.2 *Discussion of Cumulative Geologic Resources Impacts*

As shown in **Table 6.0-63**, below, individual cumulative projects have the potential to result in significant impacts related to geology and geologic hazards under criteria 1 through 5. Geologic hazard impacts, such as fault rupture, ground shaking, landslides, lateral spreading, subsidence, liquefaction, and slope stability tend to be location specific rather than cumulative in regard to project-related effects. Therefore, impacts under criteria 1, 3, and 4 would not be cumulatively significant. Individual development projects are required to adopt site development and construction standards that are intended to minimize the effects of seismic and other geologic conditions that affect a project region. Because development projects must be consistent with Los Angeles County and Ventura County requirements and the California Building Code as they pertain to protection against known geologic hazards, the geologic hazard impacts of cumulative development are considered less than significant, and the proposed Project does not result in a cumulatively considerable contribution to such impacts.

Regarding Criterion 2, as shown in **Table 6.0-63**, below, 10 cumulative projects or groups of projects would result in significant or potentially significant erosion-related impacts prior to mitigation, which combined effect has the potential to result in cumulative impacts to regional resources, such as the Santa Clara River. Prior to mitigation, the proposed Project would result in a cumulatively considerable contribution to significant cumulative erosion impacts due to the size of the proposed development of the Specific Plan, VCC, and Entrada planning areas, which would be mitigated by implementation of the applicable mitigation measures (see **Section 4.13** above for further details).

NEPA and CEQA do not require analysis of potential cumulative impacts where the proposed Project itself does not result in any impacts. (40 C.F.R. § 1508.7; Cal. Code. Regs., tit. 14, § 15130, subd. (a)(1).) Therefore, no analysis of cumulative impacts is required for geologic criteria 6 and 7.

6.5.13.3 Cumulative Geologic Mitigation Measures

As discussed above, significant cumulative erosion-related impacts would occur under Criterion 2. However, the proposed Project and all cumulative projects in the vicinity would be required to comply with NPDES and other regulatory requirements set forth in **Subsection 4.13**. Such compliance ensures that the proposed Project's erosion-related impacts are reduced to a less than cumulatively considerable level, and thus, that any cumulative impacts would be less than significant, after mitigation.

Table 6.0-63
Cumulative Projects with Related Impacts to Geology and Geologic Hazards

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-62)						
		Criterion 1a	Criterion 1b	Criterion 1c	Criterion 2	Criteria 3-4	Criterion 6	Criterion 7
1	Ritter Ranch	SU	SU	M	M	M	ND	ND
2	Centennial	ND	ND	ND	ND	ND	ND	ND
3	Adams Canyon	ND	ND	ND	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND	ND	ND	ND
5	Legacy Village	NS	PS	PS	PS	PS	PS	NS
6	Tesoro Del Valle	PS	PS	PS	M	PS	M	M
7	Tapia Ranch	PS	PS	PS	PS	PS	NS	NS
8	Whittaker Bermite/Porta Bella Project	M	M	M	ND	M	ND	ND
9	West Creek/West Hills Project	M	M	M	ND	ND	ND	ND
10	Westridge	M	M	M	ND	ND	ND	ND
11	North Valencia Specific Plan No. 1	M	ND	ND	ND	ND	ND	ND
12	RiverPark	ND	ND	ND	ND	M	ND	ND
13	Natural River Management Plan	ND	ND	ND	ND	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	M	M	M	M	M	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	M	ND	M	M	ND	ND
17	Chiquita Canyon Landfill Expansion	PS	PS	PS	ND	PS	NS	NS
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Table 6.0-63
Cumulative Projects with Related Impacts to Geology and Geologic Hazards

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-62)						
		Criterion 1a	Criterion 1b	Criterion 1c	Criterion 2	Criteria 3-4	Criterion 6	Criterion 7
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.13.4 Summary of Cumulative Geologic Impacts and Mitigation

Table 6.0-64
Summary of Project Contribution to Cumulative Geology and Geologic Hazards Impacts

Significance Criteria (See Table 6.0-61)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1a	NRSP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 1b	NRSP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 1c	NRSP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 2	NRSP	SI	M	Yes	NPDES compliance	No
	VCC	SI	M			
	Entrada	SI	M			
Criteria 3-4	NRSP	SI	M	No	NA	NA
	VCC	SI	M			
	Entrada	SI	M			
Criterion 6	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 7	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.14 Land Use

6.5.14.1 Summary of Project Land Use Impacts

The following table summarizes the land use impacts of the proposed Project, as discussed in greater detail in **Section 4.14** of this EIS/EIR.

Table 6.0-65
Summary of Proposed Project Land Use Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would physically divide an established community.	None Required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 2. Project would conflict with any applicable land use plan, policy, or regulation, *etc*. including zoning	None Feasible	NRSP	NI	NI
		VCC	NI	NI
		Entrada	SI	SU
Criterion 3. Project would conflict with any applicable habitat conservation plan or natural community conservation plan.	None Required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.14-9**.

6.5.14.2 Cumulative Land Use Impacts

6.5.14.2.1 *Methodology for Assessing Land Use Impacts*

Cumulative land use impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.14.2.2 *Discussion of Cumulative Land Use Impacts*

NEPA and CEQA do not require analysis of potential cumulative impacts where the proposed Project itself does not result in any impacts. (40 C.F.R. § 1508.7; Cal. Code Regs., tit. 14, § 15130, subd. (a)(1).) Therefore, no analysis of cumulative impacts is required for land-use criteria 1 and 3. Criterion 2 as it applies to Entrada is described below.

The establishment of a spineflower preserve on the Entrada planning area would conflict with the site's agricultural zoning. This impact would continue until Los Angeles County approves a zone change that allows the creation of open space preserves. This impact is considered to be significant and unavoidable because there is no feasible mitigation that can be implemented by the Project applicant or the state and

federal lead agencies to eliminate the zoning conflict. However, potential cumulative impacts related to conflicts with existing zoning are less than significant because such conflicts are addressed on a site-specific basis for other projects by the appropriate land use planning agencies. As such, potential zoning inconsistency impacts do not have the potential to result in significant cumulative environmental effects. Other projects in the area may also require zone changes or conditional use permits to mitigate conflicts with applicable land use regulations. However, the proposed Project does not result in a cumulatively considerable contribution to a significant cumulative land use impact.

Table 6.0-66
Cumulative Projects with Related Impacts to Land Use

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-65)		
		Criterion 1	Criterion 2	Criterion 3
1	Ritter Ranch	ND	M	ND
2	Centennial	ND	ND	ND
3	Adams Canyon	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND
5	Legacy Village	NS	PS	ND
6	Tesoro Del Valle	NS	PS	ND
7	Tapia Ranch	NS	PS	ND
8	Whittaker Bermite/Porta Bella Project	ND	NS	ND
9	West Creek/West Hills Project	ND	ND	ND
10	Westridge	ND	ND	ND
11	North Valencia Specific Plan No. 1	ND	ND	ND
12	RiverPark	ND	NS	ND
13	Natural River Management Plan	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	NS	NS	M
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	NS	NS	ND
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely

Notes:
NA = Not applicable
ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document
NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and source documents for that table.

6.5.14.3 Cumulative Land Use Mitigation Measures

There are no cumulatively significant land use impacts; therefore, no cumulative mitigation is required for land use impacts.

6.5.14.4 Summary of Cumulative Land Use Impacts and Mitigation

Table 6.0-67
Summary of Project Contribution to Cumulative Land Use Impacts

Significance Criteria (See Table 6.0-65)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	NS	NS			
Criterion 2	NRSP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	SI	SU			
Criterion 3	NRSP	NS	NS	No	NA	NA
	VCC	NS	NS			
	Entrada	NS	NS			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.15 Visual Resources

6.5.15.1 Summary of Project Visual Impacts

The following table summarizes the visual resources impacts of the proposed Project, as discussed in greater detail in **Section 4.15** of this EIS/EIR.

Table 6.0-68
Summary of Proposed Project Visual Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Have a substantial adverse effect on a scenic vista.	SP-4.7.1 and 2, SP-5.0-33 and 34, VR-1, VR-2	NRSP	SI	SU
		VCC	NS	NS
		Entrada	SI	SU
Criterion 2. Substantially degrades the existing visual character or quality of the site and its surroundings.	SP-4.7.1 and 2, SP-5.0-33 and 34, VR-1, VR-2	NRSP	SI	SU
		VCC	NS	NS
		Entrada	SI	SU
Criterion 3. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	SP-4.7.1 and SP-5.0-33	NRSP	SI	SU
		VCC	NS	NS
		Entrada	SI	SU

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.15-3**.

6.5.15.2 Cumulative Visual Impacts

6.5.15.2.1 *Methodology for Assessing Cumulative Visual Resources Impacts*

Cumulative visual resources impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.15.2.2 *Discussion of Cumulative Visual Resources Impacts*

The Santa Clarita Valley consists of a mixture of undeveloped and developed landscapes. It is a rapidly growing region that has experienced significant changes in land use over the past 10 years, with the continued expansion of urban land uses. The Valley has been transformed from a landscape dominated by croplands with undeveloped hills, to a complex urban landscape with open space. By facilitating build-out of the County-approved Specific Plan and the VCC and Entrada planning areas, implementation of the proposed Project would indirectly contribute to a general trend towards urbanization that is occurring in the Santa Clarita Valley. This trend is changing the visual character of the region from an agricultural open space area or urban fringe area to an urban setting. As shown in **Table 6.0-69**, below, 12 projects (or groups of projects) would have significant or potentially significant impacts under all three Criteria prior to mitigation, and 17 projects (or groups of projects) would have significant or potentially significant impacts under both Criteria 1 and 2 prior to mitigation. Most of those projects, however, are significant distances from the proposed Project site (*e.g.* Ritter Ranch, Centennial, Adams Canyon), and thus, are not within the same viewshed as the proposed Project and would not contribute to cumulative

visual impacts. However, Legacy Village, the NRMP, and the Chiquita Canyon landfill expansion are in the same viewsheds as the proposed Project, and thus, the cumulative visual impacts from those three projects in conjunction with the proposed Project would be cumulatively significant because they contribute to: adverse effects on the same scenic vistas, degradation of existing visual character, and additional sources of light or glare that adversely affect views, and the proposed Project is considered to make a cumulatively considerable contribution to significant cumulative visual impacts (Criteria 1 through 3).

Table 6.0-69
Cumulative Projects with Related Impacts to Visual Resources

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-68)		
		Criterion 1	Criterion 2	Criterion 3
1	Ritter Ranch	SU	SU	M
2	Centennial	ND	ND	ND
3	Adams Canyon	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND
5	Legacy Village	PS	PS	PS
6	Tesoro Del Valle	PS	PS	NS
7	Tapia Ranch	PS	PS	PS
8	Whittaker Bermite/Porta Bella Project	SU	SU	M
9	West Creek/West Hills Project	SU	SU	ND
10	Westridge	SU	SU	SU
11	North Valencia Specific Plan No. 1	SU	SU	SU
12	RiverPark	SU	SU	SU
13	Natural River Management Plan	SU	SU	ND
14	Recycled Water Master Plan (CLWA)	SU	SU	SU
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	M	M	NS
17	Chiquita Canyon Landfill Expansion	PS	PS	NS
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely
	Summary Corps (404) Permits	Unlikely	Unlikely	Unlikely
	Summary of CDFG (1600) Permits	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely

Notes:
NA = Not applicable
ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document
NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and source documents for that table.

6.5.15.3 Cumulative Visual Mitigation Measures

Because visual impacts occur on a project-specific basis, no mitigation measures could feasibly reduce cumulative visual impacts outside the proposed Project area. As discussed in **Subsection 4.15.6**, mitigation for visual impacts was included in the County's approval of the Specific Plan and VCC EIRs, and an additional measure (**VR-1**) was proposed in this EIS/EIR. Other cumulative projects could implement similar mitigation; however, cumulative visual impacts would remain significant and unavoidable and the proposed Project's contribution would remain cumulatively considerable.

6.5.15.4 Summary of Cumulative Visual Impacts and Mitigation

Table 6.0-70
Summary of Project Contribution to Cumulative Visual Resources Impacts

Significance Criteria (See Table 6.0-68)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	SI	SU	Yes	SP-4.7.1 and 2, SP-5.0-33 and 34, VR-1, VR-2	Yes
	VCC	NS	NS			
	Entrada	SI	SU			
Criterion 2	NRSP	SI	SU	Yes	SP-4.7.1 and 2, SP-5.0-33 and 34, VR-1, VR-2	Yes
	VCC	NS	NS			
	Entrada	SI	SU			
Criterion 3	NRSP	SI	SU	Yes	SP-4.7.1 and SP-5.0-33	Yes
	VCC	NS	NS			
	Entrada	SI	SU			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.16 Parks, Recreation, and Trails

6.5.16.1 Summary of Project Parks and Recreation Impacts

The following table summarizes the parks, recreation and trails impacts of the proposed Project, as discussed above in greater detail in **Section 4.16** of this EIS/EIR.

Table 6.0-71
Summary of Proposed Project Parks and Recreation Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would increase the use of existing neighborhood and regional parks or other recreational facilities to the extent that substantial physical deterioration would occur or be accelerated.	None required.	NRSP	NS	NS
		VCC	NI	NI
		Entrada	NS	NS
Criterion 2. Project includes recreational facilities or would require the construction or expansion of facilities that might have an adverse physical effect on the environment.	None required.	NRSP	NS	NS
		VCC	NI	NI
		Entrada	NS	NS

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required

Source: **Table 4.16-7**.

6.5.16.2 Cumulative Parks and Recreation Impacts

6.5.16.2.1 *Methodology for Assessing Cumulative Parks and Recreation Impacts*

Cumulative parks and recreation impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.16.2.2 *Discussion of Cumulative Parks and Recreation Impacts*

The proposed Project would not contribute to cumulative recreational facility impacts because it would dedicate parkland that substantially exceeds what is required by the County pursuant to the Quimby Act. Additional recreation facilities would include trails consistent with the County's objectives, and dedications of the High Country and River Corridor SMAs to be preserved as Open Areas in perpetuity. (See **Subsection 4.16.6.2.2**.) Thus, the impacts of the proposed Project on cumulative parks and recreation resources would not be cumulatively considerable. The potential impact to off-site parks and recreational facilities is described in **Subsection 4.16.6.2.1**. As discussed, build-out of the Specific Plan would provide adequate parks for the future land uses on site under the current regulatory requirements. Given that adequate parkland will be provided on-site, it is not expected that existing off-site parks and recreational facilities would experience significant physical deterioration with Project implementation, or that the construction of new park facilities is needed to serve the future residents of the Specific Plan site. Therefore, under Significance Criteria 1 and 2, impacts are considered to not be cumulatively considerable, and no cumulatively significant impacts to parks and recreational facilities exist.

Table 6.0-72
Cumulative Projects with Related Impacts to Parks, Recreation, and Trails

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-71)	
		Criterion 1	Criterion 2
1	Ritter Ranch	M	ND
2	Centennial	ND	ND
3	Adams Canyon	ND	ND
4	Valencia Industrial Center	ND	ND
5	Legacy Village	PS	PS
6	Tesoro Del Valle	NS	NS
7	Tapia Ranch	PS	PS
8	Whittaker Bermite/Porta Bella Project	NS	ND
9	West Creek/West Hills Project	M	ND
10	Westridge	M	ND
11	North Valencia Specific Plan No. 1	M	ND
12	RiverPark	M	ND
13	Natural River Management Plan	ND	ND
14	Recycled Water Master Plan (CLWA)	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND
17	Chiquita Canyon Landfill Expansion	ND	ND
	Consolidated City of Santa Clarita Projects	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely

Notes:
NA = Not applicable
ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document
NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.16.3 Cumulative Parks and Recreation Mitigation Measures

The proposed Project will have less-than-significant impacts to local parks and recreation resources and no cumulatively significant impacts would occur. As a result, no cumulative mitigation is required for parks and recreation.

6.5.16.4 Summary of Cumulative Parks and Recreation Impacts and Mitigation

Table 6.0-73
Summary of Project Contribution to Cumulative Parks and Recreation Impacts

Significance Criteria (See Table 6.0-71)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	NS	NS	No	NA	NA
	VCC	NI	NI			
	Entrada	NS	NS			
Criterion 2	NRSP	NS	NS	No	NA	NA
	VCC	NI	NI			
	Entrada	NS	NS			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.17 Hazards, Hazardous Materials, and Public Safety

6.5.17.1 Summary of Project Hazards and Hazardous Materials Impacts

The following table summarizes the hazards, hazardous materials, and public safety impacts of the proposed Project, as discussed in greater detail in **Section 4.17** of this EIS/EIR.

Table 6.0-74
Summary of Proposed Project Hazards and Hazardous Materials Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	PH-8; PH-9; PH-10	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials at concentrations that: Exceed PRGs set forth by the USEPA; or impair the achievement of the designated land uses by exceeding the following criteria: TPH concentrations are greater than one mg/L in drinking water sources; TPH concentrations are greater than 1,000 to 50,000 mg/kg depending on composition of oil and depth to groundwater; or TPH concentrations in shallow soils (less than five feet) exceed nuisance-based levels of 1,000 mg/kg.	Regulatory Compliance Measures PH-1, 2, 3, 5, 6; PH-9; PH-11; PH-12; PH-13	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 3. Project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	PH-11; PH-12	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 4. Project would impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan.	Regulatory Compliance Measure PH-7	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS
Criterion 5. Project would expose people or structures to a significant risk of loss, injury, or death as a result of levee or dam failure.	None Required	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS
Criterion 6. Project would expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Regulatory Compliance Measure PH-7; PH-14	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 7. Project would expose people to documented health risk associated with EMFs.	Regulatory Compliance Measure PH-4	NRSP	NS	NS
		VCC	NS	NS
		Entrada	NS	NS

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
Source: **Table 4.17-4**.

6.5.17.2 Cumulative Hazards and Hazardous Materials Impacts

6.5.17.2.1 *Methodology for Assessing Cumulative Hazards and Hazardous Impacts*

Cumulative hazards and hazardous materials impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.17.2.2 *Discussion of Cumulative Hazards and Hazardous Impacts*

Hazards and hazardous materials impacts tend to be site specific and are assessed on a site-by-site basis. Projects on the cumulative project list may individually result in impacts under Significance Criteria 1 through 7, and those impacts would be addressed by the land use agencies with mitigation similar to that adopted for the Specific Plan and proposed in this EIS/EIR. Potential hazards impacts of the projects on the cumulative project list are outlined in **Table 6.0-75**, below. However, due to the site-specific nature of these types of impacts, hazards and hazardous materials impacts under Criteria 1 through 5 and 7 are not considered to be cumulatively significant. Impacts related to wildland interface fires, however, are cumulatively significant. Recent and historic occurrences of wildfires in the vicinity of the Project, and the resulting impacts including loss of structures, degraded air quality due to smoke, and traffic congestion, would affect the residents of the proposed Project area as well as the residents of other cumulative projects. Therefore, the proposed Project's contribution to wildland fire impacts is considered to be cumulatively considerable. As shown in **Table 6.0-74** and **Section 4.17**, any hazards or hazardous materials of the proposed Project can be mitigated to a less-than-significant level and are not considered cumulatively considerable (Criteria 1 through 5 and 7), with the exception of wildland interface fires which impact is cumulatively considerable (Criterion 6). Therefore, prior to mitigation, the proposed Project, when viewed in connection with the effects of other past, present, and foreseeable future development projects, would result in a cumulatively significant impact related to wildland fires.

6.5.17.3 Cumulative Hazards and Hazardous Materials Mitigation Measures

Due to the site-specific nature of hazards and hazardous materials impacts, those impacts are generally not considered to be cumulatively significant, and therefore, require no cumulative mitigation. However, for purposes of wildland interface fires the hazard is considered cumulatively considerable. Mitigation measures such as SP-4.18-2 (fire flow capacities), SP-4.18-3 (comply with all applicable building and fire codes and hazard reduction programs), SP-4.18-4 (developer fees or fire station construction), PH-7 (secondary evacuation access) and PH-14 (Wildfire Fuel Modification plan) should be applied to other projects to mitigate this significant impact. Even with implementation of these measures, however, the cumulative impact under Criterion 6 remains significant.

Table 6.0-75
Cumulative Projects with Related Impacts to Hazards, Hazardous Materials, and Public Safety

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-74)						
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7
1	Ritter Ranch	ND	M	ND	ND	ND	M	SU
2	Centennial	ND	ND	ND	ND	ND	ND	ND
3	Adams Canyon	ND	ND	ND	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND	ND	ND	ND
5	Legacy Village	NS	NS	NS	NS	NS	PS	ND
6	Tesoro Del Valle	NS	NS	NS	NS	NS	PS	ND
7	Tapia Ranch	NS	NS	NS	NS	ND	PS	ND
8	Whittaker Bermite/Porta Bella Project	SU	SU	ND	ND	ND	ND	ND
9	West Creek/West Hills Project	M	M	ND	ND	ND	ND	M
10	Westridge	ND	ND	ND	ND	ND	M	ND
11	North Valencia Specific Plan No. 1	ND	M	ND	ND	ND	ND	M
12	RiverPark	NS	NS	ND	ND	ND	ND	NS
13	Natural River Management Plan	ND	NS	ND	ND	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	M	NS	NS	M	ND	M	ND
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND	ND	ND	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	PS	PS	PS	NS	ND	PS	ND
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely	Likely	Likely	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Notes:
NA = Not applicable
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NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and source documents for that table.

6.5.17.4 Summary of Cumulative Hazards and Hazardous Materials Impacts and Mitigation

Table 6.0-76
Summary of Project Contribution to Cumulative Hazards and Hazardous Materials Impacts

Significance Criteria (See Table 6.0-74)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP VCC Entrada	SI SI SI	M M M	No	NA	NA
Criterion 2	NRSP VCC Entrada	SI SI SI	M M M	No	NA	NA
Criterion 3	NRSP VCC Entrada	SI SI SI	M M M	No	NA	NA
Criterion 4	NRSP VCC Entrada	NS NS NS	NS NS NS	No	NA	NA
Criterion 5	NRSP VCC Entrada	NS NS NS	NS NS NS	No	NA	NA
Criterion 6	NRSP VCC Entrada	SI SI SI	M M M	Yes	SP-4.18-2 through 4.18-4, PH-7, and PH-14	Yes
Criterion 7	NRSP VCC Entrada	NS NS NS	NS NS NS	No	NA	NA

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.18 Public Services

6.5.18.1 Summary of Public Services Project Impacts

The following table summarizes the public services impacts of the proposed Project, as discussed in greater detail in **Section 4.18** of this EIS/EIR.

Table 6.0-77
Summary of Proposed Project Public Services Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.	SP-4.18-1 to 4.18-4, SP-5.0-63, 5.0-65, 5.0-67	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 2. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.	Conditions of Approval SP-4.17-1, SP-5.0-61, PS-1	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 3. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for schools.	SP-4.16-1 to 4.16-5	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 4. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for emergency medical services.	SP-4.18-1 to 4.18-4 SP-5.0-63, 5.0-65, 5.0-67	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M
Criterion 5. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for library services.	SP 4.19-1	NRSP	SI	M
		VCC	SI	M
		Entrada	SI	M

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required

Source: **Table 4.18-12**.

6.5.18.2 Cumulative Public Services Impacts

6.5.18.2.1 *Methodology for Assessing Cumulative Public Services Impacts*

Cumulative public services impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.18.2.2 *Discussion of Cumulative Public Services Impacts*

As stated in **Subsection 4.18.7.4**, the proposed Project would not result in significant direct, indirect, or secondary public service impacts with implementation of the previously adopted mitigation measures referenced in **Subsection 4.18.7**. Mitigation Measure PS-1 would further ensure that impacts on law enforcement services remain less than significant by requiring payment of the Los Angeles County Law Enforcement Facilities Mitigation Fee for north Los Angeles County prior to issuance of building permits. Aside from Mitigation Measure PS-1, however, no additional public services mitigation measures are recommended or required by this EIS/EIR. As shown in **Table 6.0-78**, below, 11 other cumulative projects in Los Angeles County would potentially contribute to a cumulative need for additional governmental facilities, creating a potentially significant cumulative impact. Prior to mitigation, the proposed Project's contribution to this cumulative impact would be cumulatively considerable due to the number of residents that would occupy the planned development areas of the Specific Plan and Entrada areas and impacts to public services would be cumulatively significant. Cumulative development projects in Ventura County could result in additional cumulative public service impacts, however, those impacts would not effect service providers in Los Angeles County.

6.5.18.3 Cumulative Public Services Mitigation Measures

Based on state and local regulatory requirements, cumulative projects can and should be required to include mitigation similar to Specific Plan Mitigation Measures 4.16-1 to 4.16-5 to set aside land for school facilities and contribute their fair share to school funding programs with the appropriate district mitigation similar to Specific Plan Mitigation Measures 4.18-1 to 4.18-4 to reduce fire protection impacts, mitigation similar to Specific Plan Mitigation Measure 4.17-1 and PS-1 to minimize impacts related to police services by designing the projects to minimize response times by optimizing access and paying into the Los Angeles County Law Enforcement Facilities Mitigation Fee for north Los Angeles County, and mitigation similar to Specific Plan Mitigation Measure 4.19-1 to fund or contribute to funding of additional libraries. Because state and local regulatory requirements will require implementation of this mitigation for cumulative projects, cumulative impacts to public services are considered to be less than significant after mitigation. With implementation of the previously adopted mitigation measures listed above in **Subsection 4.18.7**, the proposed Project's contribution to a potential cumulative impact will be rendered less than cumulatively considerable, and cumulative impacts to public services would be less than significant.

Table 6.0-78
Cumulative Projects with Related Impacts to Public Services

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-77)				
		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	Ritter Ranch	M	SU	SU	ND	SU
2	Centennial	ND	ND	ND	ND	ND
3	Adams Canyon	ND	ND	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND	ND	ND
5	Legacy Village	PS	PS	PS	PS	PS
6	Tesoro Del Valle	M	SU	M	ND	M
7	Tapia Ranch	PS	PS	PS	ND	PS
8	Whittaker Bermite/Porta Bella Project	M	M	M	ND	ND
9	West Creek/West Hills Project	M	M	M	ND	M
10	Westridge	M	M	M	ND	M
11	North Valencia Specific Plan No. 1	M	M	M	ND	M
12	RiverPark	M	M	NS	ND	M
13	Natural River Management Plan	ND	ND	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	NS	NS	NS	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	NS	NS	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	NS	NS	NS	ND	NS
	Consolidated City of Santa Clarita Projects	Likely	Likely	Likely	Likely	Likely
	Consolidated Los Angeles County Projects	Likely	Likely	Likely	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely	Likely	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely	Likely	Likely	Likely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely

Notes:
NA = Not applicable
ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document
NS = Not significant or adverse. No mitigation required
PS = Potentially significant impact
M = Impact mitigated to less-than-significant level
SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and source documents for that table.

6.4.18.4 Summary of Cumulative Public Services Impacts and Mitigation

Table 6.0-79
Summary of Project Contribution to Cumulative Public Services Impacts

Significance Criteria (See table 6.0-77)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	SI	M	Yes	SP 4.18-1 to 4.18-4	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 2	NRSP	SI	M	Yes	SP 4.17-1 and PS-1	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 3	NRSP	SI	M	Yes	SP 4.16-1 to 4.16-5	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 4	NRSP	SI	M	Yes	SP 4.18-1 to 4.18-4	No
	VCC	SI	M			
	Entrada	SI	M			
Criterion 5	NRSP	SI	M	Yes	SP 4.19-1	No
	VCC	SI	M			
	Entrada	SI	M			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.19 Socioeconomics and Environmental Justice

6.5.19.1 Summary of Socioeconomic and Environmental Justice Project Impacts

The following table summarizes the socioeconomic and environmental justice impacts of the proposed Project, as discussed in greater detail in **Section 4.19** of this EIS/EIR.

Table 6.0-80
Summary of Proposed Project Socioeconomic and Environmental Justice Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Project would result in disproportionate, adverse environmental effects on a minority or low-income population.	None Required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 2. Project would displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	None Required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI
Criterion 3. Project would displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	None Required	NRSP	NI	NI
		VCC	NI	NI
		Entrada	NI	NI

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
Source: **Table 4.19-7**.

6.5.19.2 Cumulative Socioeconomic and Environmental Justice Impacts

6.5.19.2.1 *Methodology for Assessing Cumulative Socioeconomic and Environmental Justice Impacts*

Cumulative socioeconomic and environmental justice impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.19.2.2 *Discussion of Cumulative Socioeconomic and Environmental Justice Impacts*

Development of the Specific Plan, Entrada, and VCC, along with other cumulative projects in Los Angeles County, would further an existing trend of urban and economic growth in the Santa Clarita Valley and northern Los Angeles County. As discussed in **Section 4.19**, the proposed Project would not result in disproportionate adverse environmental effects on a minority or low-income population, or displace numbers of existing housing or people that would necessitate construction of replacement housing. NEPA and CEQA do not require analysis of cumulative impacts where the proposed Project itself does not result in any impacts. (40 C.F.R. § 1508.7; Cal. Code Regs., tit. 14, § 15130, subd. (a)(1).) Therefore, no analysis of cumulative impacts is required for socioeconomic and environmental justice impacts. As shown in **Table 6.0-81**, below, no cumulative projects or groups of projects would result in significant socioeconomic or environmental justice impacts. Therefore, no significant cumulative socioeconomic or environmental justice impacts exist.

Table 6.0-81
Cumulative Projects with Related Impacts to Socioeconomics and Environmental Justice

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-80)		
		Criterion 1	Criterion 2	Criterion 3
1	Ritter Ranch	ND	ND	ND
2	Centennial	ND	ND	ND
3	Adams Canyon	ND	ND	ND
4	Valencia Industrial Center	ND	ND	ND
5	Legacy Village	ND	NS	NS
6	Tesoro Del Valle	ND	NS	NS
7	Tapia Ranch	ND	NS	NS
8	Whittaker Bermite/Porta Bella Project	ND	ND	ND
9	West Creek/West Hills Project	ND	ND	ND
10	Westridge	ND	ND	ND
11	North Valencia Specific Plan No. 1	ND	ND	ND
12	RiverPark	ND	ND	ND
13	Natural River Management Plan	ND	ND	ND
14	Recycled Water Master Plan (CLWA)	ND	NS	NS
15	Santa Clara River Enhancement and Management Plan	ND	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	ND	ND	ND
17	Chiquita Canyon Landfill Expansion	ND	NS	NS
	Consolidated City of Santa Clarita Projects	Unlikely	Unlikely	Unlikely
	Consolidated Los Angeles County Projects	Unlikely	Unlikely	Unlikely
	Consolidated Ventura County Projects	Unlikely	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Unlikely	Unlikely	Unlikely
	Consolidated City of Santa Paula Projects	Unlikely	Unlikely	Unlikely
	Summary Corps (section 404) Permits	Unlikely	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely	Unlikely

Notes:
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SU = Significant unavoidable impact
Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.
Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.
Source: **Table 6.0-9** and s ource documents for that table.

6.5.19.3 Cumulative Socioeconomic and Environmental Justice Mitigation Measures

No cumulative mitigation measures are required.

6.5.19.4 Summary of Cumulative Socioeconomic and Environmental Justice Impacts and Mitigation

Table 6.0-82
Summary of Project Contribution to Cumulative Socioeconomic and Environmental Justice Impacts

Significance Criteria (See Table 6.0-80)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 2	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			
Criterion 3	NRSP	NI	NI	No	NA	NA
	VCC	NI	NI			
	Entrada	NI	NI			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.20 Solid Waste Services

6.5.20.1 Summary of Solid Waste Project Impacts

The following table summarizes the solid waste impacts of the proposed Project, as discussed in greater detail in **Section 4.20**, above of this EIS/EIR.

Table 6.0-83
Summary of Proposed Project Solid Waste Impacts

Significance Criteria	Applicable Mitigation Measures	Planning Area	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	SP-4.15-1 through SP-4.15-4; SP-5.0-59; VCC-SWS-1; and SWS-1	NRSP	S	SU
		VCC	S	SU
		Entrada	S	SU
Criterion 2. Comply with federal, state, and local statutes and regulations related to solid waste.	SP-4.15-1, SP-4.15-4; SP-5.0-59; VCC-SWS-1; and SWS-1	NRSP	S	NS
		VCC	S	NS
		Entrada	S	NS

Notes:

SU = Significant unavoidable impact

SI = Significant impact

SI/M = Significant impact, but mitigated to less-than-significant level

NS = Not significant or adverse. No mitigation required

NI = No impact, and no mitigation required

Source: **Table 4.20-11**.

6.5.20.2 Cumulative Solid Waste Impacts

6.5.20.2.1 *Methodology for Assessing Cumulative Solid Waste Impacts*

Cumulative solid waste impacts were assessed using the List Method discussed above in **Subsection 6.3.1**. The geographic scope of this analysis is set forth above in **Subsection 6.4**.

6.5.20.2.2 *Discussion of Cumulative Solid Waste Impacts*

As discussed in **Subsection 4.20.4.1**, Los Angeles County generated 1.1 million tons of solid waste in 2000. By 2004, the County had a diversion rate of 53% through source reduction, recycling, and re-use. Development of the Specific Plan, Entrada, and VCC would generate approximately 294,391 tons of construction waste (assuming a 50% recycle rate), and at build-out, approximately 66,521 tons per year of solid waste. (See **Subsection 4.20.6.2**.) **Section 4.20** concludes that because Los Angeles County has not identified an adequate supply of landfill space beyond 2020, the proposed Project would have significant unavoidable impacts under Criterion 1.[19] As shown in **Table 6.0-84** below, 13 projects or

[19] Note that this EIS/EIR assumes a worst-case scenario that does not assume the development of any new landfills, the use of out-of-County landfills, or the implementation of any other disposal options. The more likely scenario, however, is that waste will eventually be diverted to two landfills that the County has acquired that could accept up to 20,000 tons of waste per year each for 100 years: the Mesquite Regional Landfill in Imperial County and the Eagle Mountain Landfill in Riverside County (see **Subsection 4.20.4**).

groups of past, present, and future projects would also have significant or potentially significant impacts under Criterion 1 prior to mitigation, at least 6 of which are cannot be fully mitigated. When viewed in the context of cumulative development and solid waste generation in Los Angeles County, the proposed Project would indirectly result in a cumulatively considerable contribution to a significant cumulative solid waste impact under Criterion 1. With respect to Criterion 2, **Section 4.20** concludes that the proposed Project would result in significant impacts unless solid waste is managed in accordance with federal, state, and local laws and regulations. **Section 4.20** contains mitigation measures (SP-4.15-1, SP-4.15-4; SP-5.0-59; VCC-SWS-1; and SWS-1) to reduce these impacts to less than significant by ensuring compliance with legal and regulatory requirements. Although their environmental documents did not appear to consider a similar significance threshold to Criterion 2, it is assumed that cumulative projects shown in **Table 6.0-84** will also be required to comply with federal, state, and local statutes and regulations related to solid waste. Therefore, the proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact under Solid Waste Criterion 2.

Table 6.0-84
Cumulative Projects with Related Impacts to Solid Waste

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-83)	
		Criterion 1	Criterion 2
1	Ritter Ranch	SU	ND
2	Centennial	ND	ND
3	Adams Canyon	ND	ND
4	Valencia Industrial Center	ND	ND
5	Legacy Village	PS	ND
6	Tesoro Del Valle	PS	ND
7	Tapia Ranch	PS	ND
8	Whittaker Bermite/Porta Bella Project	SU	ND
9	West Creek/West Hills Project	SU	ND
10	Westridge	SU	ND
11	North Valencia Specific Plan No. 1	SU	ND
12	RiverPark	SU	ND
13	Natural River Management Plan	ND	ND
14	Recycled Water Master Plan (CLWA)	NS	M
15	Santa Clara River Enhancement and Management Plan	ND	ND
16	Santa Clarita Valley Joint Sewerage System Facilities Plan	NS	ND
17	Chiquita Canyon Landfill Expansion	ND	ND
	Consolidated City of Santa Clarita Projects	Likely	NA
	Consolidated Los Angeles County Projects	Likely	Likely
	Consolidated Ventura County Projects	Unlikely	Unlikely
	Consolidated City of Fillmore Projects	Likely	Likely
	Consolidated City of Santa Paula Projects	Likely	Likely

Table 6.0-84
Cumulative Projects with Related Impacts to Solid Waste

Map ID	Cumulative Projects	Significance Criteria (See Table 6.0-83)	
		Criterion 1	Criterion 2
	Summary Corps (section 404) Permits	Unlikely	Unlikely
	Summary of CDFG (section 1600) Permits	Unlikely	Unlikely
	Summary Federal Take Authorizations	Unlikely	Unlikely
	Summary CDFG Take Authorizations	Unlikely	Unlikely

Notes:

NA = Not applicable

ND = No environmental document is available that discusses potential resources impacted, or criteria not evaluated in environmental document

NS = Not significant or adverse. No mitigation required

PS = Potentially significant impact

M = Impact mitigated to less-than-significant level

SU = Significant unavoidable impact

Likely = on the whole, consolidated projects are likely to have significant or potentially significant impacts in this category prior to mitigation.

Unlikely = on the whole, consolidated projects are not likely to have significant or potentially significant impacts in this category prior to mitigation.

Source: **Table 6.0-9** and source documents for that table.

6.5.20.3 Cumulative Solid Waste Mitigation Measures

Section 4.20 proposes mitigation measure SWS-1, in addition to mitigation measures previously required for the Specific Plan and VCC, to minimize the proposed Project's impacts under Solid Waste Criterion 1. However, because Los Angeles County has not definitively identified an adequate supply of landfill space beyond 2020, the proposed Project is considered to have significant unavoidable impacts under Criterion 1, and would contribute to a significant unavoidable cumulative solid waste impact. For Criterion 2, however, **Section 4.20** contains mitigation measures (SP-4.15-1, SP-4.15-4; SP-5.0-59; VCC-SWS-1; and SWS-1) to reduce these impacts to less than significant by ensuring compliance with legal and regulatory requirements and the proposed Project, therefore, would not result in a cumulatively considerable contribution to a significant cumulative impact to solid waste.

6.4.20.4 Summary of Cumulative Solid Waste Impacts and Mitigation

Table 6.0-85
Summary of Project Contribution to Cumulative Solid Waste Impacts

Significance Criteria (See Table 6.0-83)	Planning Area	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NRSP	S	SU	Yes	SP-4.15-1 through SP-4.15-4; SP-5.0-59; VCC-SWS-1; and SWS-1	Yes
	VCC	S	SU			
	Entrada	S	SU			
Criterion 2	NRSP	S	NS	No	NA	NA
	VCC	S	NS			
	Entrada	S	NS			

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable

6.5.21 Global Climate Change

6.5.21.1 Summary of Project Climate Change Impacts

Table 6.0-86
Summary of Proposed Project Climate Change Impacts

CEQA Significance Criterion	Applicable Mitigation Measures	Impact	Impacts Before Mitigation	Impacts After Mitigation
Criterion 1. Will the proposed Project's GHG emissions impede compliance with the GHG emission reductions mandated in AB 32?	GCC-1; GCC-2; GCC-3; GCC-4; GCC-5; GCC-6; GCC-7;	Direct	NS	NS
		Indirect	NS	NS
		Secondary	NS	NS

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
Source: **Table 8.0-52**.

6.5.21.2 Cumulative Climate Change Impacts

Under CEQA, the analysis of cumulative impacts is necessarily guided by standards of practicality, feasibility, and reasonableness. (Cal. Code Regs., tit. 14, § 15151.) The question to be considered when undertaking the analysis is whether a project's incremental effects are "cumulatively considerable" (Cal. Code Regs., tit. 14, § 15130, subd. (a)), which requires consideration of whether a project's incremental effects are significant when viewed in connection with the effects of past, present, and probable future projects. (Cal. Code Regs., tit. 14, § 15065, subd. (a)(3).)

The Corps' position under NEPA is that there are no science-based GHG significance thresholds, nor has the federal government or the state adopted any by regulations. In the absence of an adopted or science-based GHG significance standard, the Corps will not utilize the significance standard being utilized by CDFG, propose a new GHG significance standard, or make a NEPA impact determination for GHG emissions anticipated to result from the proposed Project or any of the alternatives. Rather, in compliance with the NEPA implementing regulations, in **Section 8.0**, the anticipated GHG emissions are disclosed for the proposed Project and each of the alternatives without the Corps' expressing judgment as to the significance of such emissions.

Under CEQA, the specific question assessed by CDFG is whether the proposed Project's GHG emissions are cumulatively considerable in conjunction with GHG emissions generated by other projects, in that the emissions would impede compliance with the GHG emissions reduction goals mandated by AB 32.

In order to better understand the overall context in which the proposed Project would contribute GHG emissions, in 2004, global emissions of GHGs were approximately 26.8 billion tonnes of CO_2e, national emissions were approximately seven billion tonnes of CO_2e, and statewide emissions were approximately 0.48 billion tonnes of CO_2e (or about five percent of the U.S. GHG emissions). Accordingly, the proposed Project's estimated annual GHG emissions (*i.e.*, 348,000 tonnes of CO_2e/year) would be approximately 0.0013 percent of global emissions, 0.0049 percent of national emissions, and 0.072 percent of statewide emissions.[20]

California-wide GHG emissions were 0.427 billion tonnes in 1990. When compared to 2004 emissions, the state needs to reduce its GHG emissions from 13.4 tonnes of CO_2e per capita to 10.1 tonnes of CO_2e per capita, which is approximately a 24 percent reduction, in order to achieve the AB 32-mandated GHG emission reductions for year 2020. The proposed Project, with incorporation of the project design features as mitigation measures, would yield approximately 344,541 tonnes of CO_2e per year, or about 5.4 tonnes of CO_2e per capita. Therefore, the proposed Project would not impede California's achievement of the AB 32-mandated reductions, and would, in fact, enable California to meet its goal of returning to 1990 GHG emission levels by 2020. In light of the analysis above, the proposed Project's incremental GHG emissions are not considered "cumulatively considerable" under CEQA and thus cumulative impacts to climate change need not be discussed in detail. (Cal.Code Regs., tit. 14, § 15130.)

[20] This is not intended to suggest that the proposed Project's emissions are *de minimis*, but only is provided for overall context. In general, the combined emissions of projects globally appear to be the primary cause of global climate change, even though many project-specific emissions appear small when viewed in isolation.

With respect to Governor Schwarzenegger's Executive Order calling for the state to reduce its emissions to 80 percent below the 1990 levels by 2050, as discussed further in **Section 8.0**, there are many uncertainties regarding the specific reduction strategies and methods needed for California to achieve this reduction goal. Therefore, the impact of the proposed Project on the state's ability to achieve an 80 percent reduction below 1990 levels by 2050 is considered speculative.

In addition to incorporating the design features and mitigation measures necessary to facilitate the achievement of AB 32's 2020 mandates at a statewide level, the proposed Project and any build-out facilitated by its approval also would comply with any additional, applicable federal or state-mandated requirements concerning GHGs and any local initiatives from Los Angeles County or the city of Santa Clarita. Compliance with all such measures would further ensure that the proposed Project and any build-out facilitated by it would not have a cumulatively considerable contribution to a significant cumulative impact on global climate change.

6.5.21.3 Cumulative Mitigation Measures For Climate Change

No additional mitigation measures are required, other than the seven measures identified in **Section 8.0**, as the proposed Project would not result in a cumulatively considerable impact. Moreover, as AB 32's reduction mandates are facilitated, through the adoption of regulations and additional legislation, additional GHG reduction measures would be implemented, and the proposed Project, and the residents and businesses that occupy build-out areas facilitated by the proposed Project, would be subject to those reduction measures.

Section 15130, subdivision (c), of the CEQA Guidelines (Cal. Code Regs., tit. 14) acknowledges that "[w]ith some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis." Global climate change is this type of issue, as the very causes and effects of global climate change are not determined on a local or regional scale. Therefore, given the uncertainties in identifying, let alone quantifying, the impact of any single project on global warming and climate change, and the efforts made to design the proposed Project and development facilitated by it with sustainable development principles in mind, any further mitigation is best accomplished through CARB and SCAQMD regulations implementing the mandated reduction goals of AB 32, or other local actions (*e.g.*, countywide or regional climate action plans).

Table 6.0-87
Summary of Project Contribution to Cumulative Climate Change Impacts

CEQA Significance Criteria (See Table 6.0-86)	Impacts Before Mitigation	Impacts After Mitigation	Project Contribution Cumulatively Considerable Before Mitigation	Cumulative Mitigation Measures	Project Contribution Cumulatively Considerable After Mitigation
Criterion 1	NS	NS	No	NA	NA

Notes:
SU = Significant unavoidable impact
SI = Significant impact
SI/M = Significant impact, but mitigated to less-than-significant level
NS = Not significant or adverse. No mitigation required
NI = No impact, and no mitigation required
NA = Not applicable