

TABLE OF CONTENTS
SECTION 5.0 - COMPARISON OF ALTERNATIVES

		Page
LIST OF SECTIONS		
5.1	Introduction	5.0-1
5.2.	Alternative 1 (No Action/No Project)	5.0-4
5.3	Alternative 2 (Proposed Project)	5.0-13
5.4	Alternative 3 (Elimination of Planned Potrero Bridge and Additional Spineflower Preserves).....	5.0-21
5.5	Alternative 4 (Elimination of Planned Potrero Bridge and Addition of VCC Spineflower Preserve)	5.0-27
5.6	Alternative 5 (Widen Tributary Drainages and Addition of VCC Spineflower Preserve)	5.0-34
5.7	Alternative 6 (Elimination of Planned Commerce Center Drive Bridge and Maximum Spineflower Expansion/Connectivity)	5.0-41
5.8	Alternative 7 (Avoidance of 100-Year Floodplain, Elimination of Two Planned Bridges, and Avoidance of Spineflower)	5.0-48
5.9	Impacts Summary	5.0-55
5.10	Environmentally Superior Alternative	5.0-55
5.11	Preferred Alternative	5.0-57

LIST OF TABLES		
5.0-1	Comparison of Key Development Components -- All Alternatives.....	5.0-3
5.0-2	Summary Of Impacts To Spineflower Populations -- All Alternatives.....	5.0-6
5.0-3	Summary of Impacts to Waters of the United States -- All Alternatives	5.0-9
5.0-4	Summary of Impacts to CDFG Jurisdictional Stream Acreages -- All Alternatives	5.0-10
5.0-5	Comparison Of Alternatives.....	5.0-56

5.1 INTRODUCTION

This section presents a summary of the impact findings previously presented in **Section 4.0**, Environmental Impact Analysis of Alternatives and Mitigation, of this EIS/EIR. The information is organized by alternative, rather than by environmental resource category, in order to facilitate an evaluation of the comparative merits of the "No Action/No Project" alternative, the proposed Project (Alternative 2), and the five Project alternatives (Alternatives 3-7). The impacts of each alternative are summarized in the text of this section, and a tabular comparison of impacts is presented in **Subsection 5.9**. A detailed description of the elements of the proposed Project and alternatives is found in **Section 2.0**, Project Description, and **Section 3.0**, Description of Alternatives, of this EIS/EIR.

5.1.1 Overview of On-Site Alternatives Analyzed

The seven on-site alternatives described and analyzed in **Section 3.0**, Description of Alternatives, of this EIS/EIR, include the No Action/No Project alternative (Alternative 1), the applicant's proposed Project (Alternative 2), and the five "build" alternatives (Alternatives 3-7). Land use plans for six of the seven alternatives are shown graphically in the discussion of each alternative (there is no land use plan for the No Action/No Project alternative). These alternatives are evaluated by environmental category in **Section 4.0**, Environmental Impact Analysis of Alternatives and Mitigation, of this EIS/EIR.

In general, the No-Action/No Project alternative (Alternative 1) is a description of what would occur should the lead agencies (*i.e.*, the Corps and CDFG) decide not to approve the permits and other approvals associated with the proposed Project. Thus, the No Action/No Project alternative would result in the inability to develop any of the RMDP infrastructure or facilitated development, none of the proposed spineflower preserves would be established, and none of the open space within the Project area would be dedicated and managed as contemplated by the proposed Project.¹

The section 404 permit, Master Streambed Alteration Agreement, and Incidental Take Permits proposed under Alternative 2 (proposed Project) would allow construction of the proposed RMDP infrastructure and SCP components of the proposed Project, and would facilitate development of the approved Specific Plan, the approved development in the VCC planning area, and the planned development in a portion of the Entrada planning area.

The five other build alternatives (Alternatives 3-7) address a broad range of different configurations for the major RMDP infrastructure in the waters of the U.S. or CDFG jurisdictional streams (Santa Clara River and tributary drainages), which is necessary to facilitate development of the Specific Plan. These alternatives also focus on different configurations for the spineflower preserves, which, in turn, affect the conservation of sensitive biotic and aquatic resources within a managed open space/preserve system.

¹ If implemented, the Specific Plan would provide approximately 10,200 acres of open space (including the 1,517-acre Salt Creek area), the VCC planning area would provide 143.6 acres, and the Entrada portion would provide 129.5 acres, for a combined total of approximately 10,473 acres of open space (see **Table 3.0-5** in **Section 3.0**, Description of Alternatives, of this EIS/EIR)

5.0 COMPARISON OF ALTERNATIVES

The five build alternatives focus on a range of proposed permitting activities that avoid or minimize impacts to jurisdictional waters and spineflower. As impacts to jurisdictional waters are primarily associated with construction of bridges, bank stabilization, the grading and realigning of tributary drainages to facilitate Specific Plan development, and the conversion of minor tributary drainages to buried storm drains, alternative configurations for the major RMDP infrastructure are reflected in each build alternative. Similarly, because the proposed Project could impact spineflower outside of designated preserves, a broad range of spineflower preserve design options and their connectivity to open space were evaluated. Each of the build alternatives (Alternatives 3-7) reduces the RMDP infrastructure and increases the size of spineflower preserves, resulting in reduced development facilitated in the Specific Plan and the VCC and Entrada planning areas, and, correspondingly, minimizes or avoids jurisdictional waters and spineflower impacts.

The build alternatives also have been designed so that the impact reduction characteristics of the preceding alternative are generally incorporated into the subsequent alternatives. For example, Alternative 3 would modify the proposed RMDP and SCP, respectively, by eliminating the planned Potrero Canyon Road Bridge and increasing spineflower preserve acreage in the Specific Plan's Airport Mesa preserve and on Entrada. Alternative 4 would eliminate Potrero Canyon Road Bridge, but retain the preserve acreage added by Alternative 3, and increase further the preserve acreage in the Specific Plan's Airport Mesa, Potrero, and Grapevine Mesa preserves and on Entrada. Alternative 4 also would add a spineflower preserve in the VCC planning area. Alternative 5 would widen tributary drainages, add a spineflower preserve within the VCC planning area, and include the same three bridge crossings over the Santa Clara River as the proposed Project. Alternative 6 would eliminate the planned Commerce Center Drive Bridge and maximize spineflower preserve buffers and open space connectivity. Alternative 7 would incorporate a two-prong approach: (i) preservation of all spineflower occurrences along with 300-foot buffers; and (ii) elimination of two planned bridges (Commerce Center and Potrero Canyon Road Bridges), and the avoidance of the 100-year floodplain along the Santa Clara River and nearly all of the tributary drainages. Key differences between the seven alternatives evaluated in this EIS/EIR are summarized in **Table 5.0-1** below.

The environmental impacts of each of the alternatives are summarized below so that reviewers may evaluate the comparative merits of the proposed Project (Alternative 2) and the other identified alternatives.

5.0 COMPARISON OF ALTERNATIVES

**TABLE 5.0-1
COMPARISON OF KEY DEVELOPMENT COMPONENTS -- ALL ALTERNATIVES**

Alternative	Bridges	Culverts	Tributary Drainage Preserved (Linear Feet)	Tributary Drainage Modified (Linear Feet)	Tributary Drainage Converted to Buried Storm Drain (Linear Feet)	Spineflower Preserve (Acres)	Total Acres of Urban Development Facilitated	Total Residential Dwelling Units	Total Commercial/ Industrial/Business Park (msf)
Existing Condition	0	0	0	0	0	0	0	0	0
Alternative 2	3	15	126,434	55,770	59,845	167.56	3,815	22,610	9.40
Alternative 3	5	12	130,314	51,725	60,010	221.76	3,506	21,558	9.33
% Change vs. Alternative 2	67%	-20%	3%	-7%	Within 1%	32%	-8%	-5%	-1%
Alternative 4	4	13	132,392	49,789	59,868	259.9	3,340	21,846	5.93
% Change vs. Alternative 2	33%	-13%	5%	-11%	Within 1%	55%	-12%	-3%	-37%
Alternative 5	10	8	132,820	48,545	60,683	338.61	3,247	21,155	5.87
% Change vs. Alternative 2	233%	-47%	5%	-13%	1%	102%	-15%	-6%	-38%
Alternative 6	11	8	147,153	51,561	43,334	891.16	2,876	20,212	5.78
% Change vs. Alternative 2	267%	-47%	16%	-8%	-28%	432%	-25%	-11%	-39%
Alternative 7	20	0	209,809	12,910	19,330	660.56	2,079	17,323	3.82
% Change vs. Alternative 2	567%	-100%	66%	-77%	-68%	294%	-46%	-23%	-59%

Source: URS, 2009

5.2. ALTERNATIVE 1 (NO ACTION/NO PROJECT)

Because no RMDP facilities or infrastructure would be authorized under this alternative, and because spineflower preserves would not be established pursuant to the proposed SCP, there would be no direct environmental impacts resulting from Alternative 1. In addition, Alternative 1 would not result in any indirect impacts, because there would be no development facilitated in uplands on the Specific Plan, VCC, or Entrada planning areas. The No Action/No Project alternative also would not cause any off-site activities resulting in secondary impacts, because there would be no Project-related development activities on the Specific Plan, VCC, or Entrada. However, the existing agricultural, grazing, oil leasing, and other activities in the Project area would continue to occur under this alternative. The applicant leases portions of the Specific Plan area for oil and natural gas production, as well as for cattle grazing, ranching, and agricultural operations (*e.g.*, food crop production, dry land farming, honey farming). All such operations are currently ongoing. In addition, the applicant leases the Specific Plan site to the movie industry for set locations. A minor existing land use includes employee houses, an oil company office, and miscellaneous structures. There also are several existing easements on the Specific Plan site, including oil, natural gas, electrical, telephone, and water easements. In particular, Southern California Edison and Southern California Gas Company maintain distribution lines within on-site easements.

Grazing activities and oil and natural gas production have had an effect on much of the natural habitat on site. Scrub habitats have been displaced by annual grasslands as a result of grazing and land clearing for agriculture and other historic land uses. In addition, the Specific Plan site has been fragmented by dirt and asphalt roads, graded oil well pads and pipelines, and pumping, storage, and transmission facilities. Please refer to **Section 2.0**, Project Description, of this EIS/EIR for a description of the Project area's existing conditions, including, specifically, **Figure 2.0-6**, which depicts the ongoing agricultural, grazing, and oil leasing activities within the Project area.

5.2.1 Surface Water Hydrology and Flood Control

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant impacts related to surface water hydrology or flood control. Nonetheless, existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area create opportunities to cause erosion, which may adversely impact surface water hydrology; however, such effects result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, surface water hydrology and flood control impacts resulting from this alternative would be fewer when compared to the RMDP and SCP components of the proposed Project. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology and flood control-related impacts of Alternative 1.

5.2.2 Geomorphology and Riparian Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any impacts related to geomorphology and riparian resources. However, the existing unstable geomorphic conditions in the three southern tributary drainages (Lion, Long, and Potrero) would not be remedied.

Additionally, the existing land uses (agriculture and oil production) would persist and geomorphic conditions may continue to degrade in these existing tributary drainages. However, such effects result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. Geomorphology and riparian resource impacts resulting from this alternative would be greater when compared to the proposed Project.

Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 1.

5.2.3 Water Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant impacts related to water resources. Nonetheless, the existing uses in the Project area (*e.g.*, agriculture) would continue to use groundwater to irrigate fields; but, such activities result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, water supply impacts resulting from this alternative would be less when compared to the RMDP and SCP components of the proposed Project. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a complete discussion of water resource impacts of Alternative 1.

5.2.4 Water Quality

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant water quality impacts. Nonetheless, the existing uses in the Project area (*e.g.*, agriculture, grazing, oil leasing) would continue to cause adverse erosion impacts resulting in adverse water quality effects; but, such activities result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, water quality impacts resulting from this alternative would be fewer when compared to the RMDP and SCP components of the proposed Project. Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of water quality impacts of Alternative 1.

5.2.5 Biological Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any impacts to biological resources, except with respect to potential impacts to sensitive biological resources arising from ongoing agricultural, grazing, oil leasing, and other ongoing activities in the Project area. However, such activities result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, biological resource impacts resulting from this alternative would be fewer when compared to the RMDP and SCP components of the proposed Project. Please refer to **Section 4.5**, Biological Resources, of this EIS/EIR for a complete discussion of the biological resource impacts of Alternative 1. The comparative impacts of all seven alternatives evaluated in this EIS/EIR on the San Fernando Valley spineflower are presented in **Table 5.0-2**.

5.0 COMPARISON OF ALTERNATIVES

**Table 5.0-2
Summary Of Impacts To Spineflower Populations – All Alternatives**

	Take (Acres)	Take (%)	Preserved (Acres)	Preserved (%)	Expansion Area (Acres)	Buffer Area (Acres)	Total Preserve Area (Acres)
Existing Condition	0	0	0	0	0	0	0
Alternative 2	6.35	31.4%	13.88	68.6%	42.91	110.76	167.56
Alternative 3	4.54	22.4%	15.70	77.1%	61.87	144.28	221.76
Percentage Change Compared to Alternative 2	28% Take Reduction		13% Preservation Increase		44% Expansion Area Increase	30% Buffer Area Increase	32% Increase in Total Preserve Area
Alternative 4	3.53	17.4%	16.71	82.6%	68.65	174.63	259.90
Percentage Change Compared to Alternative 2	44% Take Reduction		20% Preservation Increase		60% Expansion Area Increase	58% Buffer Area Increase	55% Increase in Total Preserve Area
Alternative 5	3.18	15.7%	17.06	84.3%	53.63	268.01	338.61
Percentage Change Compared to Alternative 2	50% Take Reduction		23% Preservation Increase		25% Expansion Area Increase	142% Buffer Area Increase	132% Increase in Total Preserve Area
Alternative 6	2.32	11.5%	17.92	88.5%	195.29	678.05	891.16
Percentage Change Compared to Alternative 2	63% Take Reduction		29% Preservation Increase		355% Expansion Area Increase	512% Buffer Area Increase	432% Increase in Total Preserve Area
Alternative 7	0.36	1.8%	19.88	98.2%	83.04	557.78	557.00
Percentage Change Compared to Alternative 2	94% Take Reduction		43% Preservation Increase		93% Expansion Area Increase	403% Buffer Area Increase	232% Increase in Total Preserve Area
Source: URS, 2009							

5.2.6 Jurisdictional Waters and Streams

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant impacts on waters of the U.S., CDFG jurisdictional streams, or federally protected wetlands. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area may adversely impact waters of the U.S., CDFG jurisdictional streams, or federally-protected wetlands, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, impacts to jurisdictional waters and streams resulting from this alternative would be fewer when compared to the RMDP and SCP components of the proposed Project. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of the impacts of Alternative 1 on jurisdictional waters and streams. The impacts of all seven alternatives evaluated in this EIS/EIR on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.2.7 Air Quality

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant air quality impacts. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area may slightly impact air quality, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, impacts to air quality resulting from this alternative would be far less than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 1.

5.2.8 Traffic

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant traffic impacts. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area require traffic trips to and from the Project area, but such effects result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, the modest existing traffic trips resulting from this alternative would be far less than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 1.

5.2.9 Noise

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant noise impacts. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area cause noise in the Project area, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, the existing modest noise levels resulting from this alternative would be far less than the

RMDP and SCP components of the proposed Project. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 1.

5.2.10 Cultural Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant impacts to cultural/archeological sites or resources. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area cause impacts to the ground surface in the Project area, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, the existing modest ground surface impacts resulting from this alternative would be far less than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the cultural resource impacts of Alternative 1.

5.2.11 Paleontological Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant impacts to paleontological resources. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area cause impacts to the ground surface in the Project area, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, the existing modest ground surface impacts resulting from this alternative would be far less than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the paleontological resource impacts of Alternative 1.

5.2.12 Agricultural Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in the conversion of agricultural lands to non-agricultural uses. The existing and ongoing agricultural and grazing activities in the Project area would likely remain under private ownership and in agricultural production. Compared to the proposed Project, Alternative 1 would result in fewer impacts on existing agricultural resources within the Project area. Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the agricultural resource impacts of Alternative 1.

Table 5.0-3
Summary of Impacts to Waters of the United States – All Alternatives

	Santa Clara River (Including Wetlands, Acres)	Santa Clara River Wetlands (Acres)	Chiquito Canyon (Acres)	San Martinez Grande Canyon (Acres)	Lion Canyon (Acres)	Long Canyon (Acres)	Potrero Canyon (Including Wetlands, Acres)	Potrero Canyon Wetlands	Salt (Including Wetlands, Acres)	Salt Wetlands	Other Drainages (Including Wetlands, Acres)	Other Drainages Wetlands (Acres)	Total Wetlands (Acres)	Total All Waters of U.S. (Including Wetlands, Acres)
Existing Condition (Acres)	452	237	12.2	2.55	6.86	5.70	37.9	6.52	85.4	5.67	34.5	2.14	251	636
Post-Alternative 2 Jurisdictional Acres	465.2	233.7	12.0	5.79	2.70	6.75	24.3	1.09	108.5	5.66	10.2	2.14	242.3	634.36
Change from Existing	+13.2	-3.26	-0.19	+3.24	-4.16	+1.05	-13.6	-5.43	+23.1	-0.01	-24.3	NC	-8.69	-1.64
Post-Alternative 3 Jurisdictional Acres	466.1	234.6	15.65	8.18	2.70	6.80	67.3	1.91	108.5	5.66	10.3	2.13	244	679.4
Change from Existing	+14.1	-2.39	+3.45	+5.63	-4.16	+1.1	+29.42	-4.61	+23.1	-0.01	-24.2	-0.01	-7.02	+43.4
Change Compared to Alternative 2	+0.9	+0.87	+3.46	+2.39	NC	+0.05	+35.0	+0.82	NC	NC	+0.01	-0.01	+1.67	+45.0
Post-Alternative 4 Jurisdictional Acres	466.1	234.7	12.03	5.88	2.70	7.72	37.4	1.74	108.6	5.66	10.2	2.14	243.85	648.7
Change from Existing	+14.1	-2.35	-0.17	+3.33	-4.16	+2.02	-0.5	-4.78	+23.2	-0.01	-24.3	NC	-7.15	+13.6
Change Compared to Alternative 2	+0.9	+0.91	+0.02	+0.09	NC	+0.97	+13.1	+0.65	+0.01	NC	NC	NC	+1.54	+14.3
Post-Alternative 5 Jurisdictional Acres	464.4	233.8	20.5	8.94	2.70	7.62	93.5	1.90	108.5	5.67	10.3	2.14	243.86	715
Change from Existing	+12.4	-3.22	+8.29	+6.39	-4.16	+1.92	+55.6	-4.62	+23.1	NC	-24.2	NC	-7.84	+79.4
Change Compared to Alternative 2	-0.8	+0.04	+8.48	+3.15	NC	+0.87	+69.2	+0.81	NC	+0.01	+0.01	NC	+0.85	+80.6
Post-Alternative 6 Jurisdictional Acres	467.5	235.5	15.65	6.42	2.70	5.32	67.4	1.84	108.5	5.66	15.9	2.14	244.78	688.4
Change from Existing	+15.5	-1.53	+3.45	+3.87	-4.16	-0.38	+29.5	-4.68	+23.1	-0.01	-18.6	NC	-6.22	+52.3
Change Compared to Alternative 2	+2.3	+1.73	+3.64	+0.63	NC	-1.43	+43.1	+0.75	NC	NC	+5.7	NC	+2.47	+54.0
Post-Alternative 7 Jurisdictional Acres	468.2	236.1	20.0	6.70	7.09	13.0	80.3	6.34	108.5	5.66	28.2	2.14	249.91	731
Change from Existing	+16.2	-0.90	+7.78	+4.15	+0.23	+7.28	+42.4	-0.18	+23.1	-0.01	-6.32	NC	-1.09	+94.5
Change Compared to Alternative 2	+3.00	+2.36	+7.97	+0.91	+4.39	+6.23	+56.0	+5.25	NC	NC	+18.0	NC	+7.60	+96.6

Notes:
NC = No Change
Source: URS, 2009.

5.0 COMPARISON OF ALTERNATIVES

Table 5.0-4
Summary of Impacts to CDFG Jurisdictional Stream Acreages – All Alternatives

	Santa Clara River	Chiquito	San Martinez Grande	Lion	Long	Potrero	Salt	Other Drainages	Totals
Existing Condition (Acres)	758	18.3	2.55	6.86	5.70	42.2	91.0	35.6	960
Post-Alternative 2 Jurisdictional Acres	802	16.4	5.83	3.72	10.7	27.3	114	10.3	990
Change from Existing	+44.1	-1.92	+3.28	-3.14	+4.97	-14.88	+23.1	-25.3	+30.2
Post-Alternative 3 Jurisdictional Acres	830	23.1	14.4	3.72	10.7	80.4	114	10.4	1,087
Change from Existing	+71.5	+4.8	+11.8	-3.14	+5.0	+38.2	+23.1	-25.2	+126
Change (Alt 3 v. Alt 2)	+27.4	+6.72	+8.52	NC	+0.03	+53.1	NC	+0.01	+95.8
Post-Alternative 4 Jurisdictional Acres	830	16.3	6.43	3.72	9.94	63.5	114	10.3	1,054
Change from Existing	+71.5	-2.0	+3.88	-3.14	+4.24	+21.3	+23.2	-25.3	+93
Change (Alt 4 v. Alt 2)	+27.4	-0.10	+0.60	NC	-0.73	+36.2	+0.01	NC	+62.8
Post-Alternative 5 Jurisdictional Acres	815	31.2	19.4	3.72	9.8	107	114	9.6	1,110
Change from Existing	+56.7	+12.9	+16.8	-3.14	+4.1	+65.2	+23.1	-26.0	+150
Change (Alt 5 v. Alt 2)	+12.6	+14.8	+13.5	NC	-0.87	+80.1	NC	-0.07	+120
Post-Alternative 6 Jurisdictional Acres	830	23.1	22.8	3.72	7.9	170	114	16.0	1,188
Change from Existing	+71.6	+4.8	+20.2	-3.14	+2.2	+127.8	+23.1	-19.6	+227
Change (Alt 6 v. Alt 2)	+27.5	+6.72	+16.9	NC	-2.77	+143	NC	+5.7	+196.8
Post-Alternative 7 Jurisdictional Acres	1,042	56.6	23.7	14.8	44.1	190	114	27.9	1,513
Change from Existing	+283.6	+38.3	+21.1	+7.9	+38.4	+147.5	+23.1	-7.7	+552
Change (Alt 7 v. Alt 2)	+239.5	+40.2	+17.8	+11.0	+33.4	+162	NC	+17.9	+522

Notes:

NC = No Change

Source: URS, 2009.

5.2.13 Geology and Geologic Hazards

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant geologic hazards within the Project area. Alternative 1, therefore, would result in fewer geologic impacts when compared to the proposed Project. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of the geology/geologic hazards of Alternative 1.

5.2.14 Land Use

Alternative 1 would preclude implementation of the RMDP facilities and SCP conservation activities under the proposed Project (Alternative 2). As a result, this alternative would not enable implementation of the approved Specific Plan, completion of the VCC commercial/industrial complex, or planned development within a portion of the Entrada planning area. By not facilitating such development, this alternative would conflict with the approved Specific Plan, the approved development within the VCC planning area, and the Los Angeles County General Plan/Area Plan, as amended. As a result of this conflict, Alternative 1 would have a significant, unavoidable impact on land use in Los Angeles County.

According to the Los Angeles County General Plan Housing Element 2008-2014, between 2000 and 2007, population increased at a much higher rate than the number of housing units in the North Los Angeles County subregion. Further, the population in this subregion is projected to increase by 76% from 2005 to 2014, while employment is projected to increase by only 56%. By not proceeding with the County-approved development in the VCC planning area and completing the VCC commercial/industrial complex, this alternative would impede efforts to achieve a jobs/housing balance in the Santa Clarita Valley. Thus, Alternative 1 would likely result in greater land use planning conflicts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 1.

5.2.15 Visual Resources

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any visual resource impacts within the Project area. Alternative 1, therefore, would result in fewer visual resource impacts when compared to the proposed Project. Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the visual resource impacts of Alternative 1.

5.2.16 Parks, Recreation, and Trails

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any parks and recreation impacts within the Project area. Alternative 1, therefore, would result in fewer parks and recreation impacts when compared to the proposed Project. Please refer to **Section 4.16**, Parks, Recreation, and Trails of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 1.

5.2.17 Hazards, Hazardous Materials, and Public Safety

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any significant hazards and hazardous materials within the Project area. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area cause the use of potentially hazardous materials in the Project area, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. Nonetheless, this alternative would result in far less impacts resulting from the use, handling, or storage of potentially hazardous materials than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety of this EIS/EIR for a complete discussion of such impacts under Alternative 1.

5.2.18 Public Services

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any public services impacts within the Project area. Alternative 1, therefore, would result in fewer public services impacts when compared to the proposed Project. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the public services impacts of Alternative 1.

5.2.19 Socioeconomics and Environmental Justice

Under Alternative 1, the RMDP and SCP components of the proposed Project would not be implemented, and no development would be facilitated in the Specific Plan area, or the VCC or Entrada planning areas. As a result, under this alternative, the County-approved Specific Plan would not proceed. This would preclude the development of 20,885 approved residential units and the creation of approximately 20,000 jobs within the Specific Plan area, along with associated affordable housing, schools, recreation, cultural and worship facilities, public services, and open area. In addition, under this alternative, the County-approved VCC commercial/industrial complex would not be completed, precluding the development of significant employment uses (*e.g.*, 3.40 million square feet (msf) of commercial uses). This alternative also would preclude planned residential development within the Entrada planning area (*e.g.*, 1,725 residential units). Under Alternative 1, the above socioeconomic benefits that would arise from development within the Project area, would be lost. No environmental justice issues would occur under this alternative, as there are no minority or low-income communities in the Project area. Therefore, compared to the proposed Project, Alternative 1 would result in greater socioeconomic impacts (*i.e.*, no new housing and no completed employment center). However, like the proposed Project, this alternative would not have any effect upon environmental justice impacts. Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of such impacts under Alternative 1.

5.2.20 Solid Waste Services

Because no RMDP facilities or SCP conservation activities would be authorized under this alternative, and because no upland development would be indirectly facilitated, Alternative 1 would not result in any

significant solid waste impacts. However, the existing and ongoing agricultural, grazing, oil leasing, and other activities in the Project area cause solid waste impacts in the Project area, but such impacts result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. In addition, the existing modest solid waste impacts resulting from this alternative would be far less than the RMDP and SCP components of the proposed Project. Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of the solid waste impacts of Alternative 1.

5.2.21 Global Climate Change

Because no RMDP facilities or infrastructure would be authorized under this alternative, and because no upland development would be indirectly facilitated in the Specific Plan, VCC or Entrada planning areas, Alternative 1 would not result in the emission of greenhouse gases. Although existing uses in the Project area (e.g., agriculture, grazing, oil leasing) may continue to emit greenhouse gas emissions; such activities result from existing conditions under the No Action/No Project alternative, not from the proposed Project actions or activities. Alternative 1 would result in much fewer greenhouse gas emissions than the proposed Project; however, neither Alternative 1 nor Alternative 2 would result in any significant impacts to global climate change. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 1.

5.3 ALTERNATIVE 2 (PROPOSED PROJECT)

Under the proposed Project, the RMDP and SCP would be approved as proposed by the applicant, and the requested federal and state permits and authorizations would be granted. Three major bridges across the Santa Clara River and associated bank stabilization would be constructed, including the Commerce Center Driver Bridge (already approved by the Corps and CDFG in 1999), the Potrero Canyon Road Bridge, and the Long Canyon Road Bridge. Major tributary drainages would be regraded and realigned to facilitate and protect Specific Plan development. Several minor tributary drainages would be graded and converted to buried storm drain systems.

Five spineflower preserves would be established within the Specific Plan site and the Entrada planning area, totaling 167.6 acres and preserving 68.6% of the cumulative area occupied by spineflower in the Project area;² and no spineflower preserve would occur within the VCC planning area.

The alternative would facilitate Specific Plan, VCC, and Entrada development, including 22,610 residential units and 9.40 million square feet (msf) of commercial/industrial/business park floor area.

Please refer to **Section 2.0**, Project Description, of this EIS/EIR for a complete discussion of the impacts of the proposed Project. For a summary comparison of impacts by alternative and issue area, please see **Subsection 5.9**, below.

² The phrase "cumulative area occupied" is used in the SCP to mean the total area of mapped spineflower within the preserve between 2002 and 2007.

5.3.1 Surface Water Hydrology and Flood Control

Under Alternative 2, the floodplain area for the FEMA 100-year return event on the Santa Clara River would total approximately 1,270 acres within the Project area, a decrease of about 157 acres (11 percent) when compared to existing conditions. Under less severe storms, reductions in floodplain acreage would generally be less. From a flood control standpoint, the proposed Project has been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated in the proposed Project to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of the proposed Project (Alternative 2).

5.3.2 Geomorphology and Riparian Resources

Under Alternative 2, the proposed Project design would preserve 126,434 linear feet of on-site drainages, preserving 52 percent of the total 242,049 linear feet of jurisdictional drainage within the RMDP study area. Mitigation measures have been incorporated in the proposed Project to ensure that geomorphology/riparian resource impacts remain less than significant. Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of the proposed Project (Alternative 2).

5.3.3 Water Resources

Under Alternative 2, development indirectly facilitated by the proposed Project would result in a combined water supply demand of 19,009 acre feet per year (afy) at build-out. Mitigation measures have been incorporated in the proposed Project to ensure that water supply/demand impacts remain less than significant. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a complete discussion of the water supply/demand impacts of the proposed Project (Alternative 2).

5.3.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. Although these impacts would also occur under Alternatives 3 through 7, the intensity of the impacts would be reduced as these alternatives propose less development, as detailed in **Table 5.0-1**. However, the proposed Project and alternatives would be subject to regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from the proposed Project (Alternative 2).

5.3.5 Biological Resources

Under Alternative 2, the proposed RMDP and SCP would be approved, which would indirectly facilitate urban development within the Specific Plan site and the VCC and Entrada planning areas. Direct and indirect impacts of Alternative 2 would include permanent loss of approximately 39% of existing vegetation communities and land covers within the Project Area (5,594 acres). Temporary habitat loss

5.0 COMPARISON OF ALTERNATIVES

would disturb an additional 1.4% of the Project site (201 acres) under this alternative. California annual grassland, agricultural, developed, and disturbed areas would experience 58.9% of the permanent effects. This means that the most degraded land covers on site would bear the greatest proportion of Project-related impacts under this alternative. Approximately 1,524 acres of coastal scrub would also be affected, representing 27.2% of the impact area. Project-related disturbance of chaparral communities would be limited to approximately 457 acres, or 8.2% of the impact area. The Project would also disturb 95 acres of oak woodlands on site (1.7% of the impact area). No purple needlegrass communities would be affected. Riparian habitat constitutes approximately 6.9% of the Project area. Of the riparian habitat on site, the proposed Project would affect 225 acres, or 40% of the permanent impacts to land covers generally. Impacts to vegetation communities and land covers, while potentially significant, would be mitigated to less-than-significant levels on site; however, Alternative 2 would result in significant and unavoidable cumulative impacts to coastal scrub.

Under Alternative 2, the SCP would be approved as proposed by Newhall Land. Five preserves (Potrero Canyon, Grapevine Mesa, San Martinez Grande, Airport Mesa, and Entrada) totaling 168 acres would be established, monitored, and managed for 50 years. This acreage would include the 64 acres of existing spineflower conservation easements within the Project area. The conservation easements would become subject to the standards and requirements set forth in the SCP. Each preserve would consist of a polygon encompassing all the San Fernando Valley spineflower individuals within the stand, with an additional buffer area ranging from a minimum of 80 feet to over 300 feet in width. No activities would be allowed within the preserves or buffers that are inconsistent with spineflower management. Management of the spineflower preserves under each alternative would follow the SCP and include yearly monitoring as well as restoration and enhancement of degraded and/or damaged spineflower habitat. Proposed management measures include the installation of fencing and signage; limitations on activities near spineflower preserves (*e.g.*, road building), unauthorized access, and modifications of natural fuels; response strategies to wildfire events as presented in the Emergency Fire Response Plan; and regular consultation with the County and CDFG in connection with ongoing agricultural operations.

The five preserves established under Alternative 2 would include 13.88 acres of occupied spineflower habitat, which represents nearly 69% of the 20.24 acres of currently occupied habitat within the Project Area. The proposed SCP would authorize impacts to the remaining 6.354 acres of occupied spineflower habitat (31.6% of the total). Due to this substantial loss, Alternative 2 would result in significant and unavoidable impacts to San Fernando Valley spineflower. For further information regarding the effects of Alternative 2 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

The proposed Project (Alternative 2) would result in potentially significant impacts to special status plant and wildlife species on site. While the majority of these impacts would be mitigated to a less-than-significant level through incorporation of the mitigation measures set forth in **Section 4.5**, Biological Resources, of this EIS/EIR (see **Subsection 4.5.6**, Mitigation Measures), significant and unavoidable impacts to San Fernando Valley spineflower (discussed above), southwestern pond turtle, and San Emigdio blue butterfly would occur. These impacts would result from loss of, injury, or mortality of individuals during construction activities, loss or degradation of habitat on site, and long-term secondary impacts such as habitat fragmentation.

5.0 COMPARISON OF ALTERNATIVES

As described above, the most common vegetation communities and land cover types within the Project area would be subject to the greatest proportion of permanent impacts under the proposed Project. These vegetation communities and land covers include chaparral, coastal scrub, California annual grasslands, and previously modified land covers such as agriculture, developed, and disturbed lands. Significant impacts to chaparral, coastal scrub, and California annual grassland communities at the Project level would be reduced to a less-than-significant level by mitigation measures provided in **Section 4.5, Biological Resources**. However, cumulative impacts to coastal scrub would remain significant and unavoidable due to extensive loss and fragmentation of this community in the Santa Clara River watershed. Special-status species with moderate to high mobility that use these common vegetation communities will have the greatest likelihood to escape Project-related disturbances and move to remaining habitat within or near the Project site. Examples would include large mammals, such as mule deer, and most upland birds. Due largely to the presence of the High Country SMA, River Corridor SMA, Salt Creek area, and the Spineflower Preserves, substantial wildlife habitat would remain in the Project area after build-out. Nevertheless, the overall biological carrying capacity of the site would be reduced proportionally by direct habitat loss and indirect disturbance factors related to ongoing human occupation and activities.

Project effects would be proportionally greater for species with limited mobility and/or limited availability of suitable habitat on site, as these species would be less able to avoid Project disturbances or relocate to alternative habitat areas. Such species include those that depend on riparian and marsh/bog habitats, as the distribution of these habitats on site is patchy outside the River Corridor. The proposed Project disturbs 7.3% and 21.4%, respectively, of existing marsh/bog and riparian communities on site. However, the mitigation measures set forth in **Section 4.5, Biological Resources**, of this EIS/EIR would ensure that no net loss of these vegetation communities would occur on site.

For a complete description of the proposed Project's effects on special status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for Project-related impacts to each special-status species and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

The proposed Project would have the potential to affect local and regional-scale wildlife movement patterns, due to the Project site's large size and location along the Santa Clara River. However, the proposed "South Coast Wildlands Open Space Connectivity and Linkage" habitat linkage located in the western edge of the Project area (the Salt Creek corridor, within the Specific Plan open space) would remain intact as a viable linkage for all terrestrial and avian wildlife guilds. The Santa Clara River corridor also would remain a viable linkage for aquatic and low-mobility terrestrial (*e.g.*, small mammals and reptiles) wildlife guilds, since the three proposed new bridges would not present a barrier to wildlife movement through the River corridor. Note, however, that the proposed Project would place constraints on the Castaic/Halsey Corridor, reducing somewhat its ability to function as a habitat linkage for large animals. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the proposal, and six would have their suitability constrained by adjacent development and the placement of 19 culverts within drainages. The existing SR-126 culverted crossing of Chiquito Creek, however, would be replaced with a bridge structure and the accumulated sediments removed, thus improving its function as a wildlife crossing. For a more complete discussion of the proposed Project's

effects on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and significance findings related to wildlife habitat linkages, movement corridors, and crossings.

5.3.6 Jurisdictional Waters and Streams

Under Alternative 2, the proposed Project would result in the installation of an estimated 105,207 feet of bank protection along the Santa Clara River and other tributary drainages located in the Project area, and an estimated 59,845 feet of existing drainages would be converted to storm drains. Absent mitigation, Alternative 2 would result in the net permanent loss of 8.69 acres of wetlands and a net gain of 30.2 acres of CDFG jurisdictional streams. In addition, Alternative 2 would result in a net gain of 35.68 HARC-AW Score Units within the RMDP study area. Mitigation for the proposed Project's temporal losses of stream function would require creation of mitigation areas in the Santa Clara River mainstem and tributaries outside the Project area, as the acreage required would exceed that available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of the impacts on jurisdictional waters and streams resulting from the proposed Project (Alternative 2). The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.3.7 Air Quality

The Project-specific construction and operational emissions would be significant and unavoidable under Significance Criterion AQ-2 for VOC, NO_x, CO, PM₁₀, and PM_{2.5}. These emissions would exceed standards even after incorporation of feasible mitigation. The LST analysis shows that maximum 24-hour PM₁₀ and PM_{2.5} concentrations and the maximum one-hour NO₂ concentrations would exceed the localized significance thresholds established by the SCAQMD during each of the modeled development years. However, the one-hour CO and eight-hour CO concentrations would not exceed their respective localized significance thresholds during any of the modeled development years. The estimated PM₁₀ emissions already assume compliance with the requirements of SCAQMD Rule 403, which contain best available control measures for controlling fugitive dust from construction sites. No feasible mitigation measures exist that would provide a sufficient reduction in PM₁₀, PM_{2.5}, and NO_x emissions to meet the respective LST thresholds. Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the impacts on air quality resulting from the proposed Project (Alternative 2).

5.3.8 Traffic

Under Alternative 2, the average daily traffic (ADT) generated by the proposed Project is forecasted to be 409,000, and no on-site roadway segments would be deficient (all having a level of service of "D" or better). However, absent mitigation, this alternative would result in 14 deficient off-site roadway segments. Implementation of the mitigation measures set forth in this EIS/EIR, however, would reduce the proposed Project's traffic impacts to less than significant. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the impacts on traffic resulting from the proposed Project (Alternative 2).

5.3.9 Noise

Alternative 2 would result in both construction and operational noise impacts. All on-site operational noise impacts would be reduced to less than significant with implementation of the noise-related mitigation measures set forth in this EIS/EIR. However, off-site traffic noise impacts resulting from Project-related traffic and other traffic growth in the Project region would result in significant unavoidable noise impacts along ten roadway segments. Pile driving operations that would be required to construct the previously approved Commerce Center Drive bridge across the Santa Clara River would result in noise levels at the western portion of the Travel Village RV Park that exceed construction noise threshold standards established by the Los Angeles County Noise Ordinance. Mitigation measures adopted as part of the previously approved Specific Plan (Mitigation Measures SP-4.9-1 through SP-4.9-4) would minimize the effects of this short-term noise impact, but would not reduce the impact to a less-than-significant level. Therefore, short-term construction noise impacts associated with construction of the Commerce Center Drive bridge would be significant and unavoidable. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the impacts on noise resulting from the proposed Project (Alternative 2).

5.3.10 Cultural Resources

Under Alternative 2, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two cultural resource sites could be indirectly affected, as the proposed Project would facilitate development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the impacts on cultural resources resulting from the proposed Project (Alternative 2).

5.3.11 Paleontological Resources

Under Alternative 2, the potential for significant impacts to paleontological resources is high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Alternative 2 would involve approximately 3,451.1 acres of development (residential, nonresidential, and public facilities). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the impacts on paleontological resources resulting from the proposed Project (Alternative 2).

5.3.12 Agricultural Resources

Under Alternative 2, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project area would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented. Alternative 2 would include the conversion of about 879.5 acres of important farmlands (prime, unique or of statewide importance) to nonagricultural uses, which is a significant and unavoidable impact. The establishment of a spineflower preserve on the Entrada site would conflict with that site's current zoning designation. This

conflict would be eliminated by a proposed zone change, however, implementation of the zone change cannot be implemented by the Project applicant. Therefore, this zoning conflict is considered to be a significant and unavoidable impact. Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the impacts on agricultural resources resulting from the proposed Project (Alternative 2).

5.3.13 Geology and Geologic Hazards

Alternative 2 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. Alternative 2 would create an urban area to be inhabited by approximately 69,865 people. Mitigation measures, including removal, stabilization, and avoidance, would reduce the adverse geologic impacts to less than significant. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of the impacts on geology and geologic hazards resulting from the proposed Project (Alternative 2).

5.3.14 Land Use

Alternative 2 would include implementation of the SCP, as required in the approved Specific Plan. Under Alternative 2, the proposed preserves on the Specific Plan site would be consistent with existing zoning. The Entrada planning area, which is proposed for urban development and a spineflower preserve, is currently zoned for agriculture. This zoning conflict is considered to be a significant and unavoidable impact. Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts resulting from the proposed Project (Alternative 2).

5.3.15 Visual Resources

Alternative 2 would result in the construction of RMDP infrastructure, facilitating development in the Specific Plan area. Implementation of the proposed SCP under this alternative also would facilitate development on the Specific Plan, VCC, and a portion of the Entrada planning area. Site development would permanently alter the visual character of the Project area, and these changes would be visible to mobile viewing audiences traveling along I-5 and SR-126. As a result, impacts to visual resources are significant and unavoidable. Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources resulting from the proposed Project (Alternative 2).

5.3.16 Parks, Recreation, and Trails

Under Alternative 2, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur. Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts resulting from the proposed Project (Alternative 2).

5.3.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 2, construction activities, such as the temporary transport, storage, and use of potentially hazardous materials, would occur in the Project area. The new urban population of approximately 69,865 residents would place additional demand on emergency response services in the Project area. However, impacts would be mitigated to less than significant. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of the impacts on hazards and hazardous materials resulting from the proposed Project (Alternative 2).

5.3.18 Public Services

Under Alternative 2, the post-development population of approximately 69,865 residents would place additional demands on public services in the Project area. To meet the needs of the increase in population, additional public services (*e.g.*, law enforcement, fire protection, medical services, libraries, and schools) would be needed in the Project area. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the impacts on public services resulting from the proposed Project (Alternative 2).

5.3.19 Socioeconomics and Environmental Justice

Because no communities in the Project area qualify as minority- or low-income populations, no significant socioeconomic or environmental justice impacts would occur as a result of the proposed Project. Conversely, there would be a beneficial impact upon the socioeconomics in the Santa Clarita Valley area from implementation of the development within the Project area (22,610 residential units and 9.4 msf of commercial/industrial uses). Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of such impacts under the proposed Project (Alternative 2).

5.3.20 Solid Waste Services

Alternative 2 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts under the proposed Project (Alternative 2).

5.3.21 Global Climate Change

Alternative 2 would result in approximately 344,541 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, the proposed Project would not result in any significant global climate change-related impacts. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 2.

5.4 ALTERNATIVE 3 (ELIMINATION OF PLANNED POTRERO BRIDGE AND ADDITIONAL SPINEFLOWER PRESERVES)

The RMDP and SCP would be modified from the plans proposed by the applicant, and the requested federal and state permits and authorizations would be granted consistent with those modifications. Two bridges across the Santa Clara River and the associated bank stabilization would be constructed, including the Commerce Center Driver Bridge (already approved by the Corps and CDFG in 1999) and the Long Canyon Road Bridge. The Potrero Canyon Road Bridge would not be constructed under this alternative. Major tributary drainages would be regraded and realigned under this alternative; however, the channels would be wider than those of the proposed Project. The cismontane alkali marsh in lower Potrero Canyon would be preserved.

Additional spineflower preserve acreage would be established in the Specific Plan's Airport Mesa area and on Entrada. This alternative would provide a total of 221.8 acres of spineflower preserves and protect 77.1% of the cumulative area occupied by spineflower in the Project area.

This alternative would facilitate development within the Specific Plan, VCC, and Entrada, including 21,558 residential units and 9.33 msf of commercial/industrial/ business park floor area.

A complete description of the facilities proposed and urban development facilitated under this alternative is found in **Subsection 3.4.3** of this EIS/EIR. For a tabular comparison of impacts by alternative and issue area, please see **Subsection 5.9** below.

5.4.1 Surface Water Hydrology and Flood Control

Under Alternative 3, the floodplain area for the FEMA 100-year return event would be increased by 27.6 acres, resulting in a 100-year floodplain area of 1,298.0 acres within the Project area. This increase would constitute a 2.2 percent reduction in impact compared to the proposed Project. Due to this reduction, impacts of Alternative 3 on surface water hydrology and flood control would be substantially similar to those of the proposed Project (Alternative 2). From a flood control standpoint, the proposed Project and all alternatives have been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of Alternative 3.

5.4.2 Geomorphology and Riparian Resources

Under Alternative 3, site improvements would preserve 130,314 linear feet of on-site drainages, preserving 54 percent of the total 242,049 linear feet of jurisdictional drainages in the Project area. Alternative 3 would result in approximately two percent reduction in impacts on geomorphology and riparian resources when compared to the proposed Project; and, therefore, impacts would be substantially similar to those of the proposed Project. Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 3.

5.4.3 Water Resources

Under Alternative 3, both the Alternative 3 RMDP and SCP components and the indirectly facilitated development would result in a water supply demand of 17,958 afy, a reduction of 1,951 afy when compared to the proposed Project. This represents a 10 percent reduction in water demand when compared to the proposed Project. Alternative 3, therefore, would result in slightly less impacts when compared to the proposed Project, absent mitigation. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a complete discussion of impacts on water resources of Alternative 3.

5.4.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. However, the proposed Project and the alternatives would be subject to regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Impacts to water quality under Alternative 3, therefore, would be the same as those under the proposed Project. Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from Alternative 3.

5.4.5 Biological Resources

Under Alternative 3, permanent Project-related loss of vegetation communities and land covers would be reduced by 5.0% compared to the proposed Project. This decrease would occur primarily within the riparian and bog/marsh vegetation communities on site. For example, Alternative 3 would disturb 50 fewer acres of riparian communities than would the proposed Project (175 acres versus 225 acres). Note also that, compared to the proposed Project, this alternative would increase temporary loss of vegetation communities and land covers by 24%, primarily within coastal scrub and California annual grassland vegetation and agricultural, developed, and disturbed land. For more information on the impacts of Alternative 3 on existing vegetation and land covers, please refer to **Tables 4.5-25 and 4.5-26** and **Subsection 4.5.5.2.3.2.2** of this EIS/EIR.

Alternative 3 would add one additional spineflower preserve to those planned under the proposed Project, increasing the acreage within the preserves by 32%. Under Alternative 3 the acreage of occupied habitat protected would increase by 13% compared to the proposed Project, while the acres of impacted occupied habitat would decrease by 28%. This alternative would result in a greater level of spineflower protection than the proposed SCP, with increased preservation of occupied habitat and less loss compared to the proposed Project. Impacts to spineflower, after mitigation, would be less than significant due to the increased amount of occupied and unoccupied spineflower habitat preserved. Within the preserves, spineflower management and monitoring actions would be the same as those described in the proposed SCP. For further information regarding the effects of Alternative 3 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

Like the proposed Project, Alternative 3 would result in potentially significant impacts to special-status plant and wildlife species. These impacts would result from injury and mortality of individuals during construction, loss or degradation of habitat on site, and secondary effects. However, unlike the proposed

5.0 COMPARISON OF ALTERNATIVES

Project, Alternative 3 would not result in any impacts to special-status species that would remain significant after mitigation. Impacts to the southwestern pond turtle would be less than significant under Alternative 3 because this alternative would reduce the loss of habitat in the River corridor and lower Potrero Canyon through removal of the proposed bridge across the river at Potrero Canyon Road. Impacts to the San Emigdio blue butterfly under this alternative would be less than significant because impacts to the colony in Potrero Canyon would be reduced through design changes; this colony would not be permanently fragmented as it would be under Alternative 2.

As with the proposed Project, Alternative 3 would cause the Project area to be converted from a rural to an urban landscape, with loss of upland vegetation communities and associated plant and animal species. The mitigation program set forth in **Section 4.5**, Biological Resources, of this EIS/EIR would compensate for these losses by providing protected, managed habitat in perpetuity within the High Country SMA, River Corridor SMA, and Salt Creek area.

For a complete description of the effects of Alternative 3 on special status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for Project-related impacts to each special-status species and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

Under Alternative 3, the effects to landscape habitat linkages would be the same as those that would occur under the proposed Project. The Salt Creek corridor would accommodate north-south wildlife movement for all species guilds, and the Santa Clara River corridor would remain viable for aquatic and low-mobility avian wildlife guilds since the two proposed new bridges would not present a barrier to wildlife movement through the corridor. Like the proposed Project, however, Alternative 3 contemplates build out of the VCC, which would have a constraining effect on the Castaic/Halsey Corridor. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the three bridges and 16 culverts within drainages. Although bridges within wildlife corridors present less of an obstacle than culverts, the suitability of the affected corridors is still constrained by adjacent development. For a more complete discussion of the effects of Alternative 3 on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and significance findings related to wildlife habitat linkages, movement corridors, and crossings.

In consideration of the above factors, and particularly because Alternative 3 would substantially reduce impacts to the Santa Clara River and Potrero Canyon by eliminating the proposed bridge across the river at Potrero Canyon Road, this alternative would have less impact on biological resources when compared with the proposed Project.

5.4.6 Jurisdictional Waters and Streams

Absent mitigation, Alternative 3 would result in the net permanent loss of 7.02 acres of wetlands (21 percent reduction compared to the proposed Project) and a gain of 48.4 acres of waters of the U.S.; and a 126-acre net gain of CDFG jurisdictional streams. In addition, this alternative would result in a net gain of 56.88 HARC-AW Score Units within the RMDP, compared to a net gain of 35.68 units under the proposed Project. Overall, Alternative 3 would result in less impact upon jurisdictional waters and streams than the proposed Project absent mitigation. Mitigation for temporal losses of stream function

5.0 COMPARISON OF ALTERNATIVES

would not require creation of off-site mitigation areas under this alternative, as sufficient mitigation acreage would be available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of such impacts under Alternative 3. The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.4.7 Air Quality

Under Alternative 3, Project-specific construction and operational emissions would be significant and unavoidable, even after incorporation of all feasible mitigation measures, as described above for the proposed Project (Alternative 2). The development facilitated under Alternative 3 would result in slightly less air quality impacts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 3.

5.4.8 Traffic

Under Alternative 3, the ADT is forecast at 399,000 (a 2.4 percent reduction compared to the proposed Project). With Alternative 3, no planned on-site roadway segments would be deficient. Similar to the proposed Project, Alternative 3 would result in 14 deficient off-site roadway segments, absent mitigation. This alternative would not include the Potrero Canyon Road Bridge across the Santa Clara River, thus slightly reducing the on-site circulation when compared to the proposed Project. Overall, under Alternative 3, the traffic impacts would be substantially similar to the proposed Project. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 3.

5.4.9 Noise

Construction noise and vibration impacts associated with this alternative would be slightly less than those associated with the proposed Project, primarily due to the reduction in urban development and elimination of the proposed Potrero Canyon Road Bridge across the Santa Clara River. However, pile driving operations that would be required to construct the previously approved Commerce Center Drive bridge across the Santa Clara River would result in noise levels at the western portion of the Travel Village RV Park that exceed construction noise threshold standards established by the Los Angeles County Noise Ordinance. Mitigation measures adopted as part of the previously approved Specific Plan (Mitigation Measures SP-4.9-1 through SP-4.9-4) would minimize the effects of this short-term noise impact, but would not reduce the impact to a less-than-significant level. Therefore, short-term construction noise impacts associated with construction of the Commerce Center Drive bridge would be significant and unavoidable. Off-site traffic noise impacts resulting from Project-related traffic and other traffic growth in the region also would result in significant unavoidable noise impacts along ten roadway segments. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 3.

5.4.10 Cultural Resources

Under Alternative 3, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two

cultural resource sites could be indirectly affected by facilitating development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Therefore, the potential impacts of Alternative 3 would be the same as those of the proposed Project. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the impacts on cultural resources of Alternative 3.

5.4.11 Paleontological Resources

Under Alternative 3, the potential for impacts to paleontological resources would be high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Because Alternative 3 would involve approximately 263 fewer acres of development (residential, nonresidential, and public facilities) than the proposed Project, resulting in an eight percent decrease in developed acreage, the potential for impacts would decrease accordingly. Therefore, absent mitigation, impacts of Alternative 3 would be substantially similar to the proposed Project (Alternative 2). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the paleontological impacts of Alternative 3.

5.4.12 Agricultural Resources

Under Alternative 3, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project site would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented, which is a significant and unavoidable impact. Establishment of a spineflower preserve on the Entrada site would conflict with that site's current zoning designation. This conflict would be eliminated by a proposed zone change, however, implementation of the zone change cannot be implemented by the Project applicant. This zoning conflict is considered to be a significant and unavoidable impact. The impacts of Alternative 3 on agricultural resources would be the same as those of the proposed Project (Alternative 2). Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the agricultural resources impacts of Alternative 3.

5.4.13 Geology and Geologic Hazards

Alternative 3 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts, absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. The risk to development by geologic hazards would be substantially similar to that under the proposed Project, absent mitigation. Mitigation measures would reduce the adverse geologic impacts to less than significant. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of such impacts under Alternative 3.

5.4.14 Land Use

Alternative 3 would include implementation of the SCP, similar to the proposed Project (Alternative 2), as required in the approved Specific Plan. Proposed land uses under Alternative 3 would be consistent with existing zoning, except for the establishment of a spineflower preserve in the Entrada planning area, which is proposed for urban development. This zoning conflict is considered to be a significant and unavoidable impact. Because Alternative 3 would involve generally the same proposed land uses as the proposed Project, land use impacts related to zoning conflicts would be the same as those of the proposed Project. Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 3.

5.4.15 Visual Resources

Alternative 3 would result in a slight reduction in RMDP infrastructure and slightly larger spineflower preserves in the Project area. Alternative 3 also would facilitate development in the Specific Plan, VCC, and a portion of the Entrada planning area, but to a lesser degree when compared to the proposed Project. Under Alternative 3, the visual impacts would include implementation of a new community, and such impacts would be the same as those of the proposed Project (Alternative 2). Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources of Alternative 3.

5.4.16 Parks, Recreation, and Trails

Under Alternative 3, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur (same as the proposed Project). Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 3.

5.4.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 3, construction activities, such as the temporary transport, storage and use of potentially hazardous materials, would be reduced by approximately eight percent when compared to the proposed Project, because Alternative 3 includes approximately eight percent less development. The demand on emergency response services would be proportional to the post-development population served. Under Alternative 3, the population at risk would be approximately 66,514 residents (a 4.5 percent reduction when compared to the proposed Project). This alternative would result in hazards/hazardous materials impacts, but those impacts that are substantially similar when compared to the proposed Project, absent mitigation. With mitigation, such impacts would be reduced to less-than-significant levels. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of such impacts under Alternative 3.

5.4.18 Public Services

Implementation of Alternative 3 would result in build-out of the VCC planning area, and partial build-out of the Specific Plan area and Entrada planning area. Because the demand on public services would be

proportional to the post-development population served, Alternative 3 would place approximately 4.5 percent less demand on law enforcement, fire protection, medical services, libraries, and schools when compared to the proposed Project. Overall, such impacts would be substantially similar to those of the proposed Project (Alternative 2). Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the public services impacts of Alternative 3.

5.4.19 Socioeconomics and Environmental Justice

Because no communities in the Project area qualify as minority- or low-income populations, no significant socioeconomic and environmental justice impacts would occur as a result of Alternative 3. Impacts under this alternative would be the same as those of the proposed Project (Alternative 2). Conversely, there would be a beneficial impact upon the socioeconomics in the Santa Clarita Valley area from implementation of the development within the Project area (21,558 residential units and 9.33 msf of commercial/industrial uses). Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of the impacts on socioeconomics and environmental justice of Alternative 3.

5.4.20 Solid Waste Services

Alternative 3 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Impacts under this alternative would be substantially similar when compared to the proposed Project (Alternative 2). Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts under Alternative 3.

5.4.21 Global Climate Change

Alternative 3 would result in approximately 330,436 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, Alternative 3 would not result in any significant global climate change-related impacts. When compared to the proposed Project, Alternative 3 would result in a substantially similar amount of greenhouse gas emissions. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 3.

5.5 ALTERNATIVE 4 (ELIMINATION OF PLANNED POTRERO BRIDGE AND ADDITION OF VCC SPINEFLOWER PRESERVE)

The RMDP and SCP would be modified from the plans proposed by the applicant, and the requested federal and state permits and authorizations would be granted consistent with those modifications. Two bridges across the Santa Clara River and the associated bank stabilization would be constructed, including the Commerce Center Driver Bridge (already approved by the Corps and CDFG in 1999) and the Long Canyon Road Bridge. The Potrero Canyon Road Bridge would not be constructed under this alternative.

5.0 COMPARISON OF ALTERNATIVES

Major tributary drainages would be regraded and realigned under this alternative, but cismontane alkali marsh in lower Potrero Canyon would be preserved.

Additional spineflower preserve acreage would be established in the Specific Plan's Airport Mesa, Potrero Canyon, and Grapevine Mesa areas and on Entrada. A preserve also would be established within the VCC planning area. Alternative 4 would provide a total of 259.9 acres of spineflower preserves, and protect 82.6% of the cumulative area occupied by spineflower in the Project area.

This alternative would facilitate development within the Specific Plan and the Entrada planning area, including 21,846 residential units and 5.93 msf of commercial/industrial/business park floor area. No development would be facilitated within the VCC planning area.

A complete description of the facilities proposed and urban development facilitated under this alternative is found in **Subsection 3.4.4** of this EIS/EIR. For a tabular comparison of impacts by alternative and issue area, please see **Subsection 5.9** below.

5.5.1 Surface Water Hydrology and Flood Control

Under Alternative 4, the floodplain area for the FEMA 100-year return event would be increased by 27.6 acres, resulting in a 100-year floodplain area of 1,298.0 acres within the Project area. This increase would constitute a 2.2 percent reduction in impact when compared to the proposed Project. Due to this small reduction, impacts of Alternative 4 on surface water hydrology and flood control would be substantially similar to those of the proposed Project. From a flood control standpoint, the proposed Project and all alternatives have been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of Alternative 4.

5.5.2 Geomorphology and Riparian Resources

Under Alternative 4, the proposed design would preserve 132,392 linear feet of on-site drainages, preserving 55 percent of the total 242,049 linear feet of jurisdictional drainages in the Project area. Alternative 4 would result in approximately a three percent reduction in impacts on geomorphology and riparian resources when compared to the proposed Project; and, therefore, impacts would be substantially similar to those of the proposed Project. Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 4.

5.5.3 Water Resources

Under Alternative 4, both the Alternative 4 RMDP and SCP components and the indirectly facilitated development would result in a water supply demand of 17,296 afy, a reduction of 2,613 afy when compared to the proposed Project. This represents a 15 percent reduction in demand when compared to the proposed Project. Alternative 4, therefore, would result in slightly less impacts on water supply when

compared to the proposed Project, absent mitigation. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a complete discussion of impacts on water resources of Alternative 4.

5.5.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. However, the proposed Project and the alternatives would be subject to regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Impacts to water quality under Alternative 4, therefore, would be the same as those under the proposed Project. Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from Alternative 4.

5.5.5 Biological Resources

Compared to the proposed Project, Alternative 4 would reduce permanent impacts to existing vegetation and land covers by approximately 9% primarily in the bog/marsh, riparian, and broad-leaf upland tree habitat types. Riparian impacts, for example, would be reduced from 225 acres (Alternative 2) to 159 acres (Alternative 4). The acreage of temporary vegetation communities and land covers loss would increase by 23% compared to the proposed Project; this increase would occur almost entirely within areas mapped as California annual grassland, agriculture, developed, and disturbed land. For more information on the impacts of Alternative 4 on existing vegetation and land covers, please refer to **Tables 4.5-25 and 4.5-26** and **Subsection 4.5.5.2.3.2.2** of this EIS/EIR.

Alternative 4 would add five additional spineflower preserves to those planned under the proposed Project, increasing the acreage within the preserves by 55%. One of the additional preserves is within the VCC planning area, thus precluding build out of the VCC development. The acreage of occupied spineflower habitat protected under Alternative 4 would increase by nearly 20% compared to the proposed Project, and the acreage of impacted occupied habitat would decrease by 44%. In short, this alternative would result in a greater level of spineflower protection than the proposed SCP. The significance of impacts to spineflower, after mitigation, would be lowered to less than significant due to the increase in occupied and unoccupied spineflower habitat preserved. Within these preserves, spineflower management and monitoring actions would be the same as those described in the proposed SCP. For further information regarding the effects of Alternative 4 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

Like the proposed Project, Alternative 4 would result in significant impacts to special-status plant and wildlife species. These impacts would result from injury and mortality of individuals due to construction activities, loss or degradation of habitat on site, and secondary effects. Impacts of Alternative 4 on most special-status species would not differ substantially from those of Alternative 3, and all such impacts would be reduced to a less-than-significant level. Impacts to the southwestern pond turtle would be less than significant under Alternative 4 because this alternative would reduce loss of habitat in the river corridor and lower Potrero Canyon through removal of the proposed bridge across the river at Potrero Canyon Road. Under this alternative, impacts to the San Emigdio blue butterfly would be less than

5.0 COMPARISON OF ALTERNATIVES

significant because impacts to the colony in Potrero Canyon would be reduced through design changes that would avoid permanent fragmentation of the colony.

As with the proposed Project, Alternative 4 would cause the Project area to be converted from a rural to an urban landscape, with loss of upland vegetation communities and associated plant and animal species. The mitigation program set forth in **Section 4.5**, Biological Resources, of this EIS/EIR would help to compensate for these losses by providing protected, managed habitat in perpetuity within the High Country SMA, River Corridor SMAs, and Salt Creek area.

For a complete description of the effects of Alternative 4 on special-status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for Project-related impacts to each special-status species and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

Compared to the proposed Project, Alternative 4 would have fewer effects on landscape habitat linkages. This is because the proposed Project affects the Castaic/Halsey Corridor, while Alternative 4 does not because VCC would not be constructed. Like the proposed Project, Alternative 4 would allow the Salt Creek corridor to accommodate north-south wildlife movement for all species guilds, and the Santa Clara River corridor would remain viable for and low-mobility terrestrial wildlife guilds since the two proposed new bridges would not present a barrier to wildlife movement through the corridor. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the proposal, and six would have their suitability constrained by adjacent development and the placement of three bridges and 16 culverts within drainages. Although bridges within wildlife corridors present less of an obstacle than culverts, the suitability of the affected corridors is still constrained by adjacent development. For a more complete discussion of the effects of Alternative 4 on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and significance findings related to wildlife habitat linkages, movement corridors, and crossings.

In consideration of the above factors, and particularly because Alternative 4 would avoid impacts to the Santa Clara River and Potrero Canyon by eliminating the proposed bridge across the river at Potrero Canyon Road, this alternative would have less impact on biological resources when compared with the proposed Project.

5.5.6 Jurisdictional Waters and Streams

Absent mitigation, Alternative 4 would result in the net permanent loss of 7.15 acres of wetlands (18 percent reduction compared to the proposed Project) and a gain of 13.6 acres of waters of the U.S.; and a 93-acre net gain of CDFG jurisdictional streams. In addition, this alternative would result in a net gain of 47.47 HARC-AW Score Units within the RMDP, compared to a net gain of 35.68 units under the proposed Project. Overall, Alternative 4 would result in less impact upon jurisdictional waters and streams than the proposed Project absent mitigation. Mitigation for temporal losses of stream function under Alternative 4 would require creation of mitigation areas in tributaries to the Santa Clara River outside the Project area, as the acreage of tributary mitigation required would exceed that available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete

discussion of such impacts under Alternative 4. The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.5.7 Air Quality

Under Alternative 4, Project-specific construction and operational emissions would be significant and unavoidable, even after incorporation of all feasible mitigation measures, as described above for the proposed Project (Alternative 2). The development facilitated under Alternative 4 would result in slightly less air quality impacts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 4.

5.5.8 Traffic

Under Alternative 4, the ADT is forecast at 369,000 (a 9.7 percent reduction compared to the proposed Project). With Alternative 4, no planned on-site roadway segments would be deficient. Alternative 4 would result in 10 deficient off-site roadway segments, absent mitigation. This alternative would not include the Potrero Canyon Road Bridge across the Santa Clara River, thus slightly reducing the on-site circulation when compared to the proposed Project. Overall, under Alternative 4, the traffic impacts would be substantially similar to those of the proposed Project. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 4.

5.5.9 Noise

Construction noise and vibration impacts associated with this alternative would be slightly less than those associated with the proposed Project, primarily due to the reduction in urban development and elimination of the proposed Potrero Canyon Road Bridge across the Santa Clara River. However, pile driving operations that would be required to construct the previously approved Commerce Center Drive bridge across the Santa Clara River would result in noise levels at the western portion of the Travel Village RV Park that exceed construction noise threshold standards established by the Los Angeles County Noise Ordinance. Mitigation measures adopted as part of the previously approved Specific Plan (Mitigation Measures SP-4.9-1 through SP-4.9-4) would minimize the effects of this short-term noise impact, but would not reduce the impact to a less-than-significant level. Therefore, short-term construction noise impacts associated with construction of the Commerce Center Drive bridge would be significant and unavoidable. Off-site traffic noise impacts resulting from Project-related traffic and other traffic growth in the region would result in significant unavoidable noise impacts along ten roadway segments. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 4.

5.5.10 Cultural Resources

Under Alternative 4, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two cultural resource sites could be indirectly affected by facilitating development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Therefore, the potential impacts of

Alternative 4 would be the same as those of the proposed Project. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the impacts on cultural resources of Alternative 4.

5.5.11 Paleontological Resources

Under Alternative 4, the potential for impacts to paleontological resources would be high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Because Alternative 4 would involve approximately 251 fewer acres of development (residential, nonresidential, and public facilities) than the proposed Project, resulting in an eight percent decrease in developed acreage, the potential for impacts would decrease accordingly. Therefore, absent mitigation, impacts of Alternative 4 would be substantially similar impact to those of the proposed Project (Alternative 2). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the impacts on paleontological resources of Alternative 4.

5.5.12 Agricultural Resources

Under Alternative 4, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project site would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented. Therefore, the impacts of Alternative 4 on agricultural resources would be the same as those of the proposed Project (Alternative 2). Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the agricultural resource impacts of Alternative 4.

5.5.13 Geology and Geologic Hazards

Alternative 4 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. The risk to development by geologic hazards would be substantially similar to that under the proposed Project, absent mitigation. Mitigation measures would reduce the adverse geologic impacts to less than significant. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of such impacts under Alternative 4.

5.5.14 Land Use

Alternative 4 would include implementation of the SCP, as required in the approved Specific Plan. Within the Specific Plan site, proposed land uses under Alternative 4 would be consistent with existing zoning. In the Entrada planning area, which is currently zoned for agriculture, urban development and a spineflower preserve are proposed in a configuration generally similar to Alternative 2 and would result in a significant unavoidable zoning conflict impact.. Under Alternative 4, the creation of a spineflower preserve within the VCC planning area would preclude any future commercial development in that planning area. This would result in a reduction in nonresidential uses when compared to the proposed

Project, and conflict with Los Angeles County's previously approved development plans. Because of the zoning inconsistencies in the VCC planning area, impacts of Alternative 4 on land use would be greater than those of the proposed Project (Alternative 2). Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 4.

5.5.15 Visual Resources

Alternative 4 would result in a slight reduction in RMDP infrastructure and larger spineflower preserves in the Project area, including the addition of a preserve in the VCC planning area. Alternative 4 would facilitate development in the Specific Plan site and Entrada planning area, but to a lesser degree when compared to the proposed Project. Build-out of the County-approved commercial development in the VCC planning area would not occur, as the proposed VCC spineflower preserve would preclude this development. Because the VCC planning area would not be developed under this alternative, no changes to the existing visual character of that site would result from implementation of Alternative 4. The visual impacts of Alternative 4 would include construction of a new urban community in an area currently occupied by agriculture and open space; but such impacts would be slightly less severe than those of the proposed Project (Alternative 2), but would remain significant and unavoidable. Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources of Alternative 4.

5.5.16 Parks, Recreation, and Trails

Under Alternative 4, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur (same as the proposed Project). Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 4.

5.5.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 4, construction activities, such as the temporary transport, storage, and use of potentially hazardous materials, would be reduced by approximately 4.5 percent when compared to the proposed Project. The demand on emergency response services would be proportional to the post-development population served. Under Alternative 4, the population at risk would reduce by 3.38 percent when compared to the Proposed Project, resulting in a substantially similar impact absent mitigation. With mitigation, such impacts would be reduced to less-than-significant levels. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of such impacts under Alternative 4.

5.5.18 Public Services

Implementation of Alternative 4 would result in partial build-out of the Specific Plan site and Entrada planning area. The commercial development in the VCC planning area would not proceed due to a spineflower preserve in that planning area. Because the demand on public services would be proportional to the post-development population served, Alternative 4 would place approximately 3.38 percent less demand on law enforcement, fire protection, medical services, libraries, and schools when compared to

the proposed Project. Overall, such impacts would be substantially similar to those of the proposed Project. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the impacts on public services of Alternative 4.

5.5.19 Socioeconomics and Environmental Justice

Because no communities in the Project area qualify as minority- or low-income populations, no significant socioeconomic and environmental justice impacts would occur as a result of Alternative 4. Impacts under this alternative would be the same as those of the proposed Project (Alternative 2). Conversely, there would be a beneficial impact upon the socioeconomics in the Santa Clarita Valley area from implementation of the development within the Project area (21,846 residential units and 5.93 msf of commercial/industrial uses). Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of the impacts on socioeconomics and environmental justice of Alternative 4.

5.5.20 Solid Waste Services

Alternative 4 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Impacts under this alternative would be substantially similar when compared to the proposed Project (Alternative 2). Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts under Alternative 4.

5.5.21 Global Climate Change

Alternative 4 would result in approximately 321,942 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, Alternative 4 would not result in any significant global climate change-related impacts. When compared to the proposed Project, Alternative 4 would result in slightly less emissions. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 4.

5.6 ALTERNATIVE 5 (WIDEN TRIBUTARY DRAINAGES AND ADDITION OF VCC SPINEFLOWER PRESERVE)

The RMDP and SCP would be modified from the plans proposed by the applicant, and the requested federal and state permits and authorizations would be granted consistent with those modifications. The three bridges across the Santa Clara River and the associated bank stabilization would be constructed as under the proposed Project (Alternative 2). Major tributary drainages would be regraded and realigned under this alternative, but would result in impact reductions in the Chiquito Canyon, San Martinez Grande Canyon, and Potrero Canyon drainages compared to the proposed Project (Alternative 2).

Additional spineflower preserve acreage would be established in the Specific Plan's Airport Mesa, Potrero Canyon, and Grapevine Mesa areas and on Entrada. A preserve also would be established within the

5.0 COMPARISON OF ALTERNATIVES

VCC planning area. Alternative 5 would provide a total of 338.6 acres of spineflower preserves, and protect 84.3% of the cumulative area occupied by spineflower in the Project area.

This alternative would facilitate development within the Specific Plan and the Entrada planning area, including 21,155 residential units and 5.87 msf of commercial/industrial/business park floor area. No development would be facilitated within the VCC planning area.

A complete description of the facilities proposed and urban development facilitated under this alternative is found in **Subsection 3.4.5** of this EIS/EIR. For a summary comparison of impacts by alternative and issue area, please see **Subsection 5.9** below.

5.6.1 Surface Water Hydrology and Flood Control

Under Alternative 5, the floodplain area for the FEMA 100-year return event would be decreased by 19.5 acres, resulting in a 100-year floodplain area of 1,250.9 acres within the Project area. This decrease in the 100-year floodplain area would constitute a 1.5 percent increase in impact when compared to the proposed Project. Due to this small increase, impacts of Alternative 5 on surface water hydrology and flood control would be substantially similar to those of the proposed Project. From a flood control standpoint, the proposed Project and all alternatives have been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of Alternative 5.

5.6.2 Geomorphology and Riparian Resources

Under Alternative 5, the proposed site design would preserve 132,820 linear feet of on-site drainages, preserving 55 percent of the total 242,049 linear feet of jurisdictional drainages in the Project area. Alternative 5 would result in approximately a three percent reduction in impacts on geomorphology and riparian resources when compared to the proposed Project; and, therefore, impacts would be substantially similar to those of the proposed Project (Alternative 2). Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 5.

5.6.3 Water Resources

Under Alternative 5, both the Alternative 5 RMDP and SCP components and the indirectly facilitated development would result in a water supply demand of 16,417 afy, a reduction of 3,492 afy when compared to the proposed Project. This represents a 20 percent reduction in demand when compared to the proposed Project, absent mitigation. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a complete discussion of the impacts on water resources of Alternative 5.

5.6.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. However, the proposed Project and alternatives would be subject to

regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Impacts to water quality under Alternative 5, therefore, would be the same as those under the proposed Project (Alternative 2). Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from Alternative 5.

5.6.5 Biological Resources

The impacts to existing vegetation and land covers under Alternative 5 would be very similar to those that would occur under Alternative 4: a 10.0% decrease in permanent loss and a 22.6% increase in temporary loss compared to the proposed Project. As with Alternative 4, the bog/marsh, riparian, and broad-leaf upland tree vegetation communities would experience the greatest reduction in loss. For example, Alternative 5 would disturb 161 acres of riparian and bog/marsh compared to 225 acres with the proposed Project. Under this alternative, most of the increased temporary habitat loss would occur within California annual grassland, agriculture, and developed and disturbed lands. For more information on the impacts of Alternative 5 on existing vegetation and land covers, please refer to **Tables 4.5-25 and 4.5-26** and **Subsection 4.5.5.2.3.2.2** of this EIS/EIR.

Alternative 5 would add seven additional spineflower preserves to those planned under the proposed Project, and would enlarge the buffer areas as well, thus increasing the acreage within the preserves by 132% compared to the proposed Project. Like Alternative 4, this alternative proposes a spineflower preserve within the VCC planning area, thus precluding build out of the VCC development. The acreage of *occupied* spineflower habitat protected under Alternative 5 would increase by more than 23% compared to the proposed Project, and the acreage of impacted occupied habitat would decrease by 50%. As a result, this alternative would result in a greater level of spineflower protection than the proposed SCP. Impacts to spineflower, after mitigation, would be reduced to less than significant due to the increase in occupied and unoccupied spineflower habitat preserved. Within these preserves, spineflower management and monitoring actions would be the same as those described in the proposed SCP. For further information regarding the effects of Alternative 5 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

Like the proposed Project and Alternatives 3 and 4, Alternative 5 would result in significant impacts to special-status plant and wildlife species due to injury and mortality of individuals from construction activities, loss or degradation of habitat on site, and secondary effects. The impacts of Alternative 5 on most special-status species would not differ substantially from those of Alternatives 3 and 4, and all such impacts would be mitigated to a less-than-significant level. Impacts to the southwestern pond turtle would be less than significant under Alternative 5 because, although this alternative contemplates construction of the bridge at Potrero Canyon Road, it disturbs less habitat in the Santa Clara River corridor and throughout Potrero Canyon than does the proposed Project, and would not preclude use of lower Potrero Canyon by the pond turtle. Under this alternative, impacts to the San Emigdio blue butterfly would be less than significant because impacts to the colony in Potrero Canyon would be reduced through design changes and the colony would not be permanently fragmented.

As with the proposed Project, Alternative 5 would cause the Project area to be converted from a rural to an urban landscape, with loss of upland vegetation communities associated plant and animal species. The

5.0 COMPARISON OF ALTERNATIVES

mitigation program set forth in **Section 4.5**, Biological Resources, of this EIS/EIR would compensate for these losses by providing protected, managed habitat in perpetuity within the High Country SMA, River Corridor SMA, and Salt Creek area.

For a complete description of the effects of Alternative 5 on special status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for Project-related impacts to each special-status species and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

Under Alternative 5, the effects to landscape habitat linkages would be approximately the same as those that would occur under the proposed Project, but incrementally less due to the replacement of proposed culvert crossings with bridges. Also, unlike the proposed Project, Alternative 5 would have little to no effect on the Castaic/Halsey Corridor because VCC would not be constructed. The Salt Creek corridor would continue to accommodate north-south wildlife movement for all species guilds, and the Santa Clara River corridor would remain a viable linkage for aquatic and low-mobility terrestrial wildlife guilds, since the two proposed new bridges would not present a barrier to wildlife movement through the corridor. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the proposal, and six would have their suitability constrained by adjacent development and the placement of 7 bridges and 12 culverts within drainages. Although bridges within wildlife corridors present less of an obstacle than culverts, the suitability of the affected corridors is still constrained by adjacent development. For a more complete discussion of the effects of Alternative 5 on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and significance findings related to wildlife habitat linkages, movement corridors, and crossings.

In consideration of the above factors, because Alternative 5 would avoid and protect substantially more spineflower occurrences site-wide and jurisdictional/riparian areas within Potrero Canyon, this alternative would have less impact on biological resources when compared with the proposed Project.

5.6.6 Jurisdictional Waters and Streams

Absent mitigation, Alternative 5 would result in a net loss of 7.84 acres of wetlands (10 percent reduction compared to the proposed Project) and an increase of 79.4 acres of waters of the U.S.; and a 150 acre net gain of CDFG jurisdictional streams. In addition, this alternative would result in a net gain of 87.62 HARC-AW Score Units within the RMDP, compared to a net gain of 35.68 units under the proposed Project. Overall, Alternative 5 would result in less impact on jurisdictional waters and streams than the proposed Project absent mitigation. Mitigation for temporal losses of stream function under Alternative 5 would require creation of mitigation areas in the Santa Clara River mainstem outside the Project area, as the acreage of river mainstem mitigation required would exceed that available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of such impacts under Alternative 5. The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.6.7 Air Quality

Under Alternative 5, Project-specific construction and operational emissions would be significant and unavoidable, even after incorporation of all feasible mitigation measures, as described above for the proposed Project (Alternative 2). The development facilitated under Alternative 5 would result in slightly less air quality impacts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.7, Air Quality**, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 5.

5.6.8 Traffic

Under Alternative 5, the ADT is forecast at 361,000 (an 11.7 percent reduction when compared to the proposed Project). Under Alternative 5, no planned on-site roadway segments would be deficient. Alternative 5 would result in 7 deficient off-site roadway segments, absent mitigation. Under Alternative 5, the traffic impacts would be substantially similar to those of the proposed Project (Alternative 2). Please refer to **Section 4.8, Traffic**, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 5.

5.6.9 Noise

Construction noise and vibration impacts associated with this alternative would be slightly less than those associated with the proposed Project, primarily due to the reduction in urban development. However, pile driving operations that would be required to construct the previously approved Commerce Center Drive bridge across the Santa Clara River would result in noise levels at the western portion of the Travel Village RV Park that exceed construction noise threshold standards established by the Los Angeles County Noise Ordinance. Mitigation measures adopted as part of the previously approved Specific Plan (Mitigation Measures SP-4.9-1 through SP-4.9-4) would minimize the effects of this short-term noise impact, but would not reduce the impact to a less-than-significant level. Therefore, short-term construction noise impacts associated with construction of the Commerce Center Drive bridge would be significant and unavoidable. Off-site traffic noise impacts resulting from Project-related traffic and other traffic growth in the Project region would result in significant unavoidable noise impacts along ten roadway segments. Please refer to **Section 4.9, Noise**, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 5.

5.6.10 Cultural Resources

Under Alternative 5, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two cultural resource sites could be indirectly affected by facilitating development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Therefore, the potential impacts of Alternative 5 would be the same as those of the proposed Project. Please refer to **Section 4.10, Cultural Resources**, of this EIS/EIR for a complete discussion of the impacts on cultural resources of Alternative 5.

5.6.11 Paleontological Resources

Under Alternative 5, the potential for impacts to paleontological resources would be high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Because Alternative 5 would involve approximately 339 fewer acres of development (residential, nonresidential, and public facilities) than the proposed Project, resulting in an 11 percent decrease in developed acreage, the potential for impacts would decrease accordingly. Therefore, absent mitigation, impacts of Alternative 5 would be slightly less to those of the proposed Project (Alternative 2). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the impacts on paleontological resources of Alternative 5.

5.6.12 Agricultural Resources

Under Alternative 5, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project site would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented. Therefore, the impacts of Alternative 5 on agricultural resources would be the same as those of the proposed Project (Alternative 2). Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of agricultural resource impacts of Alternative 5.

5.6.13 Geology and Geologic Hazards

Alternative 5 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. The risk to development by geologic hazards would be slightly less than the proposed Project, absent mitigation. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of such impacts under Alternative 5.

5.6.14 Land Use

Alternative 5 would include implementation of the SCP, as required in the approved Specific Plan. Within the Specific Plan site, proposed land uses under Alternative 5 would be consistent with existing zoning. Within the Entrada planning area, which is currently zoned for agriculture, urban development and a spineflower preserve are proposed in a configuration generally similar to that proposed under Alternative 2 (proposed Project), and would result in a significant unavoidable zoning conflict impact.. Within the VCC planning area, the creation of a spineflower preserve under Alternative 5 would preclude any future commercial development. This would result in a reduction in nonresidential uses compared to the proposed Project, and conflict with Los Angeles County's previously approved development plans. Because Alternative 5 would result in zoning inconsistencies in the VCC planning area, impacts of Alternative 5 on land use would be greater than those of the proposed Project (Alternative 2). Please refer

to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 5.

5.6.15 Visual Resources

Alternative 5 would result in a slight reduction in RMDP infrastructure and larger spineflower preserves in the Project area, including the addition of a preserve in the VCC planning area. Alternative 5 would facilitate development in the Specific Plan and a portion of the Entrada planning area, but to a lesser degree when compared to the proposed Project. As stated above, there would be no development, and resulting visual impacts in the VCC planning area due to the additional spineflower preserve. Under Alternative 5, the visual impacts would include implementation of a new community, and such impacts would be slightly less than those of the proposed Project (Alternative 2) but would remain significant and unavoidable. Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources of Alternative 5.

5.6.16 Parks, Recreation, and Trails

Under Alternative 5, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur (same as the proposed Project). Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 5.

5.6.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 5, construction activities, such as the temporary transport, storage, and use of potentially hazardous materials, would be reduced by approximately 6.3 percent when compared to the proposed Project. The demand on emergency response services would be proportional to the post-development population served. Under Alternative 5, the population at risk would be reduced by 6.44 percent when compared to the proposed Project, resulting in a slightly lesser impact absent mitigation. With mitigation, such impacts would be reduced to less-than-significant levels. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of such impacts under Alternative 5.

5.6.18 Public Services

Implementation of Alternative 5 would result in partial build-out of the Specific Plan site and Entrada planning area. The commercial development in the VCC planning area would not proceed due to a spineflower preserve in that planning area. Because the demand on public services would be proportional to the post-development population served, Alternative 5 would place approximately 6.44 percent less demand on law enforcement, fire protection, medical services, libraries, and schools, when compared to the proposed Project. Overall, such impacts would be slightly less than that of the proposed Project. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the impacts on public services of Alternative 5.

5.6.19 Socioeconomics and Environmental Justice

Because no communities in the Project area qualify as minority- or low-income populations, no significant socioeconomic and environmental justice impacts would occur as a result of Alternative 5. Impacts under this alternative would be the same as those of the proposed Project (Alternative 2). Conversely, there would be a beneficial impact upon the socioeconomics in the Santa Clarita Valley area from implementation of the development within the Project area (21,155 residential units and 5.87 msf of commercial/industrial uses). Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of the impacts on socioeconomics and environmental justice of Alternative 5.

5.6.20 Solid Waste Services

Alternative 5 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Impacts under this alternative would be substantially similar when compared to the proposed Project (Alternative 2). Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts of Alternative 5.

5.6.21 Global Climate Change

Alternative 5 would result in approximately 312,420 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, Alternative 5 would not result in any significant global climate change-related impacts. When compared to the proposed Project, Alternative 5 would result in slightly less emissions. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 5.

5.7 ALTERNATIVE 6 (ELIMINATION OF PLANNED COMMERCE CENTER DRIVE BRIDGE AND MAXIMUM SPINEFLOWER EXPANSION/CONNECTIVITY)

The RMDP and SCP would be modified from the plans proposed by the applicant, and the requested federal and state permits and authorizations would be granted consistent with those modifications. Two bridges across the Santa Clara River and the associated bank stabilization would be constructed, including the Potrero Canyon Road Bridge (extended span similar to the proposed Project (Alternative 2) and Alternative 5) and the Long Canyon Road Bridge. The previously approved Commerce Center Drive bridge would not be constructed under this alternative. Major tributary drainages would be regraded and realigned under this alternative. However, all realigned channels would be wider under this alternative than under the proposed Project (Alternative 2), and the majority of proposed road crossings along the channels would be bridges as opposed to culverts.

This alternative would designate spineflower preserves on the applicant's property with known spineflower populations (Specific Plan, four preserves; Entrada, one preserve; and VCC, one preserve). Alternative 6 would significantly increase preserve acreage, and provide a total of 891.2 acres of

5.0 COMPARISON OF ALTERNATIVES

spineflower preserves, protecting 88.5% of the cumulative area occupied by spineflower in the Project area.

This alternative would facilitate development within the Specific Plan and the Entrada planning area, including 20,212 residential units and 5.78 msf of commercial/industrial/business park floor area. No development would be facilitated within the VCC planning area.

A complete description of the facilities proposed and urban development facilitated under this alternative is found in **Subsection 3.4.6** of this EIS/EIR. For a summary comparison of impacts by alternative and issue area, please see **Subsection 5.9** below.

5.7.1 Surface Water Hydrology and Flood Control

Under Alternative 6, the floodplain area for the FEMA 100-year return event would be increased by 9.7 acres, resulting in a 100-year floodplain area of 1,172.2 acres within the Project area. This increase would constitute a 0.8 percent reduction in impact when compared to the proposed Project. Due to this small reduction, impacts of Alternative 6 on surface water hydrology and flood control would be substantially similar to those of the proposed Project. From a flood control standpoint, the proposed Project and all alternatives have been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of Alternative 6.

5.7.2 Geomorphology and Riparian Resources

Under Alternative 6, the proposed design would preserve 147,153 linear feet of on-site drainages, preserving 61 percent of the total 242,049 linear feet of jurisdictional drainage in the Project area. Alternative 6 would result in approximately nine percent less impacts on geomorphology and riparian resources when compared to the proposed Project; and, therefore, impacts would be slightly less than those of the proposed Project. Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 6.

5.7.3 Water Resources

Under Alternative 6, both the Alternative 6 RMDP and SCP components and the indirectly facilitated development would result in a water supply demand of 15,553 afy, a reduction of 4,356 afy when compared to the proposed Project. This represents a 27 percent reduction in demand when compared with the proposed Project. Alternative 6, therefore, would result in less impact when compared to the proposed Project, absent mitigation. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a discussion of the impacts on water resources of Alternative 6.

5.7.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. However, the proposed Project and alternatives would be subject to

regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Impacts to water quality under Alternative 6, therefore, would be the same as those under the proposed Project (Alternative 2). Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from Alternative 6.

5.7.5 Biological Resources

This alternative would result in a 19.5% decrease in permanent loss of vegetation communities and land covers compared to the proposed Project. For example, Alternative 6 would disturb 110 acres of riparian and bog and marsh communities, whereas the proposed Project would disturb 225 acres of these vegetation types. Alternative 6 would reduce substantially impacts to coastal scrub and broad-leaf upland tree vegetation types as well. Temporary habitat loss would be increased by 24 percent under this alternative, primarily in the coastal scrub and California annual grassland vegetation types and agricultural, developed, and disturbed land covers. For more information on the impacts of Alternative 6 on existing vegetation and land covers, please refer to **Tables 4.5-25** and **4.5-26** and **Subsection 4.5.5.2.3.2.2** of this EIS/EIR.

This alternative focuses on providing the maximum amount of habitat connectivity within and among the proposed spineflower preserves. While Alternative 6 would establish six spineflower preserves (one more than in the proposed SCP), the buffer areas would be enlarged substantially, increasing the size of the preserves to 891 acres -- a 432% increase over the preserve area in the proposed Project. The preserves would be comprised of large, contiguous blocks of suitable spineflower habitat. The VCC development would not be constructed under this alternative, as one of the proposed preserves is within the VCC planning area. The acreage of occupied spineflower habitat protected under Alternative 6 would increase by 29% compared to the proposed SCP, and the acreage of impacted occupied habitat would decrease by 63%. This alternative would result in a much greater level of spineflower protection than the proposed SCP. Impacts to spineflower, after mitigation, would be reduced to less than significant under this alternative due to the increase in occupied and unoccupied spineflower habitat preserved. Within the preserves, spineflower management and monitoring actions would be the same as those described in the proposed SCP. For further information regarding the effects of Alternative 6 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

Although Alternative 6 would result in significant impacts to special-status plants and wildlife, this alternative differs from the proposed Project in that the eastern portion of the Project area would be largely undeveloped. The previously approved bridge across the River at Commerce Center Drive would not be constructed, and the Airport Mesa spineflower preserve would be significantly expanded. Therefore, while impacts associated with general vegetation community loss and urbanization would occur under this alternative, the intensity and extent of those impacts would be less than under the proposed Project. Under this alternative, all significant impacts to special-status species -- including those to the San Fernando Valley spineflower, southwestern pond turtle, and San Emigdio blue butterfly -- would be mitigated to less-than-significant levels.

For a complete description of the effects of Alternative 6 on special-status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for

Project-related impacts to each special-status species, and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

Under Alternative 6, the effects to landscape habitat linkages would be approximately the same as those that would occur under the proposed Project, except that the Castaic/Halsey Corridor would be unaffected because VCC would not be constructed and many of the proposed culvert crossings would be replaced with bridges. The Salt Creek corridor would continue to accommodate north-south wildlife movement for all species guilds, and the Santa Clara River corridor would remain a viable linkage for aquatic and low-mobility terrestrial wildlife guilds since the two proposed new bridges would not present a barrier to wildlife movement through the corridor. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the proposal, and six would have their suitability constrained by adjacent development and the placement of nine bridges and 12 culverts within drainages. Although bridges within wildlife corridors present less of an obstacle than culverts, the suitability of the affected corridors would still be constrained by adjacent development. Although some of the drainages in the eastern portion of the Project area would remain undeveloped under this alternative, the presence of existing adjacent development upstream of these areas precludes their effective use as wildlife corridors. For a more complete discussion of the effects of Alternative 6 on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and Significance findings related to wildlife habitat linkages, movement corridors, and crossings.

In consideration of the above factors, in particular the large blocks of contiguous habitat that would be preserved and managed within spineflower preserves, Alternative 6 would have substantially less impact on biological resources when compared with the proposed Project.

5.7.6 Jurisdictional Waters and Streams

Absent mitigation, Alternative 6 would result in the a permanent loss of 6.22 acres of wetlands (28 percent reduction in impact compared to the proposed Project) and an increase of 52.3 acres of waters of the U.S.; and a 227 acre gain of CDFG jurisdictional streams. In addition, this alternative would result in a net gain of 181.26 HARC-AW Score Units within the RMDP, compared to a net gain of 35.68 units under the proposed Project. Overall, Alternative 6 would result in much less impact on jurisdictional waters and streams than the proposed Project absent mitigation. Mitigation for temporal losses of stream function would not require creation of off-site mitigation areas under this alternative, as sufficient mitigation acreage would be available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of such impacts under Alternative 6. The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.7.7 Air Quality

Under Alternative 6, Project-specific construction and operational emissions would be significant and unavoidable, even after incorporation of all feasible mitigation measures, as described above for the proposed Project (Alternative 2). The development facilitated under Alternative 6 would result in slightly

less air quality impacts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 6.

5.7.8 Traffic

Under Alternative 6, the ADT is forecast at 350,000 (a 14.2 percent reduction compared to the proposed Project). With Alternative 6, only one on-site roadway segment would be deficient. Alternative 6 would result in 14 deficient off-site roadway segments, absent mitigation. This alternative would not include the Commerce Center Drive Bridge across the Santa Clara River, thus slightly reducing the on-site circulation compared to the proposed Project. Overall, under Alternative 6, the traffic impacts would be greater than those of the proposed Project. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 6.

5.7.9 Noise

Construction noise and vibration impacts associated with this alternative would be slightly less than those associated with the proposed Project, primarily due to the reduction in urban development and elimination of the proposed Commerce Center Drive Bridge across the Santa Clara River. Significant unavoidable off-site traffic noise impacts along ten roadway segments would continue to occur under this alternative. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 6.

5.7.10 Cultural Resources

Under Alternative 6, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two cultural resource sites could be indirectly affected by facilitating development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Therefore, the potential impacts of Alternative 6 would be the same as those of the proposed Project. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the impacts on cultural resources of Alternative 6.

5.7.11 Paleontological Resources

Under Alternative 6, the potential for impacts to paleontological resources would be high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Because Alternative 6 would involve approximately 684 fewer acres of development (residential, nonresidential, and public facilities) than the proposed Project, resulting in a 22 percent decrease in developed acreage, the potential for impacts would decrease accordingly. Therefore, absent mitigation, impacts of Alternative 6 would be slightly less than those of the proposed Project (Alternative 2). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the impacts on paleontological resources of Alternative 6.

5.7.12 Agricultural Resources

Under Alternative 6, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project site would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented. Therefore, the impacts of Alternative 6 on agricultural resources would be identical to those of the proposed Project (Alternative 2). Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the agricultural resource impacts of Alternative 6.

5.7.13 Geology and Geologic Hazards

Alternative 6 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts, absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. The risk to development by geologic hazards would be slightly less than that of the proposed Project, absent mitigation. Mitigation measures would reduce the adverse geologic impacts to less than significant. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of such impacts under Alternative 6.

5.7.14 Land Use

Alternative 6 would include implementation of the SCP. Within the Specific Plan site, proposed land uses under Alternative 6 would be consistent with existing zoning. Within the Entrada planning area, which is currently zoned for agriculture, urban development and a spineflower preserve are proposed in a configuration generally similar to that proposed under Alternative 2 (proposed Project), and would result in a significant unavoidable zoning conflict impact. Within the VCC planning area, the creation of a spineflower preserve under Alternative 6 would preclude any future commercial development. This would result in a reduction in nonresidential uses compared to the proposed Project, and conflict with Los Angeles County's previously approved development plans. Because Alternative 6 would result in zoning inconsistencies in the VCC planning area, impacts of Alternative 6 on land use would be greater than those of the proposed Project (Alternative 2). Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 6.

5.7.15 Visual Resources

Alternative 6 would result in a reduction in RMDP infrastructure and larger spineflower preserves in the Project area, including the addition of a preserve in the VCC planning area. Alternative 6 would facilitate development in the Specific Plan and a portion of the Entrada planning area, but to a lesser degree when compared to the proposed Project. As stated above, there would be no development, and resulting visual impacts in the VCC planning area due to the additional spineflower preserve. Under Alternative 6, the visual impacts would include implementation of a new community, and such impacts would be slightly less than those of the proposed Project (Alternative 2) but would remain significant and unavoidable.

Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources of Alternative 6.

5.7.16 Parks, Recreation, and Trails

Under Alternative 6, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur (same as the proposed Project). Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 6.

5.7.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 6, construction activities, such as temporary transport, storage, and use of potentially hazardous materials, would be reduced by approximately 15 percent compared to the proposed Project. The demand on emergency response services would be proportional to the post-development population served. Under Alternative 6, the population at risk would reduce by 10.61 percent compared to the proposed Project, resulting in a slightly lesser impact absent mitigation. With mitigation, such impacts would be reduced to less-than-significant levels. Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of such impacts under Alternative 6.

5.7.18 Public Services

Implementation of Alternative 6 would result in partial build-out of the Specific Plan area and Entrada planning area. The commercial development in the VCC planning area would not proceed due to a spineflower preserve in that planning area. Because the demand on public services would be proportional to the post-development population served, Alternative 6 would place approximately 10.6 percent less demand on law enforcement, fire protection, medical services, libraries, and schools when compared to the proposed Project. Overall, such impacts would be slightly less than that of the proposed Project. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the impacts on public services of Alternative 6.

5.7.19 Socioeconomics and Environmental Justice

Because no communities in the Project area qualify as minority- or low-income populations, no significant socioeconomic and environmental justice impacts would occur as a result of Alternative 6. Impacts under this alternative would be the same as those of the proposed Project (Alternative 2). Conversely, there would be a beneficial impact upon the socioeconomics in the Santa Clarita Valley area from implementation of the development within the Project area (20,212 residential units and 5.78 msf of commercial/industrial uses). Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of the impacts on socioeconomics and environmental justice of Alternative 6.

5.7.20 Solid Waste Services

Alternative 6 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Impacts under this alternative would be substantially similar when compared to the proposed Project (Alternative 2). Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts under Alternative 6.

5.7.21 Global Climate Change

Alternative 6 would result in approximately 299,697 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, Alternative 6 would not result in any significant global climate change-related impacts. When compared to the proposed Project, Alternative 6 would result in slightly less emissions. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 6.

5.8 ALTERNATIVE 7 (AVOIDANCE OF 100-YEAR FLOODPLAIN, ELIMINATION OF TWO PLANNED BRIDGES, AND AVOIDANCE OF SPINEFLOWER)

The RMDP and SCP would be modified from the plans proposed by the applicant, and the requested federal and state permits and authorizations would be granted consistent with those modifications. Only one bridge across the Santa Clara River would be constructed, located at Long Canyon Road. The Potrero Canyon Road Bridge and the already approved Commerce Center Drive Bridge would not be constructed under this alternative. Bank stabilization along the Santa Clara River would be constructed outside the 100-year floodplain. Under this alternative, major tributary drainages would not be regraded or realigned. Bank stabilization would be constructed to protect development, but would be located outside the 100-year floodplain of these drainages. In addition, the Middle Canyon and Magic Mountain Canyon drainages, which are proposed for conversion to buried storm drains under the proposed Project (Alternative 2), would be preserved.

Alternative 7 was designed to maximize avoidance of the cumulative area occupied by spineflower within the Project area. This alternative would designate spineflower preserves with 300 feet of expansion area surrounding the cumulative area occupied spineflower locations, and provide a total of 557 acres of spineflower habitat preserves, protecting 98.2% of the cumulative area occupied by spineflower in the Project area.³

This alternative would facilitate development within the Specific Plan and the Entrada planning area, including 17,323 residential units and 3.82 msf of commercial/industrial/business park floor area. No development would be facilitated within the VCC planning area.

³ The term "expansion area" is used in the SCP to represent the area interior to the core that is not part of the cumulative area occupied. (See, *e.g.*, SCP, Table 3.0-34.)

5.0 COMPARISON OF ALTERNATIVES

A complete description of the facilities proposed and urban development facilitated a complete description is found in **Subsection 3.4.7** of this EIS/EIR. For a summary comparison of impacts by alternative and issue area, please see **Subsection 5.9** below.

5.8.1 Surface Water Hydrology and Flood Control

Under Alternative 7, the floodplain area for the FEMA 100-year return event would be increased by 141.9 acres, resulting in a 100-year floodplain area of 1,412.3 acres within the Project area. This increase would constitute an environmental benefit, and impacts of Alternative 7 would be substantially less when compared to the proposed Project. From a flood control standpoint, the proposed Project and all alternatives have been designed to comply with DPW requirements, and flooding impacts have been eliminated by design. Mitigation measures also have been incorporated to ensure that hydrology/flood control impacts remain less than significant. Please refer to **Section 4.1**, Surface Water Hydrology and Flood Control, of this EIS/EIR for a complete discussion of the hydrology-related impacts of Alternative 7.

5.8.2 Geomorphology and Riparian Resources

Under Alternative 7, the proposed design would preserve 209,809 linear feet of on-site drainages, preserving 87 percent of the total 242,049 linear feet of jurisdictional drainage in the Project area. Alternative 7 would result in approximately 35 percent reduction in impacts on geomorphology and riparian resources, and impacts would be much less compared to the proposed Project. Please refer to **Section 4.2**, Geomorphology and Riparian Resources, of this EIS/EIR for a complete discussion of the geomorphology-related impacts of Alternative 7.

5.8.3 Water Resources

Under Alternative 7, both the Alternative 7 RMDP and SCP components and the indirectly facilitated development would result in a water supply demand of 10,590 afy, a reduction of 9,319 afy when compared to the proposed Project. Because this represents a 60 percent reduction in demand, Alternative 7 would result in much less impact on water resources when compared to the proposed Project, absent mitigation. Please refer to **Section 4.3**, Water Resources, of this EIS/EIR for a discussion of the impacts on water resources of Alternative 7.

5.8.4 Water Quality

The surface water quality would be directly impacted by construction activities, which include removal of vegetation, grading, and trenching. However, the proposed Project and alternatives would be subject to regulatory requirements, included as water quality mitigation measures in this EIS/EIR, which would ensure that water quality standards are met and that such impacts remain less than significant. Impacts to water quality under Alternative 7, therefore, would be the same as those under the proposed Project. Please refer to **Section 4.4**, Water Quality, of this EIS/EIR for a complete discussion of the impacts on water quality resulting from Alternative 7.

5.8.5 Biological Resources

Compared to the proposed Project, Alternative 7 would reduce permanent vegetation community and land cover loss on site by 34.4%. For riparian and bog/marsh communities, Alternative 7 would reduce impacts by 82.7%, from 225 acres to 39 acres. Impacts to upland vegetation communities also would be reduced. However, Alternative 7 would result in a 284 percent increase in the amount of temporary vegetation community loss compared to the proposed Project. This increase would occur in areas mapped as chaparral, coastal scrub, broad-leaf upland tree, and California annual grassland vegetation, and agricultural, developed, and disturbed land covers. For more information on the impacts of Alternative 7 on existing vegetation and land covers, please refer to **Tables 4.5-25** and **4.5-26** and **Subsection 4.5.5.2.3.2.2** of this EIS/EIR.

Alternative 7 focuses on protecting all currently known spineflower occurrences on the Project site. The alternative would designate 28 spineflower preserves, delineated by applying 300-foot buffer areas around all known habitat occupied by spineflower. These preserves are individually smaller than the blocks proposed in Alternative 6 and are not contiguous. Alternative 7 would provide a total of 557 acres of spineflower preserves (a 232% increase compared to the proposed SCP), protecting 98.2% of the cumulative habitat occupied by spineflower on site (a 43% increase compared to the proposed SCP). Only 0.36 acre of occupied spineflower habitat would be lost under this alternative, 94% less than what would be lost under the proposed Project. This alternative would result in a much greater level of spineflower protection, with greatly increased protection of occupied habitat and only a fraction of the loss compared to the proposed Project. This alternative would result in a much greater level of spineflower protection than the proposed SCP, with increased protection of occupied habitat and less than two percent spineflower take site-wide. Impacts to spineflower, after mitigation, would be reduced to less than significant under this alternative due to the increase in occupied and unoccupied spineflower habitat preserved. Within the preserves, spineflower management and monitoring actions would be the same as those described in the proposed SCP. For further information regarding the effects of Alternative 7 on the San Fernando Valley spineflower, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR.

Alternative 7 would result in potentially significant impacts to special-status plants and wildlife; however, this alternative differs from the proposed Project in that the amount of urban development facilitated would be reduced by approximately 23%. Therefore, while impacts associated with general habitat loss and urbanization would occur under this alternative, the intensity and extent of those impacts would be substantially less than under the proposed Project. Additionally, avoidance of all mapped 100-year floodplain areas would greatly lessen impacts to aquatic, semi-aquatic, and riparian species compared to the proposed Project. Under this alternative, all impacts to special-status species -- including San Fernando Valley spineflower, southwestern pond turtle, and San Emigdio blue butterfly -- would be reduced to less-than-significant levels.

For a complete description of the effects of Alternative 7 on special-status plants and wildlife, please refer to **Subsection 4.5.5** of this EIS/EIR. Also, **Table 4.5-75** provides a summary of significance findings for Project-related impacts to each special-status species, and **Subsection 4.5.5.1** describes the analysis approach and methods used to reach impact determinations.

Under Alternative 7, the effects to landscape habitat linkages would be approximately the same as those that would occur under the proposed Project, except that the Castaic/Halsey Corridor would be unaffected because VCC would not be constructed and most of the Project's proposed culvert crossings would be replaced with bridges. The Salt Creek corridor would continue to accommodate north-south wildlife movement for all species guilds, and the Santa Clara river corridor would remain a viable linkage for aquatic and low-mobility terrestrial wildlife guilds, since the two proposed new bridges would not present a barrier to wildlife movement through the corridor. Of the 17 other wildlife corridors within the Project site, seven would be rendered non-functional by the proposal, and six would have their suitability constrained by adjacent development and the placement of nine bridges and 12 culverts within drainages. Although bridges would still be constrained by adjacent development. Although some of the drainages in the eastern portion of the Project area would remain undeveloped under this alternative, the presence of existing adjacent development upstream of these areas precludes their effective use as wildlife corridors. For a more complete discussion of the effects of Alternative 7 on wildlife movement, please refer to **Section 4.5**, Biological Resources, of this EIS/EIR. Within that section, **Tables 4.5-23** and **4.5-74** summarizes the impacts and significance findings related to wildlife habitat linkages, movement corridors, and crossings.

In consideration of the above factors, especially the avoidance of all mapped floodplains and nearly all spineflower populations, Alternative 7 would have substantially less impact on biological resources when compared with the proposed Project.

5.8.6 Jurisdictional Waters and Streams

Absent mitigation, Alternative 7 would result in a permanent loss of 1.09 acres of wetlands (an 87 percent reduction in impacts compared to the proposed Project) and an increase of 94.5 acres of waters of the U.S. and a 551-acre net gain of CDFG jurisdictional streams. In addition, this alternative would result in a net gain of 407.18 HARC-AW Score Units within the RMDP, compared to a net gain of 35.68 units under the proposed Project. Overall, Alternative 7 would result in much less impact on jurisdictional waters and streams when compared to the proposed Project absent mitigation. Mitigation for temporal losses of stream function would not require creation of off-site mitigation areas under this alternative, as sufficient mitigation acreage would be available on site. Please refer to **Section 4.6**, Jurisdictional Waters and Streams, of this EIS/EIR for a complete discussion of such impacts under Alternative 7. The impacts of all seven alternatives on jurisdictional waters and streams are presented comparatively in **Table 5.0-3** (Corps) and **Table 5.0-4** (CDFG).

5.8.7 Air Quality

Under Alternative 7, Project-specific construction and operational emissions would be significant and unavoidable, even after incorporation of all feasible mitigation measures, as described above for the proposed Project (Alternative 2). The development facilitated under Alternative 7 would result in slightly less air quality impacts when compared to the proposed Project (Alternative 2). Please refer to **Section 4.7**, Air Quality, of this EIS/EIR for a complete discussion of the air quality impacts of Alternative 7.

5.8.8 Traffic

Under Alternative 7, the ADT is forecast at 266,000 (a 35 percent reduction when compared to the proposed Project). With Alternative 7, no planned on-site roadway segments would be deficient. Alternative 7 would result in 8 deficient off-site roadway segments, absent mitigation. This alternative would not include the bridges across the Santa Clara River at Commerce Center Drive and Potrero Canyon Road, significantly reducing the on-site circulation when compared to the proposed Project. Overall, under Alternative 7, the traffic impacts would be greater than those of the proposed Project. Please refer to **Section 4.8**, Traffic, of this EIS/EIR for a complete discussion of the traffic impacts of Alternative 7.

5.8.9 Noise

Construction noise and vibration impacts associated with this alternative would be less than Alternative 2, particularly with respect to pile driving and vibration, because the bridges across the Santa Clara River at Commerce Center Drive and Potrero Canyon Road would not be constructed under this alternative. Because substantially fewer residents would be exposed to noise impacts under this alternative, impacts of Alternative 7 would be considered much less than those of the proposed Project, however, significant unavoidable off-site traffic noise impacts along ten roadway segments would continue to occur. Please refer to **Section 4.9**, Noise, of this EIS/EIR for a complete discussion of the noise impacts of Alternative 7.

5.8.10 Cultural Resources

Under Alternative 7, there would be no direct impacts to known cultural resources as a result of construction of the proposed RMDP infrastructure associated with the proposed Project. However, two cultural resource sites could be indirectly affected by facilitating development of the previously approved residential, mixed-use, and nonresidential uses in the Specific Plan area, absent mitigation. With mitigation, the impacts would be reduced to less than significant. Therefore, the potential impacts of Alternative 7 would be the same as those of the proposed Project. Please refer to **Section 4.10**, Cultural Resources, of this EIS/EIR for a complete discussion of the impacts on cultural resources of Alternative 7.

5.8.11 Paleontological Resources

Under Alternative 7, the potential for impacts to paleontological resources would be high for both direct and indirect impacts, absent mitigation. However, the intensity of these potential impacts would be proportional to the amount of surface disturbance associated with each alternative. Because Alternative 7 would involve approximately 1,486 fewer acres of development (residential, nonresidential, and public facilities) than the proposed Project, resulting in a 51 percent decrease in developed acreage, the potential for impacts would decrease accordingly. Therefore, absent mitigation, impacts of Alternative 7 would much less than those of the proposed Project (Alternative 2). Please refer to **Section 4.11**, Paleontological Resources, of this EIS/EIR for a complete discussion of the impacts on paleontological resources of Alternative 7.

5.8.12 Agricultural Resources

Under Alternative 7, the development of urban areas, spineflower preserves, and open space would convert agricultural lands to nonagricultural uses. Although the amount of development would vary among the alternatives, the entire Project site would be converted to a combination of nonagricultural uses (urban, preserves, and open areas) regardless of which alternative is implemented. Therefore, the impacts of Alternative 7 on agricultural resources would be the same as those of the proposed Project. Please refer to **Section 4.12**, Agricultural Resources, of this EIS/EIR for a complete discussion of the agricultural resource impacts of Alternative 7.

5.8.13 Geology and Geologic Hazards

Alternative 7 would implement a new community within the Specific Plan area, VCC, and a portion of the Entrada planning area, which would result in significant geologic impacts, absent mitigation. Although the risk of geologic hazards would exist regardless of which alternative is implemented, the intensity of the potential risk would be proportional to the population exposed. The risk to development by geologic hazards would be less than that under the proposed Project, absent mitigation. Mitigation measures would reduce the adverse geologic impacts to less than significant. Please refer to **Section 4.13**, Geology and Geologic Hazards, of this EIS/EIR for a complete discussion of the impacts on geology and geologic hazards of Alternative 7.

5.8.14 Land Use

Implementation of Alternative 7 would facilitate development of the Specific Plan site, however, Alternative 7 would reduce previously approved residential development on the Specific Plan site by 21 percent when compared to the proposed Project. The Specific Plan has received local land use approvals and was found to be consistent with applicable land use plans and policies. As described above, Alternative 7 would not be consistent with an objective of the Specific Plan related to accommodating a jobs/housing balance, which would result in a significant and unavoidable land use impact under Significance Threshold 2. In addition, if implemented, Alternative 7 may require an amendment to the Specific Plan because the alternative calls for avoidance of development within the 100-year floodplain, elimination of two planned bridges, which would impact the approved Specific Plan circulation and land use patterns, and avoidance of impacts to the spineflower within the Specific Plan site. If a Specific Plan amendment were required to implement Alternative 7, then Los Angeles County would need to approve such an amendment, which is outside the control of the applicant. Therefore, Alternative 7 has the potential to result in a significant and unavoidable conflict with the land use requirements of the approved Specific Plan.

Within the Entrada planning area, which is currently zoned for agriculture, urban development and a spineflower preserve are proposed in a configuration generally similar to that proposed under Alternative 2, except that Alternative 7 proposes a larger preserve. The preserve would conflict with the site's existing agricultural zoning and result in a significant unavoidable zoning conflict impact.

Within the VCC planning area, the creation of a spineflower preserve under Alternative 7 would preclude any future commercial development. This would result in a reduction in nonresidential uses compared to

the proposed Project, and conflict with Los Angeles County's previously approved development plans. Because Alternative 7 would result in zoning inconsistencies within the Specific Plan site and VCC planning area, impacts of Alternative 7 on land use would be greater than those of the proposed Project (Alternative 2). Please refer to **Section 4.14**, Land Use, of this EIS/EIR for a complete discussion of the land use impacts of Alternative 7.

5.8.15 Visual Resources

Alternative 7 would result in a slight reduction in RMDP infrastructure and larger spineflower preserves in the Project area, including the addition of a preserve in the VCC planning area. Alternative 7 would facilitate development in the Specific Plan and a portion of the Entrada planning area, but to a lesser degree when compared to the proposed Project; however, significant unavoidable impacts to visual resources would continue to occur. As stated above, there would be no development, and resulting visual impacts in the VCC planning area due to the additional spineflower preserve. Under Alternative 7, the visual impacts would include implementation of a new community, and such impacts would be slightly less than those of the proposed Project (Alternative 2). Please refer to **Section 4.15**, Visual Resources, of this EIS/EIR for a complete discussion of the impacts on visual resources of Alternative 7.

5.8.16 Parks, Recreation, and Trails

Under Alternative 7, the parks and recreation acreages that would be developed under this alternative exceed requirements based on the post-development population; and, thus, no impacts related to parks and recreation would occur (same as the proposed Project). Please refer to **Section 4.16**, Parks, Recreation, and Trails, of this EIS/EIR for a complete discussion of the parks and recreation impacts of Alternative 7.

5.8.17 Hazards, Hazardous Materials, and Public Safety

Under Alternative 7, construction activities, such as the temporary transport, storage, and use of potentially hazardous materials, would be reduced by approximately 35.4 percent when compared to the proposed Project. The demand on emergency response services would be proportional to the post-development population served. Under Alternative 7, the population at risk would reduce by 23.38 percent when compared to the proposed Project. However, because Alternative 7 would provide only one point of access to the site across the Santa Clara River (the proposed bridge at Long Canyon Road), access across the river would be impaired in the event of an emergency or evacuation. Thus, the impact would remain significant after mitigation, and the impacts of Alternative 7 relative to public safety and hazards would be greater than those of the proposed Project (Alternative 2). Please refer to **Section 4.17**, Hazards, Hazardous Materials, and Public Safety, of this EIS/EIR for a complete discussion of such impacts under Alternative 7.

5.8.18 Public Services

Implementation of Alternative 7 would result in partial build-out of the Specific Plan site and Entrada planning area. The commercial development in the VCC planning area would not proceed due to a spineflower preserve in that planning area. Because the demand on public services would be proportional to the post-development population served, Alternative 7 would place approximately 23.4 percent less

5.0 COMPARISON OF ALTERNATIVES

demand on law enforcement, fire protection, medical services, libraries, and schools when compared to the proposed Project. Overall, such impacts would be less than that of the proposed Project. Please refer to **Section 4.18**, Public Services, of this EIS/EIR for a complete discussion of the impacts on public services of Alternative 7.

5.8.19 Socioeconomics and Environmental Justice

Because no communities in the Project vicinity qualify as minority- or low-income populations, no direct, indirect, or secondary socioeconomic and environmental justice impacts would occur as a result of Alternative 7. Impacts under this alternative would be the same as those of the proposed Project. Please refer to **Section 4.19**, Socioeconomics and Environmental Justice, of this EIS/EIR for a complete discussion of the impacts on socioeconomic and environmental justice of Alternative 7.

5.8.20 Solid Waste Services

Alternative 7 would result in the generation of solid waste, and the need for solid waste services, during both construction and operational phases. Project impacts would remain significant even after implementation of the mitigation measures set forth in this EIS/EIR due to landfill capacity shortfalls over the long term. Impacts under this alternative would be substantially similar when compared to the proposed Project (Alternative 2). Please refer to **Section 4.20**, Solid Waste Services, of this EIS/EIR for a complete discussion of such impacts under Alternative 7.

5.8.21 Global Climate Change

Alternative 7 would result in approximately 245,369 tonnes of carbon dioxide equivalent emissions per year. As these emissions would not impede California's achievement of the greenhouse gas emission reduction target for year 2020, as codified in Assembly Bill 32, Alternative 7 would not result in any significant global climate change-related impacts. When compared to the proposed Project, Alternative 7 would result in much less emissions. Please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR for a complete discussion of the global climate change-related impacts of Alternative 7.

5.9 IMPACTS SUMMARY

For comparative purposes, the information previously presented in this section is provided in tabular format in **Table 5.0-5**, below. The table contains symbols that illustrate the level of impact of each alternative compared to the proposed Project, ranging from "much greater impact" to "much less impact." Although numeric thresholds have been assigned to each symbol, the thresholds are based on a reasonableness standard and not on a precise mathematical determination.

5.10 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an environmentally superior alternative. The determination of an environmentally superior alternative is based on consideration of how the alternative either avoids or reduces significant impacts to the environment. Because Alternative 1 (the "No Action/No Project" alternative) would involve no development on the Project site, thereby avoiding all potential impacts of the proposed Project, this alternative would be the environmentally superior alternative.

5.0 COMPARISON OF ALTERNATIVES

**Table 5.0-5
Comparison Of Alternatives**

Impacts		No Project	Proposed Project	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7	Impacts Less Than Significant After Incorporation of EIS/EIR Mitigation?
4.1	Hydrology	○	●	●	●	●	●	○	Yes, all alternatives
4.2	Geomorphology and Riparian Resources	✱	●	●	●	●	●	○	Yes, all alternatives
4.3	Water Resources	○	●	○	○	○	○	○	Yes, all alternatives
4.4	Water Quality	○	●	●	●	●	●	●	Yes, all alternatives
4.5	Biological Resources	○	●	○	○	○	○	○	No, for Alternative 2
4.6	Jurisdictional Waters and Streams	○	●	○	○	○	○	○	Yes, all alternatives
4.7	Air Quality	○	●	○	○	○	○	○	No, all alternatives
4.8	Traffic	○	●	●	○	○	✱	✱	Yes, all alternatives
4.9	Noise	○	●	○	○	●	○	○	No, all alternatives
4.10	Cultural Resources	○	●	●	●	●	●	●	Yes, all alternatives
4.11	Paleontological Resources	○	●	●	●	○	○	○	Yes, all alternatives
4.12	Agricultural Resources	○	●	●	●	●	●	●	No, all alternatives
4.13	Geology and Geologic Hazards	○	●	●	●	○	○	○	Yes, all alternatives
4.14	Land Use	✱	●	●	✱	✱	✱	✱	No, all alternatives
4.15	Visual Resources	○	●	●	●	○	○	○	No, all alternatives
4.16	Parks, Recreation, and Trails	○	●	●	●	●	●	●	Yes, all alternatives
4.17	Hazards, Hazardous Materials, and Public Safety	○	●	●	●	○	○	✱	No for Alternative 7 only
4.18	Public Services	○	●	●	●	○	○	○	Yes, all alternatives
4.19	Socioeconomics and Environmental Justice	○	●	●	●	●	●	●	Yes, all alternatives
4.20	Solid Waste	○	●	●	○	○	○	○	No, all alternatives
8.0	Global Climate Change	○	●	●	○	○	○	○	Yes, all alternatives

Notes:

✱ Much Greater Impact than proposed Project

✱ Greater Impact than proposed Project

● Same Impact as proposed Project (±.01%)

● Substantially Similar Impact When Compared to the proposed Project (±.01 – 5%)

○ Slightly Less Impact Compared to the proposed Project (5.1 -14.9% Reduction)

○ Less Impact Compared to the proposed Project (15 - 25% Reduction)

○ Much Less Impact Compared to the proposed Project (> 25% Reduction)

● Not applicable, as the proposed Project cannot be compared to itself

Source: URS (2008).

5.0 COMPARISON OF ALTERNATIVES

Section 15126.6, subdivision (e)(2), of the State CEQA Guidelines states that, "[i]f the environmentally superior alternative is the no Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Among the other alternatives, Alternative 7 is considered the environmentally superior alternative because it would result in the lowest level of environmental impacts across the majority of environmental resource categories. The relative impacts of all seven alternatives are presented in **Table 5.0-1**. This table illustrates that Alternative 7 has the lowest level of environmental impact in nearly all of the environmental resource categories.

5.11 PREFERRED ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 C.F.R. §1502.14, subd. (e)) require that a draft EIS identify the lead agency's preferred alternative or alternatives, if one or more exists. The Corps has not yet identified a preferred alternative among the alternatives evaluated; and, therefore, no preferred alternative is identified in this Draft EIS/EIR. A preferred alternative will be selected following receipt and consideration of public comments on this EIS/EIR, and will be identified in the Final EIS/EIR as required by the CEQ regulations.