City of Colton
General Plan Update
Environmental Impact Report

State Clearinghouse Number 2012031037
May 2013

Vol. I







Hogle-Ireland
Planning & Development Consulting

City of Colton
General Plan Update: Land Use, Housing, and Mobility Elements

Environmental Impact Report

Prepared For:
City of Colton
659 N. La Cadena Drive
Colton, CA 92324
Contact:
Mark Tomich, Director of Development Services

Prepared By:
Hogle-Ireland, Inc.
630 N. Rosemead Boulevard, #150
Pasadena, CA 91107
Contact:
Laura Stetson, AICP, Senior Vice President
626.356.4460

May 2013

This page left intentionally blank

Table of Contents

Section **Page**

1.0 – Introduction 1-1
1.1 – CEQA and the Purpose of an EIR 1-1
1.2 – Program EIR 1-4
1.3 – Scoping and Public Review 1-7
1.4 – Citation 1-9

2.0 – Executive Summary 2-1
2.1 – Project Summary 2-1
2.2 – Project Location 2-3
2.3 – Environmental Setting 2-4
2.4 – Environmental Impacts 2-4
2.5 – Areas of Potential Controversy 2-19
2.6 – Alternatives to the Proposed Project 2-19

3.0 – Project Description 3-1
Background 3-1
Project Location 3-1
Project Objectives 3-2
Existing General Plan 3-2
Proposed General Plan Update 3-3
Intended Use of this EIR 3-7
Scoping 3-8

4.0 – Environmental Impact Analysis 4.1-1
4.1 Aesthetics 4.1-1
4.2 Agricultural and Forestry Resources 4.2-1
4.3 Air Quality 4.3-1
4.4 Biological Resources 4.4-1
4.5 Cultural Resources 4.5-1
4.6 Geology and Soils 4.6-1
4.7 Greenhouse Gas Emissions 4.7-1
4.8 Hazards and Hazardous Materials 4.8-1
4.9 Hydrology and Water Quality 4.9-1
4.10 Land Use and Planning 4.10-1
4.11 Mineral Resources 4.11-1
4.12 Noise 4.12-1
4.13 Population and Housing 4.13-1
4.14 Public Services 4.14-1
4.15 Recreation 4.15-1
4.16 Transportation and Traffic 4.16-1

4.17 Utilities and Service Systems.....4.17-1

5.0 – Alternatives 5-1
5.1 – Purpose..... 5-1
5.2 – Rationale for Alternative Selection..... 5-1
5.3 – Alternatives Considered 5-2
5.4 – Alternatives Considered but Rejected..... 5-5
5.5 – Evaluation of Impacts Among Selected Alternatives 5-6
5.6 – Environmentally Superior Alternative 5-13

6.0 – Analysis of Long Term Effects 6-1
6.1 – Cumulative Impacts 6-1
6.2 – Growth Inducing Impacts 6-25
6.3 – Energy Conservation 6-26
6.4 – Significant Irreversible Environmental Changes..... 6-30
6.5 – Unavoidable Significant Environmental Impacts..... 6-31

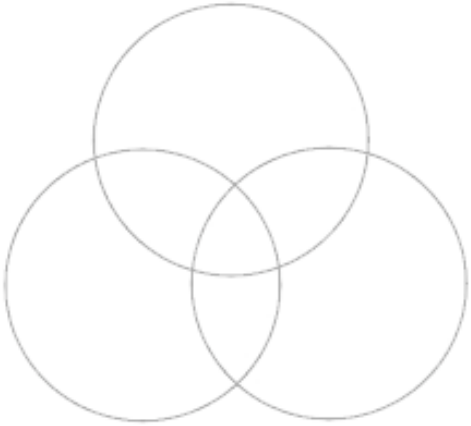
7.0 – Effects Found Not to Be Significant 7-1

8.0 – Preparation Team 8-1
8.1 – Lead Agency 8-1
8.2 – Consultants to the Lead Agency 8-1

9.0 – Organizations and Persons Consulted 9-1

Volume II – Appendix (Under Separate Cover)

Appendix A: Notice of Preparation and Scoping Materials
Appendix B: NOP Distribution List and Comment Letters
Appendix C: Air Quality and Climate Change Assessment
Appendix D: Noise Study
Appendix E: Traffic Impact Analysis



Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

1	Introduction

CEQA and the Purpose of an EIR 1.1

Introduction

The City of Colton (Lead Agency) has completed an update of its General Plan, to establish a vision and guiding policies to shape and manage long term growth in the Colton planning area, which is referred to as the "General Plan Update" and is the subject of this Environmental Impact Report.

The adoption and implementation of a General Plan update is defined as a "project" and is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Section 15000 et. seq.). Accordingly, the City has prepared this environmental impact report (EIR) to assess the long range and cumulative environmental consequences that could result from adoption and implementation of the proposed General Plan Update. This report has been prepared in accordance with the CEQA Statutes and Guidelines and with the City of Colton's local rules and procedures for implementing CEQA. It was prepared by professional planning consultants under contract to the City of Colton. The City of Colton is the Lead Agency for the preparation of this EIR, as defined by CEQA (Public Resources Code, Section 21067, as amended), because it has primary discretionary authority with respect to adoption, amendment, and implementation of the proposed General Plan. The content of this document reflects the independent judgment of the City.

This body of state law known as "CEQA" was originally enacted in 1970 and has been amended since. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code, as follows:

The Legislature finds and declares as follows:

(a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.

(b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.

(c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.

(d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the State take immediate steps to identify

any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.

(e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

(f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.

(g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

j) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.

k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.

m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002, quoted below:

> The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.

CEQA Case Law Regarding the Purpose of an EIR

In addition to the policies declared by the Legislature concerning environmental protection and administration of CEQA in Sections 21000, 21001, 21002, and 21002.1 of the Public Resources Code, the courts of the State have declared the following policies to be implicit in CEQA:

(a) The EIR requirement is the heart of CEQA. (County of Inyo v. Yorty, 32 Cal. App. 3d 795.)

(b) The EIR serves not only to protect the environment but also to demonstrate to the public that it is being protected. (County of Inyo v. Yorty, 32 Cal. App. 3d 795.)

(c) The EIR is to inform other governmental agencies and the public generally of the environmental impact of a proposed project. (No Oil, Inc. v. City of Los Angeles, 13 Cal. 3d 68.)

(d) The EIR is to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. (People ex rel. Department of Public Works v. Bosio, 47 Cal. App. 3d 495.)

(e) The EIR process will enable the public to determine the environmental and economic values of their elected and appointed officials thus allowing for appropriate action come election day should a majority of the voters disagree. (People v. County of Kern, 39 Cal. App. 3d 830.)

(f) CEQA was intended to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the

statutory language. (Friends of Mammoth v. Board of Supervisors, 8 Cal. 3d 247.)

(g) The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind. (Bozung v. LAFCO (1975) 13 Cal.3d 263)

(h) The lead agency must consider the whole of an action, not simply its constituent parts, when determining whether it will have a significant environmental effect. (Citizens Assoc. For Sensible Development of Bishop Area v. County of Inyo (1985) 172 Cal.App.3d 151)

(i) CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document. (Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692)

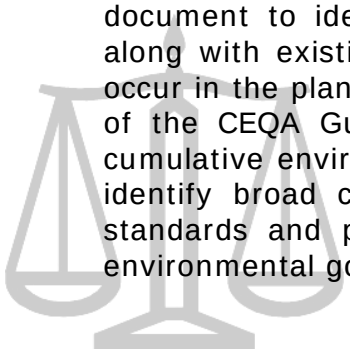
(j) CEQA requires that decisions be informed and balanced. It must not be subverted into an instrument for the oppression and delay of social, economic, or recreational development or advancement. (Laurel Heights Improvement Assoc. v. Regents of U.C. (1993) 6 Cal.4th 1112 and Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553)

Program EIR 1.2

Purpose and Scope

The proposed General Plan Update is a long range planning program, to guide the orderly growth and development of the Colton planning area over the long-term. It is intended to communicate the City's vision of its future and to establish a policy framework to govern decision-making concerning the physical development of the community, including assurances that the community at large will be supported by an adequate range of public services and infrastructure systems.

The General Plan Update would not authorize any specific development project or other form of land use approval or any kind of public facilities or capital facilities expenditures or improvements. As such, a Program EIR is the appropriate type of document to identify the geographic extent of sensitive resources and hazards, along with existing and planned services and infrastructure support systems that occur in the planning area. Further, the Program EIR is described in Section 15168 of the CEQA Guidelines as the appropriate analytical framework to assess the cumulative environmental effects of the full plan, in a first tier level of analysis, to identify broad concerns and sets of impacts, and to define/develop regulatory standards and programmatic procedures that reduce impacts and help achieve environmental goals and objectives.



Later activities proposed pursuant to the goals and policies of the General Plan will be reviewed in light of this EIR and may focus on those site-specific and localized environmental issues that could not be examined in sufficient detail as part of this EIR. Advantages of a Program EIR include consideration of effects and alternatives that cannot practically be reviewed at the project-level, consideration of cumulative impacts that may not be apparent on a project-by-project basis, the ability to enact citywide mitigation measures, and subsequent reduction in paperwork.

Organization of the Program EIR

The EIR is divided into three volumes. Volume 1 contains the primary analysis of potential environmental impacts discussed in the following nine sections:

Section 1.0 Introduction

Section 2.0 Executive Summary
A brief project description and summarizes project impacts and mitigation measures

Section 3.0 Project Description
Provides detailed description of the proposed Project

Section 4.0 Environmental Impact Analysis
Considers project impacts and identifies mitigation measures designed to reduce significant impacts

Section 5.0 Alternatives
Provides an analysis of alternatives to the proposed project

Section 6.0 Analysis of Long-Term Effects
Provides an analysis of cumulative impacts, growth-inducing impacts, and significant irreversible environmental impacts

Section 7.0 Effects Found Not to be Significant
Identifies areas of no significant impact

Section 8.0 Preparation Team
Lists the preparers of this analysis

Section 9.0 Organizations and Persons Consulted
Contains reference information on people and organizations consulted during the preparation of the EIR

Volume 2 includes the EIR appendices, including documentation of the scoping process and Notice of Preparation (NOP). The appendices include:

- Appendix A: Notice of Preparation

- Appendix B: NOP Distribution List, Comment Letters, and Scoping Meeting Notes
- Appendix C: Air Quality and Climate Change Report
- Appendix D: Noise Study
- Appendix E: Traffic Impact Analysis

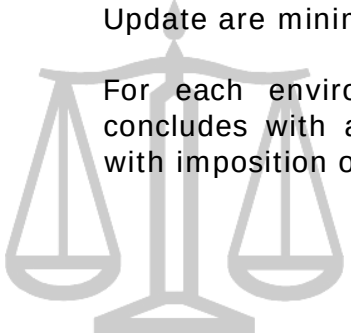
In compliance with Public Resources Code Section 21081.6, a mitigation monitoring reporting program (MMRP) will be prepared as a separately bound document that will be adopted in conjunction with the certification of the Final EIR. The MMRP, responses to public comments, any revisions to the Draft EIR, and findings will be identified as Volume 3.

Approach to EIR Analysis

The approach to the analysis presented in this EIR is programmatic in nature given the broad scope of the General Plan. Each environmental issue is analyzed in the same manner, starting with a discussion of the existing environmental setting, including physical conditions and pertinent planning and regulatory framework. Thresholds of significance are then defined and are used to measure the proposed General Plan Update's potential impact to the environment. Thresholds of significance are based on a broad list of questions and impact topics set forth in Appendix G of the State CEQA Guidelines. The impact analysis section examines the broad, long-term environmental effects resulting from implementation of the goals and policies contained in each of the updated General Plan elements. The assessment of impacts focuses on how the impact in question could occur and whether some aspect of the proposed Plan would trigger or somehow induce those sets of conditions, due to the unique effects of the proposed policies, rather than a generalized consideration of growth as the primary force behind potential impacts. The presence of sensitive environmental resources, hazards in specific areas, and the broad implications of the General Plan throughout the planning area are considered in the determination of impact significance. If the analysis indicates that a significant impact could occur, even with the benefits of any proposed planning policies, mitigation measures are specified.

In conjunction with the Final EIR, a Mitigation Monitoring and Reporting Program (MMRP) may be prepared for adoption that identifies a responsible party, a timeline for implementation, and a monitoring frequency for any incorporated mitigation measures. The MMRP provides a mechanism for ensuring that potentially significant impacts resulting from long-term implementation of the General Plan Update are minimized, reduced, or avoided.

For each environmental issue area examined in Section 4.0, the discussion concludes with a statement regarding the level of impact significance remaining with imposition of the mitigation measures.



Scoping and Public Review 1.3

Notice of Preparation

To define the scope of the investigation of the Program EIR, the City of Colton distributed a Notice of Preparation (NOP) (attached as Appendix A) to city, county, and state agencies; other public agencies; and interested private organizations and individuals. The purpose of the NOP was to identify agency and public concerns regarding potential impacts of the proposed project, and to request suggestions concerning ways to avoid significant impacts (Section 15082, CEQA Guidelines).

Copies of written comments received during the 30-day public review period for the NOP are included in Appendix A of this EIR. On March 22, 2012, the City conducted a scoping meeting to solicit oral comments on the NOP. Comments were received from two people during the meeting. Additional scoping comments were also received by other jurisdictions and agencies during the 30-day public review period. The scoping comments addressed in this Program EIR are summarized in Table 1.1 (Summary of Scoping Comments).

Table 1.1
Summary of Scoping Comments

Commenting Agency/Person	Summary of Comment	Addressed in EIR as:
Department of Water Resources	-Encroachment on agency infrastructure	-Utility and Service Systems
Southern California Air Quality Management District	-Air Quality -Toxic Emissions -Greenhouse Gas Emissions	-Air Quality -Greenhouse Gas Emissions
OmniTrans	Public Transportation and Alternative Modes of Transportation	-Transportation and Traffic
City of Riverside	Impacts of Land Use Changes on Aesthetics, Air Quality, and Traffic	-Aesthetics -Air Quality -Transportation and Traffic
City of Grand Terrace	-Land Use Compatibility -Traffic, Drainage Patterns, Cumulative Impacts	-Hydrology and Water Quality -Land Use and Planning -Transportation and Traffic -Long Term Effects
San Bernardino County Public Works	-Impacts on County roads and Flood control facilities	-Utility and Service Systems
Rialto Unified School District	-School Capacity	-Public Services

Notice of Completion

Pursuant to Section 15085 of the State CEQA Guidelines, a Notice of Completion (NOC) was filed with the State Office of Planning and Research (OPR) on January 15, 2013 and the DEIR circulated for public and agency review for a period of 45 days. A copy of the DEIR was posted at the Colton Library and at City Hall. Copies of the DEIR were sent to responsible agencies, local agencies, and concerned agencies and individuals, as requested. Public hearings will be held in conjunction with the review of the project.



Response to Comments on DEIR

Comments from all agencies and individuals are invited regarding the information contained in the Draft Program EIR. Such comments should explain any perceived deficiencies in the assessment of impacts, provide the information that is purportedly lacking in the Draft Program EIR or indicate where the information may be found. All comments on the Draft Program EIR are to be submitted to:

Mark Tomich, Development Services Director
City of Colton
659 N. La Cadena Drive
Colton, California 92324

Following a 45-day period of circulation and review of the Draft Program EIR, all comments and the City's responses to the comments will be incorporated into a Final Program EIR prior to certification of the document by the City of Colton.

Availability of EIR Materials

All materials related to the Preparation of this Program EIR are available for public review. To request an appointment to review these materials, please contact:

Mark Tomich, Development Services Director
City of Colton
659 N. La Cadena Drive
Colton, California 92324

Citation 1.4

Preparation of this Program EIR and the General Plan Update rely on information from many sources, including the appendix materials previously listed and numerous other references. Pursuant to Section 15148 of the State CEQA Guidelines, citations from the appendix materials and other sources are provided throughout the EIR. Citations are numbered sequentially and inclusive to each environmental impact topic (Sections 4.1 through 4.12). References are located at the end of each environmental impact section.

Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

2	Executive Summary

Project Summary 2.1

The Project analyzed in this EIR is the adoption and implementation of three updated elements of the City of Colton General Plan: Land Use Element, Mobility, and Housing. The Project also consists of subsequent amendments to the City's Zoning Code (Title 18) that may be required to implement the updated General Plan elements.

The updated Land Use Element establishes overall development capacity for the City and surrounding areas, and serves as a policy guide for determining the appropriate physical development and character of the City. The updated Mobility Element provides for a circulation system in balance with the Land Use Plan, and addresses City goals to provide "complete streets" consistent with State law. The Housing Element has been updated to address the 2008-2014 planning period for jurisdictions within the Southern California Association of Governments (SCAG) region.

The updated elements and the General Plan as a whole apply to all properties within the City of Colton and its unincorporated sphere of influence.

At this time, no changes are proposed to the remaining General Plan elements: Noise, Open Space and Conservation, Safety, Model Air Quality, and Cultural Resources Preservation.

General Plan Update

The intent of the General Plan Update with respect to each of the elements is summarized below.

The focus of the updated Land Use Element is to provide opportunities for a diversity of residential, commercial, industrial, public, and open space uses in Colton, and to ensure compatibility where land uses interface. The City looks to revitalize aging neighborhoods, enhance economic development potential, and re-create Colton's historical downtown area as a mixed-use district.

Toward these ends, land use policy and the Land Use Plan establishes the following land use designations:

- Very Low Density Residential (0.1 to 2.0 units/acre)
- Low Density Residential (2.1 to 8.0 units/acre)
- Medium Density Residential (8.1 to 16.0 units/acre)
- High Density Residential (16.1 to 22.0 units/acre)
- Residential Overlay (up to 30.0 units/acre)

- Neighborhood Commercial (0.5 maximum floor-area ratio)
- General Commercial (1.0 maximum floor-area ratio)
- Mixed-Use Neighborhood (2.0-8.0 units/acre; maximum 1.0 floor-area ratio)
- Mixed-Use Downtown (2.0-30.0 units/acre; maximum 2.0 floor-area ratio)
- Industrial Park (0.5 maximum floor-area ratio)
- Light Industrial (0.5 maximum floor-area ratio)
- Heavy Industrial (0.5 maximum floor-area ratio)
- Public/Institution (0.5 to 2.0 floor-area ratio)
- Railroad/Utility/ROW
- Open Space-Recreation
- Open Space-Resource

The Cooley Ranch Planned Community, Agua Mansa Industrial Corridor Specific Plan, and the Santa Ana River Redevelopment Project Specific Plan are proposed to be rescinded, and standard General Plan land use designations will be applied to these properties.

Over time, the distribution of uses within the community will change as vacant properties develop and application of land use policy will facilitate evolution toward the mix of uses the City envisions. Table 2.0-1 summarizes the level of development (dwelling units, population, and non-residential square feet) expected through the 2030 planning horizon year. The table provides a comparison of the existing developed conditions (Existing Land Use) and the build-out assumptions of the proposed Land Use Element update (Proposed Land Use).

Table 2.0-1
Existing Developed and Proposed Build-Out Summary

	Dwelling Units			Population			Non-Residential Square Feet		
	City	Sphere	Total	City	Sphere	Total	City	Sphere	Total
Existing Land Use	16,349	1,355	17,704	51,797	4,293	56,091	11,107,700	2,559,100	13,666,800
Proposed Land Use	21,204	1,690	22,894	67,182	5,354	72,536	23,291,600	2,809,300	26,100,900
Change	4,856	335	5,191	15,384	1,061	16,445	12,183,900	250,200	12,434,100
Percent Change	29.7%	24.7%	29.3%	29.7%	24.7%	29.3%	109.7%	9.8%	91.0%

In addition to the land changes, the Land Use Element also includes new goals and policies to address sustainability and green building, economic development, residential neighborhood protection and preservation, and mixed-use districts. Goals and policies address specific focus areas: Downtown Colton, La Cadena Drive, Valley Boulevard Corridor, Mount Vernon Avenue Corridor, South Colton, West Valley Specific Plan, and Pellissier Ranch/La Loma Hills area.

Mobility Element

The Mobility Element addresses all modes of circulation on the City's street network and trail system: cars, pedestrians, bicycling, and public transit, and the movement of goods. The element also specifically establishes policies regarding traffic congestion and the protection of residential neighborhoods from vehicular, train, and truck impacts.

The primary modifications proposed in the Mobility Element include:

- Street Classification Map updated to include new street connections, enhanced road widths where needed to support future traffic, bridge improvements, and more complete circulation
- Complete Streets goals and policies
- Neighborhood Traffic Congestion and Safety goals and policies
- Address future transit projects, including Bus Rapid Transit and potential Metrolink station
- Address truck and train traffic impacts
- Additional goals and policies that address transit, walking, and bicycling
- New policies directed to make Downtown Colton more pedestrian friendly

Housing Element

The Housing Element has been comprehensively updated for the 2008-2014 SCAG planning cycle. The City has crafted the Element to focus on this primary community goal: improving the existing housing stock and providing opportunities for development of new quality housing to raise the overall quality of residences throughout Colton. Key components of the Housing Element include:

- Identification of sufficient vacant and underutilized sites to achieve the Regional Housing Needs Allocation (RHNA) of 3,705 units for the planning period
- Policies that address SB 2 regarding transitional and emergency housing
- Programs aimed at providing increased homeownership opportunities
- Programs intended to remove governmental constraints to housing construction
- Programs addressing fair housing law

Project Location 2.2

The City of Colton is located in southwestern San Bernardino County, within the West Valley region. The City is surrounded by the cities of Rialto, Grand Terrace, Loma Linda, San Bernardino, and Riverside. Major transportation facilities include Interstate 10 (I-10), Interstate 215 (I-215), the Union Pacific Railway, and the Burlington Northern Santa Fe (BNSF) Railway.

Environmental Setting 2.3

The City of Colton is within an urbanized area of the County of San Bernardino, with ready regional access from I-10 and I-215. The City's municipal limits encompass 16.1 square miles, with the planning area also including 1.7 square miles in the City's unincorporated Sphere of Influence (SOI). While the City is largely urbanized, major natural and topographical features include the Santa Ana River, which traverses northeast to southwest throughout the City, and a series of hill features: the La Loma Hills within the south area of Colton, Slover Mountain (an aggregate mine) just south of I-10, and the Box Springs Mountains/Reche Canyon to the southeast. The San Andreas earthquake fault passes along the northeast corner of the City. Also, habitat lands for the Delhi Sands Flower-Loving Fly can be found west of Rancho Avenue.

Most of the land area north of I-10 has been developed with residential, commercial, industrial, and institutional uses, with some buildings in downtown Colton dating to the early 1900s. Industrial uses are concentrated along the rail lines. Along the western boundary, uses consist of residential subdivisions from the 1970s to current, the Arrowhead Regional Medical Center, and newer business parks.

South of I-10, industrial businesses represent the predominate use, as they take advantage of rail lines and easy access to the freeways. The residential neighborhood of South Colton, immediately south of I-10 and bounded by the Santa Ana River, was developed in conjunction with the earliest industrial businesses as housing for railroad workers. More recent development includes the Cooley Ranch Business Park just south of the I-10/I-215 interchange, single-family subdivisions in the La Loma Hills area, and a landfill.

In addition to the two regional freeways through Colton, two major intercontinental rail lines traverse east-west and north-south. These rail lines present challenges to efficient local circulation, and train noise is a community concern as well.

Environmental Impacts 2.4

Based on the preliminary environmental analysis conducted, the City determined that the adoption and long-term implementation of the updated General Plan Land Use, Mobility, and Housing Elements—and any subsequent adoption of Zoning Ordinance Amendments to implement General Plan policies—has the potential to result in significant environmental effects with regard to the following environmental issue areas:

- Aesthetics
- Agricultural Resources
- Air Quality

- Biological Resources
- Cultural Resources
- Geology and Soils
- Green House Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

This Program EIR examines each of these issue areas in separate sections, in addition to other required topics specified in the State CEQA Guidelines. Table 2.0-2 summarizes the environmental impacts associated with the project and lists the mitigation measures required to reduce or avoid impacts.

This page intentionally left blank

Table 2.0-2
Environmental Impact Summary

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	**Mitigation Measures**	**Level of Significance with Mitigation Incorporated**
Significant and Unavoidable Impacts		
Air Quality		
4.3.A 4.3.B 4.3.C	The proposed General Plan Update has the potential to conflict with the 2007 and 2012 Air Quality Management Plans because land use policy does not support the same level of population growth projected. Also, projected cumulative daily pollutant emissions program-wide have the potential to exceed SCAQMD thresholds for criteria pollutants. Impacts at the program level are significant and unavoidable.	
Greenhouse Gas Emissions		
4.7.A	Construction emissions of greenhouse gases associated with build-out pursuant to land use policy will be less than significant. Over the long term, GHG emissions may exceed regional thresholds established, as projected population capacity for Colton falls below population growth assumptions in the regional plans. Impacts at the program level are significant and unavoidable.	
4.7.B	The proposed General Plan Update has the potential to conflict with the 2012 SCAG RTP/SCS and CARB Scoping Plan–and thereby not attain GHG reductions targets–because land use policy does not support the same level of population growth projected. Impacts at the program level are significant and unavoidable.	
Recreation		
4.15.A	The proposed General Plan Update has the potential to result in the deterioration of existing parks and recreation facilities, and adequate funding cannot be identified at this time to mitigate the impacts. Therefore, impact is potentially significant and unavoidable.	
Transportation and Traffic		
4.16.A 4.16.B	Long-term implementation of land use policy, in combination with regional contributions to traffic on the local road network, will cause an increase in traffic that will result in several intersections and roadway segments to operate at Level of Service F. Impact will be significant.	
Less than Significant Impacts with Mitigation Incorporated		

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)		Mitigation Measures	Level of Significance with Mitigation Incorporated
Biological Resources			
4.4.A	Impacts to special status species and their habitat resulting from implementation of the General Plan Update will be less than significant with mitigation incorporated.	4.4.A-1 – A biological resources assessment shall be prepared for any land use plan or development proposal located on any undeveloped land within a Critical Habitat designation or identified in the General Plan Environmental Impact Report as dry herbaceous, hardwood forest-woodland, shrub, or giant reed-pampas grass vegetation communities or mapped Delhi sands habitat. This assessment shall identify the habitat types and quality, identify species occurrence and distribution, determine the specific impacts to biological resources and characterize the biological significance of those impacts, and define measures to avoid, reduce or compensate for any significant impacts attributable to a proposed project. The reduction in impacts may include a redesign of the project. The compensation may include creating and/or preserving in perpetuity equivalent or better quality habitat at a minimum 1:1 ratio, as will be determined through project-specific analysis. The biological resources assessment shall be prepared by a qualified biologist and submitted to the Development Services Director for review/approval in consultation with the biologist in consultation with the biologist and other as appropriate to the project. The biological resources assessment shall be included in the CEQA compliance documentation for all such proposals.	Less than Significant

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)		**Mitigation Measures**	**Level of Significance with Mitigation Incorporated**
		4.4.A-2 – A focused survey for burrowing owls shall be conducted by a qualified professional biologist for any new development project proposed on a vacant site of two acres or larger, with a landscape of annual and perennial grasslands, desert, or arid scrubland with low-growing vegetation or agricultural use or vegetation. The purpose of the survey is to determine if burrowing owls are foraging or nesting on or adjacent to the project site. If surveys confirm that the site is occupied habitat, mitigation measures to minimize impacts to burrowing owls, their burrows, and foraging habitat shall be identified. The results of this survey, including any mitigation recommendations, shall be incorporated into the project-level CEQA compliance documentation. Owl surveys and approaches to mitigation shall be in accordance with the Staff Report on Burrowing Owl Mitigation, issued by the California Department of Fish and Game on March 7, 2012.	
Cultural Resources			
4.5.C	Impacts to paleontological resources will be less than significant with mitigation incorporated	4.5-1 - Future development proposals subject to environmental review pursuant to the California Environmental Quality Act (CEQA) are subject to the following provisions at the expense of the project proponent, as directed by the Development Services Director. Paleontological Assessment. In areas containing	Less than Significant

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)		Mitigation Measures	Level of Significance with Mitigation Incorporated
		middle to late Pleistocene era sediments (Qof) where it is unknown if paleontological resources exist, prior to grading an assessment shall be made by a qualified paleontological professional to establish the need for paleontologic monitoring. Should paleontological monitoring be required after recommendation by the professional paleontologist and approval by the Development Services Director, paleontological monitoring shall be implemented. Paleontological Monitoring. A project that requires grading plans and is located in an area of known fossil occurrence or that has been demonstrated to have fossils present in a paleontological field survey or other appropriate assessment shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially fossilferous units described for the property in question are not	

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)		**Mitigation Measures**	**Level of Significance with Mitigation Incorporated**
		present or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources. Should significant paleontological resources be discovered, paleontological recovery, identification, and curation shall be implemented. Paleontological Recovery, Identification, and Curation. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum or a similar established, accredited museum repository with permanent retrievable paleontologic storage. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. This measure is not considered complete until curation into an established museum repository has been fully completed and documented. Paleontological Findings. Qualified paleontologic personnel shall prepare a report of findings with an appendix itemized of specimens subsequent to implementation of paleontological recovery,	

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)		Mitigation Measures	Level of Significance with Mitigation Incorporated
		identification, and curation. A preliminary report shall be submitted to and approved by the Development Services Director before granting of building permits, and a final report shall be submitted to and approved by the Development Services Director before granting of occupancy permits.	
Hazards and Hazardous Materials			
4.8.D	Impacts to development and persons due to building siting on contaminated properties will be less than significant with mitigation incorporated.	4.8.D-1 - Applications for new development projects requiring City discretionary approval shall include the results of a Phase I Environmental Site Assessment (ESA), prepared in accordance with the latest ASTM protocol for such assessments. If the Phase I ESA indicates some evidence of site contamination exists that could require cleanup to avoid danger to people or damage to the environment, a Phase II level review shall be completed to fully characterize the nature and extent of such contamination, and the scope of required clean up procedures. The results of the Phase II assessment shall be considered as part of the CEQA compliance process prior to any action on the project.	Less than significant

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)
No Impact and Less than Significant Impacts
Aesthetics

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	
4.1.A 4.1.B	Impacts to scenic vistas and resources will be less than significant with implementation of existing General Plan policies.
4.1.C	Impacts to the visual character and quality of the planning area will be less than significant with implementation of proposed General Plan policies.
4.1.D	Impacts due to light and glare will be less than significant with implementation of existing zoning standards.
Agricultural Resources	
4.2.A	Implementation of the proposed General Plan Update will not result in impacts to farmland.
4.2.B	Implementation of the proposed General Plan Update will not result in any Williamson Act Contract impacts.
4.2.C 4.2.D	No impact would occur to existing zoning for forest land or timberland as a result of the General Plan Update.
4.2.E	Implementation of the proposed General Plan Update would not create conflicts involving agricultural zoning and would not result in other changes to the existing environment that could result in the conversion of Farmland.
Air Quality	
4.3.D	The proposed General Plan Update has the potential to result in the exposure of sensitive receptors to pollutant emissions associated with industrial uses. However, potential impacts can be addressed at the project level. Impact will be less than significant with implementation of General Plan policies and application of standard development practices.
4.3.E	The proposed General Plan Update has the potential to result in the exposure of sensitive receptors to odors from industrial uses. However, potential impacts can be addressed at the project level. Impact will be less than significant with implementation of General Plan policies and application of standard development practices.
Biological Resources	
4.4.B	No impact to Southern Cottonwood Willow Riparian Forest or Southern Riparian Scrub habitat will occur as a result of implementation of the General Plan Update.
4.4.C	No impact to Section 404 wetlands will occur as a result of implementation of the General Plan Update.
4.4.D	No impact to the Lytle Creek and Santa Ana River wildlife corridors or any wildlife nurseries will occur as a result of implementation of the General Plan Update.
4.4.E	No impact related to conflicts with the proposed General Plan Update and other existing policies, regulations, or standards would occur.
4.4.F	No impact related to conflicts between the proposed General Plan Update and existing Habitat Conservation Plans will occur.
Cultural Resources	

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	
4.5.A	Impacts to historic resources will be less than significant with implementation of existing policies and regulations.
4.5.B	Impacts to archaeological resources will be less than significant with implementation of existing policies and regulations.
4.5.D	Impacts to human remains will be less than significant with implementation of existing regulations.
Geology and Soils	
4.6.A.1	Hazardous impacts to people and structures resulting from the potential rupture of the San Jacinto Fault System will be less than significant with implementation of existing standards adopted in the General Plan Safety Element.
4.6.A.2	Impacts to life and property resulting from earthquakes will be less than significant with implementation of the City's existing standards and regulations.
4.6.A.3	Impacts to life and property resulting from seismically induced liquefaction or settlement will be less than significant with implementation of the City's existing standards and regulations.
4.6.A.4	Impacts to life and property within the La Loma Hills, Box Springs Mountains, and other portions of the planning area related to seismically induced landslides will be less than significant with implementation of existing standards and regulations.
4.6.B	Impacts related to wind-blown soil erosion and loss of topsoil will be less than significant.
4.6.C	Impacts related to ground failure will be less than significant with implementation of existing City policies and regulations.
4.6.D	Impacts related to expansive soils will be less than significant with implementation of existing City regulations.
4.6.E	No impacts related to soils and septic systems will occur.
Hazards and Hazardous Materials	
4.8.A 4.8.B 4.8.C	The proposed General Plan Update will result in less than significant impacts from the use, transport, and disposal of hazardous materials and wastes.
4.8.E 4.8.F	No impacts related to operation of public or private airports could occur.
4.8.G	The proposed General Plan Update will not interfere with the implementation of the City's emergency response and evacuation procedures.
4.8.H	Impacts due to wildland fires will be less than significant.
Hydrology and Water Quality	

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	
4.9.A 4.9.F	Implementation of the General Plan Update will not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality.
4.9.B	Impacts related to overdrafting of groundwater resources and lowering of groundwater levels will be less than significant based on existing standards and regulations.
4.9.C 4.9.D	Flooding and sedimentation impacts caused by on- or off-site flooding will be less than significant with implementation of existing City standards.
4.9.E	Impacts related to polluted urban runoff and storm drain capacity will be less than significant with implementation of existing standards and regulations.
4.8.G	Impacts due to the placement of housing within 100-year flood zones will not occur as a result of implementation of the General Plan Update.
4.9.H	Impacts related to the diversion of floodwaters will be less than significant with implementation of existing City regulations.
4.9.I	Impacts related to inundation due to dam or levee failure will be less than significant with implementation of existing Federal and County regulations.
4.9.J	Impacts associated with mudflows, tsunami, and seiche will be less than significant with implementation of existing City regulations.
Land Use and Planning	
4.10.A	No impact will occur as the General Plan Update will not result in a division of an established community.
4.10.B	The General Plan Update's implementation potential for impact is discussed in other sections of this EIR; those sections determine that a less than significant impact is anticipated to occur.
4.10.C	The proposed General Plan Update's Land Use Plan designation of Recovery Units of the Delhi-Sands Flower-Loving Fly Recovery Plan as open space supports the objections of habitat and natural community conservation plans.
Mineral Resources	
4.11.A	Implementation of the General Plan Update will result in a less than significant loss of known mineral resources of value to the region and the state.
4.11.B	No impact to locally important mineral resources will occur as a result of the implementation of the General Plan Update.
Noise	
4.12.A 4.12.C	Projected long-term traffic volumes, the extension of new roadway segments, and the proposed land uses located near rail lines and other sensitive land uses would increase noise by less than significant levels with

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	
	continued implementation of General Plan policies.
4.12.B	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels with implementation of the General Plan Update will result in a less than significant impact.
4.12.D	The proposed project would allow for additional development of residential and mixed-use development that may result in increased temporary or intermittent noise impacts. Those impacts are less than significant with the continued implementation of the City's Municipal Code.
4.12.E 4.12.F	The proposed project would not expose people residing or working within two miles of any public airport nor private airport to excessive noise levels associated with air traffic.
Population and Housing	
4.13.A	Implementation of the proposed General Plan Update would have a less than significant impact on inducing population and housing growth as the anticipated increase is consistent with SCAG's 2012-2035 forecasts.
4.13.B 4.13.C	The General Plan Update does not propose policies that would result in displacement or demolition of permanent or temporary residential structures.
Public Services	
4.14.A	Impacts related to the expansion of fire protection facilities to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.
4.14.B	Impacts related to the expansion of police protection facilities to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.
4.14.C	Impacts related to the expansion of school facilities to maintain applicable service standards will be less than significant with implementation of existing state regulations.
4.14.D	Impacts related to the expansion and construction of parks to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.
4.14.E	Impacts related to the expansion and construction of libraries to maintain applicable service standards will be less than significant with implementation of existing Municipal Code requirements.
Recreation	
4.15.B	Impacts related to the expansion and construction of recreational facilities will be less than significant since the General Plan update does not specifically provide for new park facilities.
Transportation and Traffic	
4.16.C	Impact with respect to air traffic patterns would be less than significant.
4.16.D	Impact with respect to traffic hazards would be less than significant.
4.16.E	Impact with respect to emergency access would be less than significant.

Impact Summary (The numbers in the first column refer to the EIR sections where specific impact topics are addressed. The letters refer to the thresholds identified in Appendix G of the CEQA Guidelines.)	
4.16.F	Impact with respect to parking capacity would be less than significant.
4.16.G	No adverse impact will result with respect to alternative transportation.
Utilities and Service Systems	
4.17.A	Impacts related to the exceedance of wastewater treatment requirements of the Colton Wastewater Reclamation Facility will be less than significant based on existing City plans and regulatory requirements.
4.17.B	Impacts related to the potential future construction of water and wastewater infrastructure will be less than significant with implementation of existing City standards.
4.17.C	Impacts related to the potential future expansion of storm drain facilities will be less than significant with implementation of existing City standards.
4.17.D	Implementation of the proposed General Plan Update will not require new or expanded water supply entitlements to be secured.
4.17.E	Impacts related to insufficient wastewater treatment capacity will be less than significant with implementation of existing standards and regulations.
4.17.F 4.17.G	Impacts associated with solid waste regulations and adequacy of disposal sites will be less than significant pursuant to existing policies and regulations.

This page intentionally left blank

2.5 Areas of Potential Controversy

Areas of potential controversy were identified during the initial scoping process and during the preparation of this EIR. These issues are related to and have been addressed in the following sections of this document:

- Aesthetics
- Air Quality
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Long Term Effects
- Transportation and Traffic
- Utility and Service Systems

2.6 Alternatives to the Proposed Project

CEQA requires that an EIR examine alternatives to the project that are capable of reducing or eliminating the unavoidable significant effects. The alternatives examined in Section 5.0 are:

- Alternative 1: No Project

- Alternative 4: Industrial to Residential

The analysis indicates that Alternatives 1 and 2 would have marginally reduced environmental impacts relative to those associated with the proposed project.

- Alternative 2: Limit Downtown Residential

- Alternative 3: Increase Residential intensity

The analysis indicates that Alternative 3 would have marginally increased environmental impacts to those associated with the proposed project.

None of the four alternatives fully achieves the objectives of the Project.

This page intentionally left blank

Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
Organizations and Persons Consulted	9

3	Project Description

3.0 Project Description

Background

Under California state law (Government Code Section 65300 et seq.), every city and county is required to have a general plan. The general plan is to be comprehensive and long-range in guiding the physical development of the incorporated city, plus any land outside city boundaries that has a relationship to the city's planning activities. To this end, the California Supreme Court has called the general plan "the constitution for all future development" within a given community.[1]

The project analyzed in this Environmental Impact Report (EIR) is the adoption and long-term implementation of the City of Colton General Plan's updated Land Use Element, Circulation Element, and Housing Element. The General Plan Update will serve as the blueprint for the City of Colton (City) and will establish goals, policies, and programs, for the long-term physical development and quality of life in the community. The General Plan Update will include a land use designation map that replaces the land use designation map associated with the 1986 General Plan. The City has established 2030 as the horizon year for the General Plan Update; in other words, the year by which the City would expect that policies and programs would be realized and further comprehensive review of the plan may be warranted.

This EIR is being prepared in accordance with the California Environmental Quality Act (CEQA) and the CEQA guidelines. This EIR is a Program EIR prepared in accordance with CEQA guidelines Section 15168. Section 15168 allows for the preparation of a Program EIR for a series of actions that can be characterized as a single project.

Project Location

The City of Colton is located in the extensively developed West Valley region of the southwestern portion of San Bernardino County. It is surrounded by the cities of Rialto, Grand Terrace, Loma Linda, San Bernardino, and Riverside (Exhibit 3.0-1 Regional Map). Major transportation facilities include Interstate 10 (I-10), Interstate 215 (I-215), Union Pacific Railway, and Burlington Northern Santa Fe (BNSF) Railway.

The 18.0 square mile area covered by the General Plan Update, as shown in Exhibit 3.0-2 (Planning Area), consists of the corporate limits of the City as well as lands within the City's unincorporated "sphere of influence". The term "sphere of influence" (SOI) applies to the area designated by the San Bernardino County Local Agency Formation Commission (LAFCO) as the probable, future physical boundary or service area of the City. Land use regulatory authority in the SOI area is held by

[1] Lesher Communications, Inc. v. City of Walnut Creek, 52 Cal.3d 531,540 (1990

the San Bernardino County. However, certain portions of the SOI receive one or more services administered by the City. Overall, planning decisions made for the City are assumed to have a bearing on growth and development in these unincorporated adjacent areas; hence the term "sphere of influence".

Project Objectives

The project objectives for the General Plan Update are:

- Replace the current Land Use, Circulation, and Housing Elements with new elements that reflect the goals and aspirations of the community through 2030
- Ensure the General Plan Update achieves compliance with all applicable state laws and regulations
- Ensure development, use, and maintenance of public and private lands will always:
  - respect Colton's heritage and historic resources,
  - protect Colton's traditional suburban development pattern and residential neighborhoods while accommodating new, more urban approaches to development,
  - provide opportunities for diverse businesses that generate revenue and employment, and
  - promote high-quality design.
- Accommodate circulation and mobility options beyond the automobile. In all infrastructure and development planning decisions, we will:
  - Provide for the integration of automobiles, transit, bicycles, and pedestrians within our established street network using the Complete Street system,
  - Provide greater connectivity and reduce congestion on our street network,
  - Promote efficient and high-quality transit use, including bus rapid transit routes and Metrolink stations in Colton, and
- Accommodate freight train operations that serve businesses in the City while striving to protect residential neighborhoods from the impacts of rail operations.
- Ensure that the City can meet its goals for the preservation and production of housing, provide capacity to meet the Regional Housing Needs Assessment allocation for the 2008-2014 planning period, and provide equal access to housing for all.

Existing General Plan

The following ten Elements, or chapters, comprise the General Plan:

1. Introduction
2. Land Use Element
3. Circulation Element
4. Housing Element
5. Noise Element
6. Open Space and Conservation Element

7. Safety Element
8. Model Air Quality Element
9. Cultural Resources Element
10. Implementation Plan

The bulk of the current City of Colton General Plan, including the Land Use Element, was adopted in 1986. The Circulation and Housing Elements were adopted in 1993 and 2002, respectively.

Proposed General Plan Update

The General Plan Update addresses three elements (land use, housing, and circulation) of the seven state mandated General Plan elements. The proposed Land Use Element establishes an overall development capacity for the City and serves as a policy guide for determining the appropriate physical development and character of the approximately 16.1 square miles that make up the City's jurisdiction proper and the additional 1.9 square miles located in the City's SOI. The development capacity of the proposed Land Use Plan is estimated at 22,800 dwelling units to house about 72,000 residents, and 26.1 million square feet of commercial and industrial space. The General Plan applies to all properties within the City of Colton and recommends policy for the City's SOI.

The Zoning Code serves as the primary tool to implement General Plan land use policy. Zoning districts that correspond to General Plan land use designations establish use regulations, development standards, and design criteria for all types of development in Colton. Following adoption of the updated General Plan, the City will undertake a comprehensive Zoning Code amendment to achieve consistency between the General Plan and the Zoning Code and thereby allow for consistent implementation of the General Plan.

The General Plan Update consists of the Elements detailed below. The following descriptions include highlights of the changes between the existing General Plan and the proposed General Plan.

Land Use Element

The proposed Land Use Element defines Colton's physical form and sets out a basic plan for how land in the City and unincorporated Sphere of Influence will be used over time. The Element sets forth the location, type, and intensity of development, and establishes the desired mix and relationship between uses. The Land Use Plan (see Exhibit 3.0-3, Draft Land Use Plan) identifies the planned pattern of uses. Land use designations identify the general categories of land-based activities permitted throughout the planning area. The goals and policies contained in the Element provide guidance to achieving the City's priorities as spelled out at the beginning of the Element, namely:

- Protecting and preserving established single-family residential neighborhoods
- Requiring all new development to be of high-quality design, with character that reflects Colton's rich history

- Creating expanded opportunities for employment- and revenue-generating land uses to support both established and new services and facilities for the Colton community

The Land Use Element proposes 17 land use designations intended to provide a rational and ordered approach to land use development and the maintenance of public uses and public open spaces. The land use designations are:

VLD: Very Low Density Residential
LD: Low Density Residential
MD: Medium Density Residential
HD: High Density Residential
NC: Neighborhood Commercial
GC: General Commercial
MU-N: Mixed Use – Neighborhood
MU-DC: Mixed Use – Downtown Colton
IP: Industrial Park
LI: Light Industrial
HI: Heavy Industrial
PF: Public/Institution
RR: Railroad/Utility Corridor
OS-R: Open Space - Recreation
OS-RS: Open Space - Resource
RCSP: Reche Canyon Specific Plan
WVSP: West Valley Specific Plan Amendment (aka "Colton's Hub City Centre Specific Plan")

The more significant changes include:

- creation of two mixed use designations (Mixed Use – Downtown Colton and Mixed Use – Neighborhood) and the addition of a Residential Overlay;
- eventual elimination of the Agua Mansa Industrial Corridor Specific Plan, the Santa Ana River Redevelopment Project Specific Plan, and the Cooley Ranch Planned Community;
- removal of the Multi-Use land use designation; and
- creation of the Railroad/Utility Corridor designation.

The Mixed Use – Downtown designation aims to create a downtown district that integrates civic, public, commercial, office, and residential uses. The Mixed – Use Downtown designation will allow for residential development (up to 30 dwelling units per acre) and supporting commercial uses. Long-established, low-density residential areas containing homes dating to Colton's early years are encouraged to retain their density and character. The Mixed Use – Neighborhood designation aims to preserve the existing housing stock and character of residential neighborhoods while creating office or commercial opportunities and encouraging the adaptive reuse of residential structure. The Mixed Use – Neighborhood designation allows for residential development (up to 8 dwelling units per acre) and commercial and office uses. The Residential Overlay is designed to encourage higher density

residential housing in select Commercial, and Mixed Use – Neighborhood areas by allowing development of up to 30 dwelling units per acre.

In 2012, four Specific Plans are in effect; they are: Agua Mansa Industrial Corridor Specific Plan, Santa Ana River Redevelopment Project Specific Plan, Reche Canyon Specific Plan, and the West Valley Specific Plan. The proposed Land Use Element lays the groundwork for two of the Specific Plans to be rescinded (Agua Mansa Industrial Corridor Specific Plan and Santa Ana River Redevelopment Project Specific Plan). These Specific Plan designations are replaced with land use designations that mirror the land uses prescribed in the Specific Plans. In addition, the proposed Land Use Element provides for the Cooley Ranch Planned Community; a designation prepared to be rescinded, as well. The Planned Community Development category, which was primarily used for the Cooley Ranch area, has been removed in the proposed plan. Parcels that currently have this designation will be re-designated as Medium Density or General Commercial, uses that reflect the existing reality on the ground.

The proposed Land Use Element also provides for the West Valley Specific Plan to be amended and the West Subarea to be re-named to "Colton's Hub City Centre Specific Plan"; if amended the West Valley Specific Plan will provide a Delhi Sands Flower-Loving Fly habitat area and provide for approximately 500 residential units.

Other land use changes include the elimination and consolidation of certain designations. The Residential Estate designation is proposed to be translated into a new Very Low Density Residential designation and much of the previous Residential Estate designated properties have been subsumed into the new Reche Canyon Specific Plan designation. The Multi-Use designation, which currently marks a wide swath of properties along Mt. Vernon and Colton Avenues, has been removed in order to focus commercial development on the properties fronting these major thoroughfares and protecting the existing single-family residential neighborhoods behind them.

The three open space categories of the current General Plan (Open Space - Permanent, Open Space - Agriculture, and Open Space - Parks/Recreational) is proposed to be consolidated into two, Open Space - Resource and Open Space - Recreation, reflecting the absence of any significant remaining agricultural land in the planning area. Finally, the Railroad/Utility Corridor designation is added in the proposed plan. In the current General Plan these lands have either been designated with adjacent land uses categories, or have no designation at all.

The existing land uses within the City of Colton are shown on Exhibit 3.0-4 (Existing Land Use).

Mobility Element

The Circulation Chapter has been renamed to "Mobility Element" and not only addresses roadways, but includes pedestrian, bicycling, and public transit, and the

movement of goods. It also includes a discussion on congestion and the protection of neighborhoods.

The primary modifications proposed in the Circulation Element are as follows:

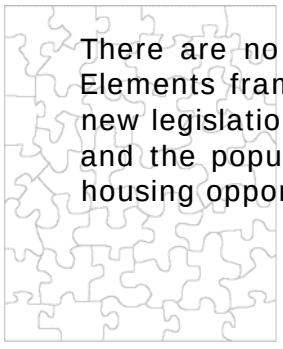
- Street Classification Map updated (See Exhibit 3.0-5, Draft Circulation Plan)
- Incorporation of Complete Streets goals and policies
- Incorporation of Neighborhood Traffic Congestion and Safety goals and policies
- Address future transit projects, including Bus Rapid Transit and potential Metrolink station
- Address truck and train traffic impacts
- Additional goals and policies that address transit, walking, and bicycling
- New policies directed to make Downtown Colton more pedestrian friendly

Housing Element

The Housing Element identifies ways in which the housing needs of current and future residents can be met. Unlike the other elements, State law requires that the Housing Element be updated every five years (unless otherwise extended by legislation). This Housing Element covers the period from July 1, 2008 to June 30, 2014.

The Housing Element consists of the following major components:

- An Executive Summary describing the conditions in Colton, the City's State-allocated housing need, and a brief description of how this need will be met
- An introduction of the purpose and organization of the Housing Element
- An evaluation of land, administrative, and financial resources available to address the housing goals including providing sufficient land to meet the Regional Housing Needs Allocation (RHNA)
- A Housing Plan to address the identified housing needs, including housing goals, policies, and programs
- Appendices including an analysis of the City's demographic and housing characteristics and trends, a review of potential market, governmental, and environmental constraints to meeting the City's identified housing needs, a review of accomplishments under the previous Housing Element, and an inventory of sites designated so as to allow for development to meet the City's RHNA



There are no appreciable differences between the existing and proposed Housing Elements framework although the proposed General Plan Update does account for new legislation and changes in the City's Regional Housing Needs Allocation (RHNA) and the population and land use changes that have affected existing housing and housing opportunities since adoption of the existing Housing Element.

Implementation Plan

The proposed General Plan includes an Implementation Plan that provides staff and City decision-makers with choices for translating each General Plan element to specific action items. The identified actions will serve as a basis for making future programming decisions related to the assignment of staff and the expenditure of City funds. The proposed Implementation Plan identifies individual program responsibility, funding sources, and time frame for completion. The Implementation Plan is a new addition to the City's General Plan framework.

Intended Use of this EIR

The policy framework set forth in the proposed General Plan Update would not result in the immediate construction of any new development. All new development within the City will continue to undergo the City's development review and approval process. Elected and appointed officials and City staff will review subsequent project applications for consistency with the General Plan Update and prepare appropriate environmental documentation in compliance with CEQA and other applicable environmental requirements.

As provided by Section 15168 of the CEQA Guidelines, this EIR is a Program EIR. The goals, policies, land use designations, implementation programs, and other substantive components of the General Plan Update comprise the "program" that is evaluated in this Program EIR. Subsequent activities undertaken by the City and project proponents to implement the General Plan will be examined in light of this Program EIR to determine the appropriate level of environmental review required under CEQA. Such subsequent implementation activities may include the following:

- Update the Zoning Ordinance
- Rezoning of properties consistent with the adopted General Plan
- Approval of Specific Plans, Precise Plans, and other development plans and planning documents
- Approval of tentative maps, variances, conditional use permits, and other land use permits and entitlements
- Approval of development agreements
- Approval of facility and service master plans and financing plans
- Approval and funding of public improvement projects
- Approval of resource management plans
- Issuance of municipal bonds
- Issuance of permits and other approvals necessary for implementation of the updated General Plan
- Acquisition of property
- Issuance of permits and other approvals necessary for public and private development projects
- Updates to the City's Housing Element and other General Plan Elements

Following the certification of the EIR and adoption of the General Plan Update by the lead agency (City of Colton), other agencies, may use this Program EIR in the

approval of subsequent implementation activities. These agencies may include but are not limited to the following:

Local Agencies
- City of Colton
- County of San Bernardino and associated agencies

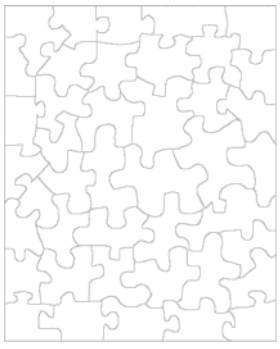
State and Regional Agencies
- California Department of Fish and Game
- California Department of Conservation
- California Department of Housing and Community Development (HCD)
- California Department of Transportation (CALTRANS)
- Regional Water Quality Control Board (Santa Ana Region – Region 8)
- San Bernardino Association of Governments
- Southern California Association of Governments
- South Coast Air Quality Management District

Federal Agencies
- U.S. Fish and Wildlife Services
- U.S. Army Corps of Engineers

Scoping

The City issued a Notice of Preparation (NOP) related to the General Plan Update and EIR on March 9, 2012. The NOP announced a public scoping meeting. The scoping meeting was convened on March 22, 2012. Appendix A includes the Notice of Preparation.

The City received seven scoping letters from interested agencies and parties. Copies of the scoping letters are available for review at City of Colton City Hall, and are included as part of Appendix B. Comments from the scoping letters were sorted and reviewed and included in Appendix B as are the Notice of Preparation Distribution List, and Scoping Meeting Notes.



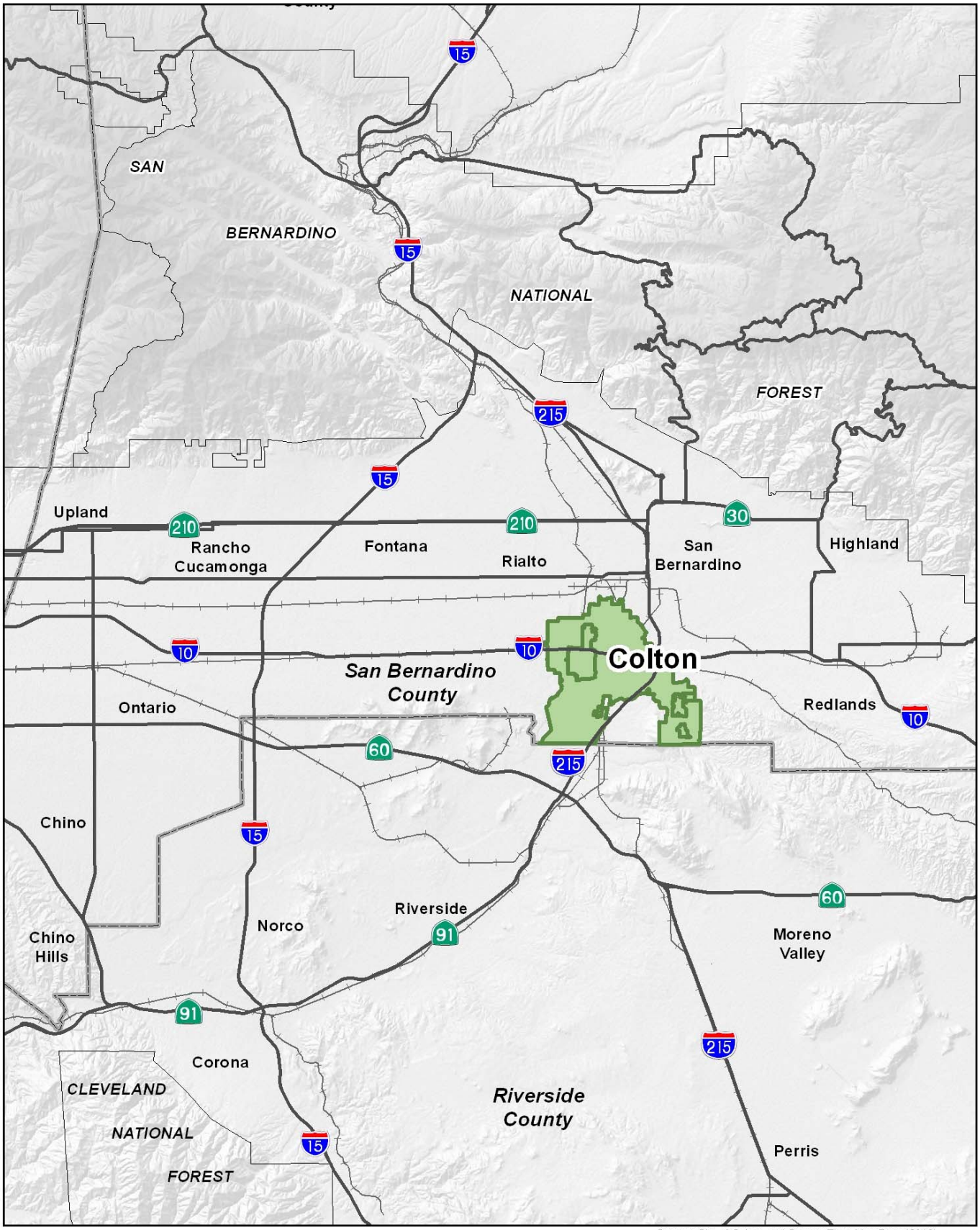


Exhibit 3.0-1

Regional Map

This Page Intentionally Left Blank

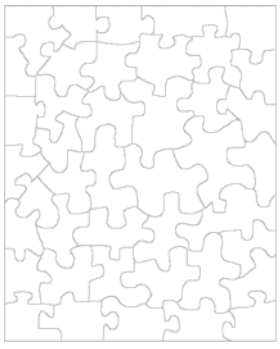
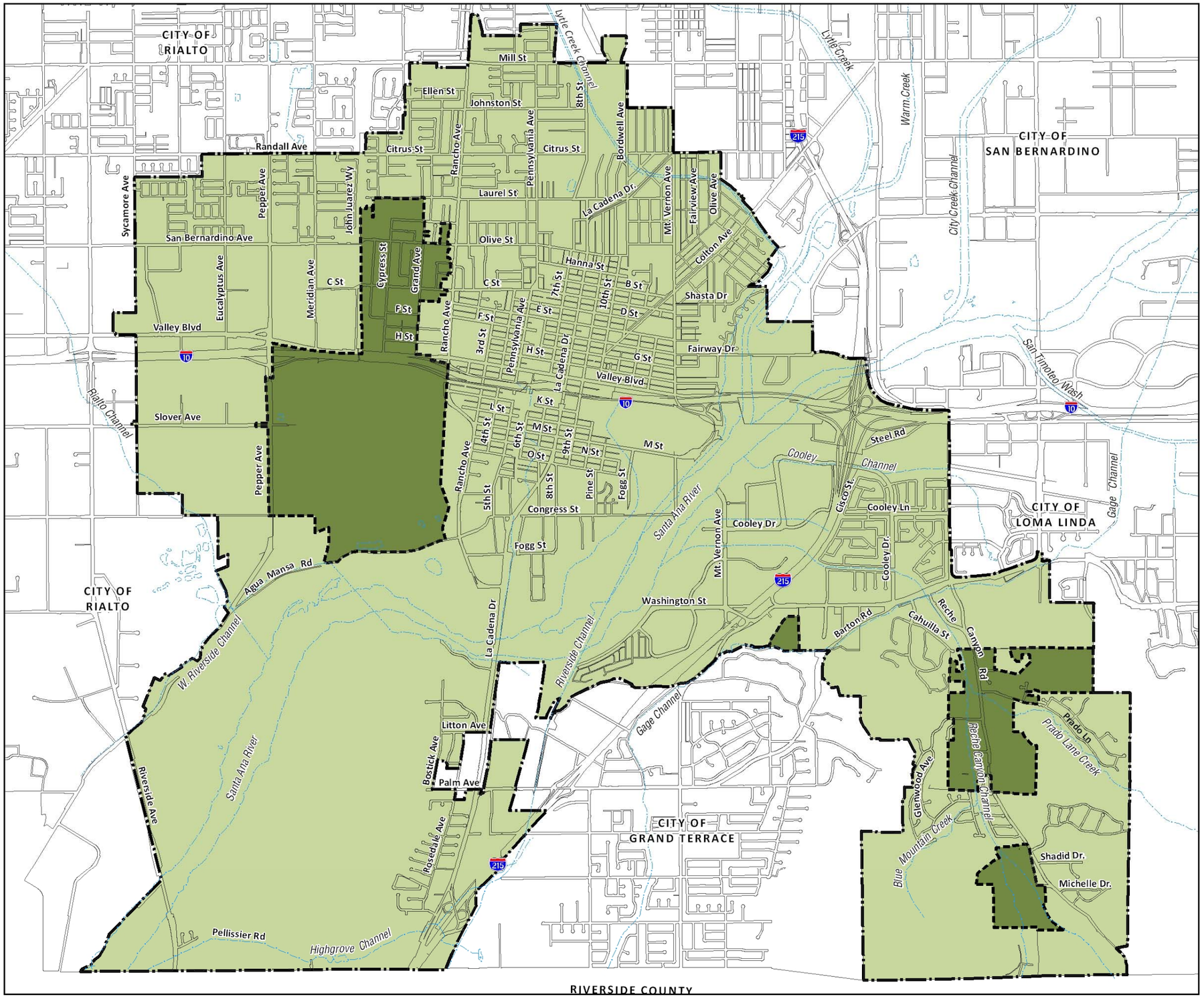


Exhibit 3.0-2

Planning Area



Planning Area

- City Boundary
- Sphere of Influence

Public Facilities/Institutions

Date: March 1, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

Feet
0 2,000 4,000 6,000 8,000

This Page Intentionally Left Blank

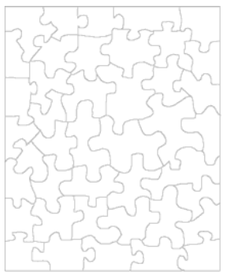
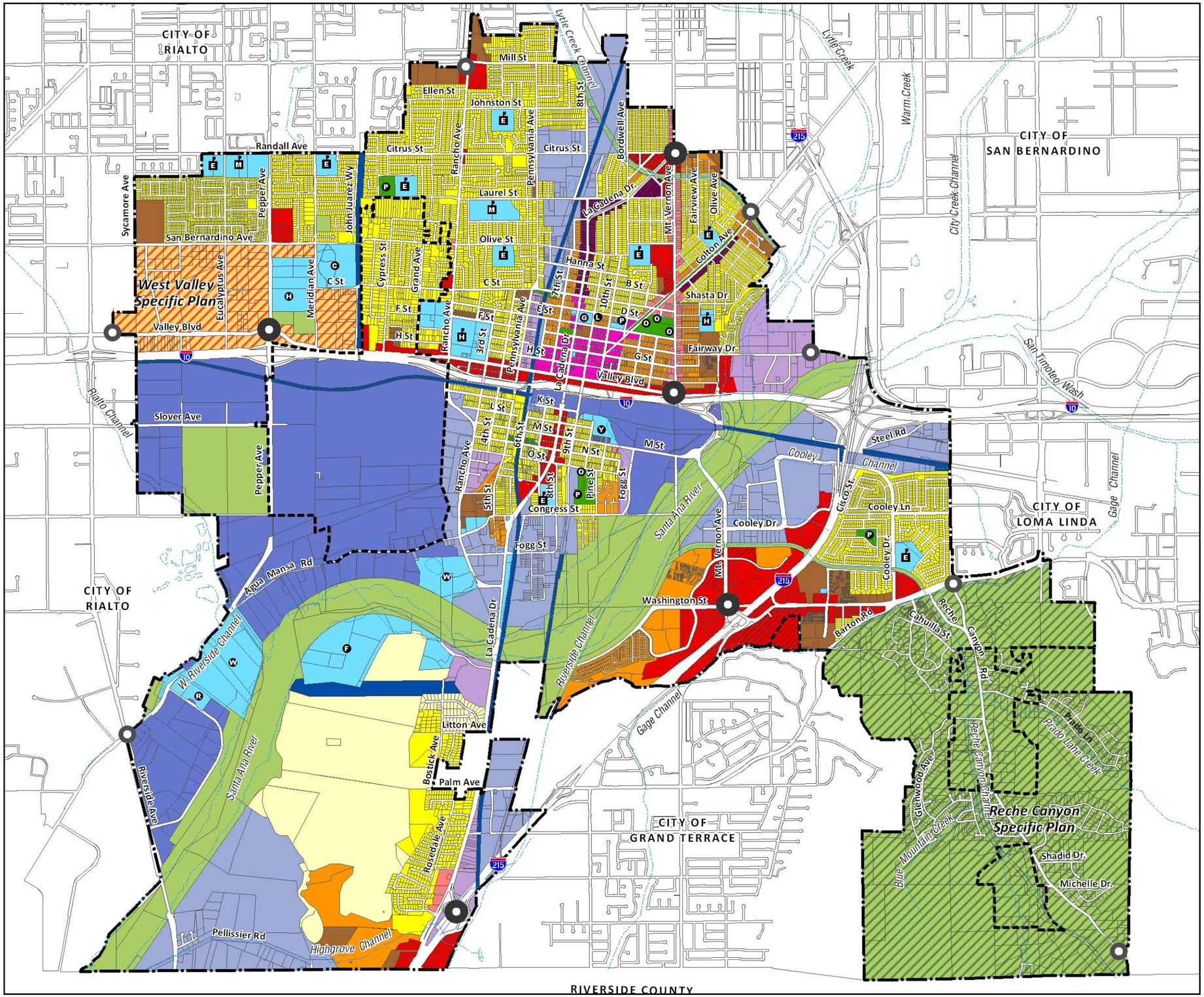


Exhibit 3.0-3

Draft Land Use Plan



Land Use Designations

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Community Gateways

- Major Gateway
- Minor Gateway

Public Facilities/Institutions

- E Elementary School
- M Middle School
- H High School
- C Cemetery
- O Community Center
- G City Hall
- H Hospital (Private)
- L Library
- F Landfill
- Y City Maintenance Yard
- P Parks
- R Power Plant
- W Wastewater Facility

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

Date: May 21, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

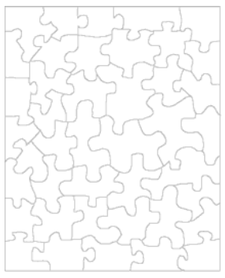


Exhibit 3.0-4

Existing Land Use

Existing Land Use

- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Local Commercial
- General Commercial
- Commercial/Office
- Industrial Park
- Light Industrial
- Heavy Industrial
- Open Space-Recreation
- Open Space-Resources
- Public Facility/Institution
- Railroad
- Vacant

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

Date: March 1, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

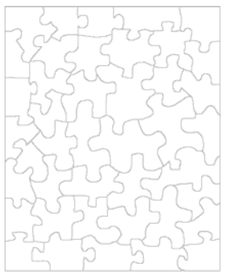
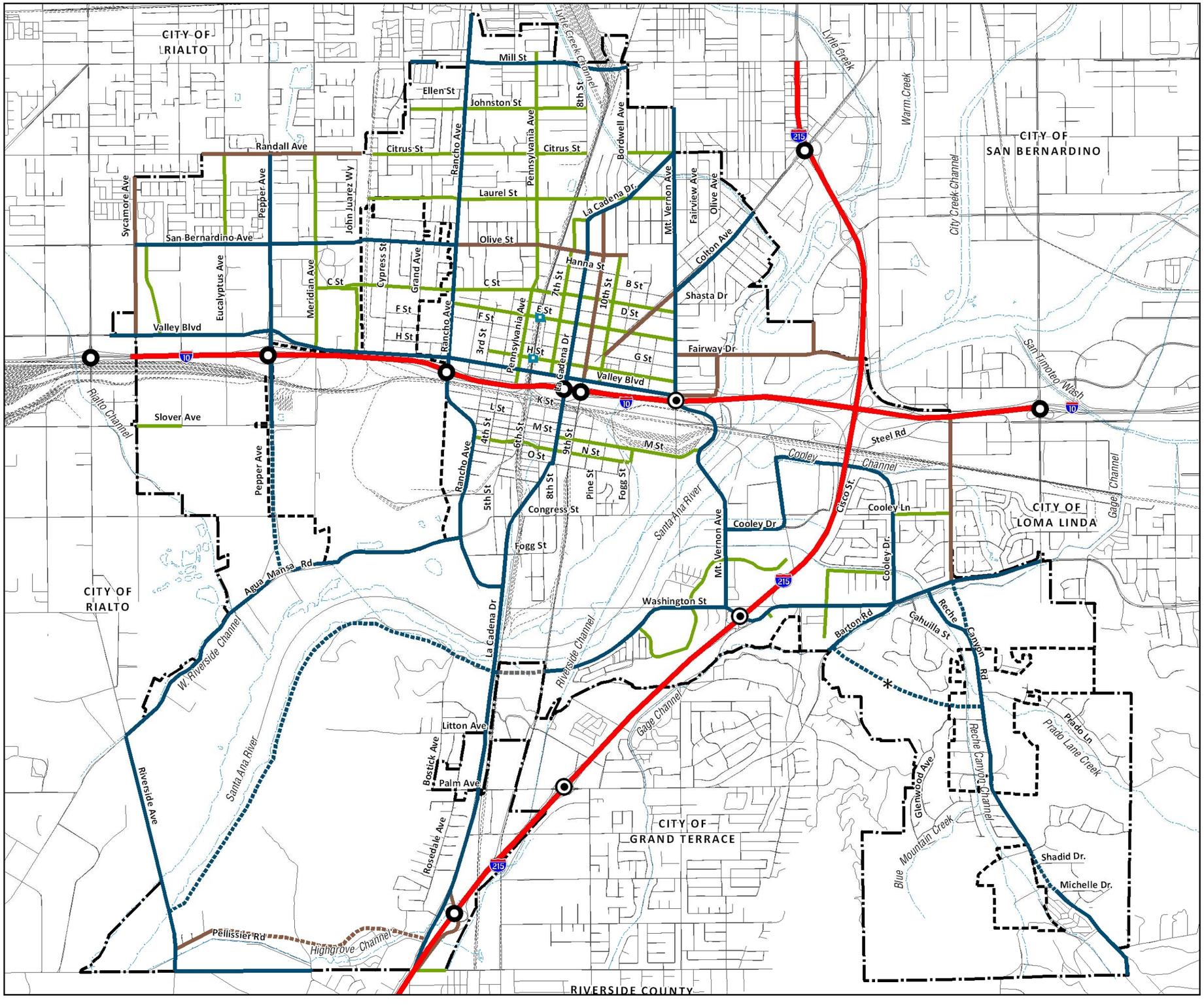


Exhibit 3.0-5

Draft Circulation Plan



Circulation Plan

- Freeway
- Major Arterial
- Planned Arterial
- Secondary Arterial
- Planned Secondary
- Collector Street
- Planned Collector
- Planned Roadway Located in Another City

* Conceptual roadway location. Final roadway location to be determined on proposed subdivision design.

Freeway Interchanges

- Interchanges
- Interchanges with Planned Improvements

Street Closure

- Street Closure (BSNF Quiet Zone Project)

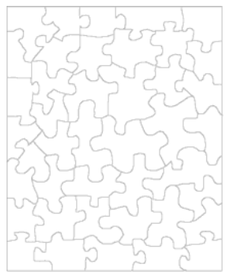
Boundaries

- City Boundary
- Sphere of Influence
- Railroad Tracks
- Watercourse

Date: January 5, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank



Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
Organizations and Persons Consulted	9

4 Environmental Impact Analysis

Aesthetics 4.1

The following section discusses potential impacts to scenic vistas and visual resources, and the potential for adverse changes in the visual character and quality that could result from implementing the proposed land use and urban design policies. Potential impacts associated with light and glare are also addressed. Scenic and visual resources in the planning area were identified through a *windshield survey* of the natural and urban environment, and consideration of the community's perception and values of aesthetics. A comment was submitted by the City of Riverside in response to the circulation of the Notice of Preparation that raised concerns about general impacts to aesthetics from proposed land uses within the southern portion of the City of Colton. This comment is addressed in this section of the EIR. No other comments were submitted in response to the Notice of Preparation or at the public scoping meeting regarding potential aesthetic impacts.

Existing Conditions

The planning area is generally urbanized although the southeastern part of the City remains largely undeveloped. The planning area lies south of the Cajon Pass, which divides the San Gabriel Mountains and San Bernardino mountain ranges. Colton's natural environment can generally be described as semi-arid desert on the valley floor transitioning to forests as foothill/mountains' elevations increase. Within the planning area are Lytle Creek and the Santa Ana River; both are generally dry with intermittent flows during storm events. The Santa Ana River, which experiences a higher rate of flow, provides a much *greener* river view. In some portions of the Santa Ana River, the river views are lush, riparian habitat, while in other areas views are limited to the river's sandy bottom and irregular pockets of foliage.

The urban environment is primarily residential neighborhoods with scattered commercial districts and a large heavy industrial section in the southwest as is shown in the Existing Land Use map in the Project Description. The heavy industrial section is dominated by the California Portland cement plant on unincorporated land within the Sphere of Influence. The eastern side of the river has a combination of manufacturing, commercial, and higher density residential uses. Further to the southeast is the Reche Canyon Specific Plan area, which is mostly made up of very low density, single-family residential housing. Downtown Colton (roughly bordered by the I-10 Freeway to the south, the BNSF rail line to the west, 10th Street to the east, and D Street to the north) forms the historic core of the City characterized by small-lot residential development with Victorian houses intermixed with classic California bungalows. The commercial core of the City was originally along La Cadena Drive and Valley Boulevard but has deteriorated since the 1960s. On the other side of the I-10 Freeway is South Colton, a neighborhood first made up of homes built by rail yard workers. Today a few of the original houses made from lumber stripped from old boxcars can still be seen. A photographic survey highlighting the visual setting of the area is provided as Exhibit 4.1.1 (Photographic Survey).

Scenic Vistas

Scenic vistas can generally be defined as natural landscapes that form views of unique flora, geologic, or other natural features that are generally free from urban intrusions. Typical scenic vistas include views of mountains and hills, large, uninterrupted open spaces, and waterbodies. Scenic vistas generally play a large role in the way a community defines itself and also effects development patterns as projects are designed to take advantage of viewsheds.

Views of the San Bernardino and San Gabriel Mountains form a scenic backdrop for the northern portion of the planning area. This scenic backdrop is shared amongst all of the surrounding cities and communities that border and are nearby the City of Colton. These mountains are well outside the Planning Area and the jurisdiction of the City of Colton.

Scenic Resources

While scenic vistas form a complete viewshed, scenic resources are isolated occurrences of aesthetically pleasing natural or man-made forms. Typical examples of natural scenic resources include rock outcroppings, trees, and prominent ridgelines. Scenic resources can also be architecturally distinctive structures, historic buildings, etc. The Santa Ana River and its surrounding natural areas constitute a scenic resource within the Planning Area. Views of it are accessible from the surrounding area as well as through the recreational use of the Santa Ana River area.

Scenic Highways

The planning area does not have any officially designated Scenic Highways or any highways that are considered eligible for Scenic Highway status.

Visual Character

A community's visual character can be defined by the historical development pattern and architectural precedence that has occurred over its history, coupled with the community theming and design elements that have been implemented. Most cities' visual character is divided into sub-areas, each with its own visual pattern. Some of these sub-areas are shown on Exhibit 4.1.2 (Focus Areas) as *Focus Areas* identified in the General Plan Update.

Downtown Colton. Downtown boasts a collection of Victorian-style homes, intermixed with traditional California bungalows. These homes, some of which date from the late 1800s, are one of the City's significant cultural resources. The commercial core of Downtown has changed since the City's inception. La Cadena Drive reflected a Main Street-USA character until the 1960s and has changed to a mix of parking lots, one-story office buildings, and strip malls. One visual resource remaining from the City's past is the 1908 Carnegie Library on La Cadena Drive that houses the Colton Area Museum. Downtown Colton is characterized by mature landscaping and sidewalks. The Civic Center and Fleming Park are located in this area.

La Cadena Drive. La Cadena Drive runs through the historic core of Colton between the downtown and Laurel Street. Historic homes and small office buildings along La Cadena Drive contribute to its unique character, as many of the homes have been converted to professional office uses. This transformation has created opportunities for small professional businesses to locate near the Civic Center in a residential atmosphere. La Cadena is generally developed on both sides with sidewalks along its northern extent through the urban core of the City. Developed becomes more rural along its southern extent and sidewalks and other improvements are generally lacking. La Cadena Drive serves as a primary entry point at the northern and southern entries to the City.

Valley Boulevard Corridor. Valley Boulevard is Colton's main east-west corridor, with frontage along I-10 and freeway access at Rancho Avenue, 9th Street, and Mount Vernon Avenue. Valley Boulevard often serves as an alternate travel route between cities in west San Bernardino County when the I-10 experiences congestion. Many commercial and industrial buildings exhibit deferred maintenance and design quality. Older residential structures are intermixed with the commercial and industrial uses. The City has implemented extensive street improvements east of 9th Street and has assisted with façade improvements and new development at the gateway to downtown.

Mount Vernon Avenue Corridor. The Mount Vernon Avenue Corridor has direct access to I-10 via an off-ramp and connects Colton and the City of San Bernardino to the north. A key use anchoring the corridor's north end, but located in San Bernardino, is San Bernardino Valley College. Prior City planning efforts have sought to encourage lower-scale mixed use along Mount Vernon Avenue, in part to reflect a pattern of small auto-related businesses and restaurants intermixed with older single-family homes and duplexes; however, very little private investment has occurred, due in part to the narrow, shallow lots under multiple ownership. Mount Vernon Avenue serves as a primary entry point into the northern portion of the City.

Pellissier Ranch. The Pellissier Ranch/La Loma Hills area, located at the southern edge of the City, covers approximately 1,450 acres and represents the largest remaining developable area in Colton. The Santa Ana River defines the north and western boundaries, with the Riverside County line forming the southern border. The eastern edge of the area is bounded largely by neighborhoods located on the west side of La Cadena Drive.

South Colton. South Colton's residential neighborhoods reflect the families who live there, many of whom can trace their lineage in the area to the original settlements built by railroad workers. On 7th St. a few small structures remain as evidence of what was once a thriving neighborhood commercial district where small-scale shopkeepers would sell groceries and other goods directly out of their front windows, which opened directly onto the sidewalk. The area includes mature landscaping and sidewalks. Veterans Park is located in South Colton as is the iconic

Wilson Wildcats pedestrian bridge over La Cadena Drive at its intersection with Maple Street.

Outdoor Lighting and Night Skies

Much of the planning area is urbanized, with numerous outdoor lighting sources such as street lights, building and parking lot lighting, sports field lighting, illuminated signs, etc. Views of night skies and stars are impacted throughout the planning area, though less so in the comparatively more rural southern portions of the City such as Pellissier Ranch and parts of Reche Canyon.

Regulatory Setting

City of Colton General Plan

The current General Plan contains scant discussion of the issue of maintenance and enhancement of the visual character of the planning area. The few Principles and Standards that exist can be found in the Land Use Element. They are:

Residential Principle 1. Concentrated residential development resulting in attractive neighborhoods should be promoted through the use of effective neighborhood design guidelines.

Commercial Principle 4. Well-designed, human-scale commercial developments featuring an attractive and efficient pedestrian environment should be encouraged as they add to the responsiveness of commercial growth to localized needs.

Commercial Principle 5. The use of a "theme" in commercial areas, reflective of local characteristics and values should be promoted.

Industrial Principle 2. The majority of future light-industrial developments should be in the form of attractive industrial parks, consistent with conventional design applications, and rehabilitation of older existing industrial sites, and needs to be encouraged with design incentives for landscaping and attractive building design finishes.

Industrial Principle 4. The City should use specific plans for creating design flexibility and encouraging the development of attractive industrial parks.

Industrial Standard 6. For industrial parks, a review and permit process similar to that used for Planned Community Design Review or Conditional Use Permit [sic] should be employed, with strict guidelines as to use, landscaping, and building design adopted for each parcel.

Open Space Principle 1. A functional and adequate open space system should be provided which will protect recreational, agricultural, and other permanent open space uses.

Special Uses Principle 1. Special use districts are needed to respond to highly specialized needs in the community and to create special localized investment opportunities that will stimulate further development City-Wide.

Special Uses Principle 2. Attractive, efficient and quality developments should be attracted through the use of a Multi-Use District and Planned Community Development District.

Special Uses Principle 3. Special use districts should provide unique incentives to encourage larger projects of a self-sustaining scale, achieve aesthetically pleasing designs, and improve the character of the existing environments.

City of Colton Zoning Code

The City's Zoning Code (Chapter 18 of the Municipal Code) sets out some very general development standards to be used for projects in each zone. The City does not have a set of design guidelines, however, to address topics such as site design, building design, materials, fences and walls, design of parking, and landscaping and buffering.

Thresholds of Significance

The proposed General Plan Update would result in significant aesthetic impacts if it would:

A. Have a substantial adverse effect on a scenic vista.
B. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
C. Substantially degrade the existing visual character or quality of the site and its surroundings.
D. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Environmental Impacts

IMPACT 4.1.A 4.1.B

Impacts to scenic vistas and resources will be less than significant with implementation of existing General Plan policies

The General Plan Update does not propose to establish any scenic corridors or highways nor do any occur in the planning area. Therefore, there will be no impact to scenic corridors or highways.

Views of scenic vistas can be primarily impacted by development in two ways. First, a structure may be constructed that blocks the view of the vista (i.e. a second-story building constructed next to a single-story building). Second, the vista itself may be altered (i.e. development on a scenic hillside). Specifically, obstruction of views of the San Bernardino and San Gabriel Mountains could occur

for residents in the northern portion of the City if permissible heights and/or building massing design standards were increased. Currently, the low-density character of this area provides generally uninterrupted views of these resources and the proposed General Plan Update contains no policies that would change this. Likewise, as the mountain ranges to the north are outside of the planning area, the proposed update will not alter them.

The proposed General Plan Update does lay the groundwork for future residential, mixed-use, commercial, and industrial development throughout the planning area – the details of which are to be determined by future individual development plans. As portions of the planning area are undisturbed hillside, it is possible that development could impact scenic vistas currently visible from the southernmost parts of the City. However, since the proposed update would not authorize any site-specific land altering activities or any particular development project, infrastructure improvement, community facility, etc., it would itself have no direct impact on these vistas.

Impacts of future development projects would be reduced to a less than significant level with the implementation of these principles from the existing General Plan Conservation and Open Space Element:

6. Restrict development in canyons and hillsides and control the plan of development to prevent obstruction of natural runoff or water courses and to prevent unwarranted scarring of hillsides.
7. Outstanding scenic vistas and visual features shall be preserved and protected through the use of view easements, height limitations, and a design review board.

Through the implementation of these existing principles of the General Plan, impacts to scenic vistas and resources will be less than significant.

IMPACT 4.1.C

Impacts to the visual character and quality of the planning area will be less than significant with implementation of proposed General Plan policies

The proposed General Plan Update would not directly result in the degradation of any portion of the planning area's visual character, because it would not authorize any specific land altering activities or any site-specific development plans. Indirect impacts could occur if proposed policies are not sufficient to preserve and enhance those areas that contribute to a sense of place and provide distinctive community identity. The proposed General Plan Update supports low-density residential and light industrial development in the Pellissier Ranch area in the southwestern portion of the City adjacent to the City of Riverside. Development in this area over the long-term will incrementally convert this area from naturalized open space to an urban character. The remainder of the planning area is generally developed and future development supported by the General Plan would generally be constructed within context of an urbanize environment.

The updated Land Use Element contains goals and policies designed to protect and enhance visual character. These focus primarily on enhancement of the aesthetic quality of new development, which has been a problem area for the City for many years. Policies are also designed to focus on the individual character of residential, commercial, and industrial development, as well as public and private spaces, to ensure compatibility of architectural and design elements. Proposed policies that support maintenance and enhancement of visual character include:

Policy LU-1.3: Encourage quality building façades appropriate for pedestrian scale and visual interest.

Policy LU-1.6: Develop and implement a cohesive urban design and streetscape plan for the district.

Policy LU-1.9: Review all proposed development plans for consistency with the Development Code, General Plan, and any other Specific Plans or planning areas as applicable.

Policy LU-2.3: Support development proposals that will revitalize aging, underutilized, and poorly maintained properties along Valley Boulevard and Mount Vernon Avenue.

Policy LU-2.6: Reduce the visual and environmental impacts of expansive parking lots along major corridors by encouraging a street-oriented development pattern that encourages pedestrian activity, with buildings sited at or near the sidewalk edge.

Policy LU-2.7: Require the use of landscaping, lighting, site design, and similar design elements to improve the appearance of commercial sites.

Policy LU-2.10: Vigorously enforce City codes, including building and safety, zoning and land use regulations, and property maintenance codes, to improve the visual appearance of properties along Valley Boulevard and Mount Vernon Avenue.

Policy LU-3.3: Promote adaptive reuse of historic residential structures for office or commercial uses to maintain the district's character.

Policy LU-3.5: Require preservation of significant historic buildings and resources in downtown, and discourage the use of generic architecture styles used by corporate and franchise businesses that may undermine downtown's character.

Policy LU-3.7: Encourage the development of gateway features that include landscaping, entry features, signage, street furniture, and public art and other design features.

Policy LU-3.9: Encourage high-quality, attractive, higher-density housing that complements office and commercial uses in the area.

Policy LU-4.1: Preserve and maintain established single-family homes in south Colton.

Policy LU-4.2: Encourage and facilitate property maintenance and rehabilitation to improve neighborhood conditions.

Policy LU-5.1: Require that new industrial and commercial uses adjacent to residential neighborhoods use physical design features such as buffering, landscaping, setbacks, screening, operational standards, and other methods to minimize light, glare, noise, dust, odor, vibration, traffic, and other impacts.

Policy LU-5.2: Provide logical transitions between industrial development and adjacent single-family neighborhoods through careful treatment of scale, massing, and the location of services that respond sensitively to adjacent residential uses.

Policy LU-8.1: Protect and preserve quality single-family residential neighborhoods.

Policy LU-8.2: Require that the architectural, design, and scale of new residential developments respect the character of established neighborhoods.

Policy LU-9.3: Encourage a unified architectural character in commercial areas, and vigorously enforce commercial land use standards, including but not limited to landscaping, signage, and property maintenance to enhance the visual appearance of the City's commercial areas.

Policy LU-10.2: Require parcels developed for industrial uses to incorporate buffers that minimize the impacts of noise, light, visibility of activity and vehicular traffic on surrounding residential uses.

Policy LU-12.6: Protect structures of historical and architectural significance.

Policy LU-12.7: Pay critical attention to the appearance of properties at the City's major gateways. Require that private development at these locations create a stronger sense of City identity, and improve the public realm to reinforce this image.

The proposed policy framework will guide new private and public development to be consistent with existing natural and urban characters, while still providing a variety and visual interest. As discussed in Chapter 4.5 of this EIR, sufficient regulations are in place to protect the integrity of historic buildings and structures and the proposed plan would not result in any significant impacts to such visual resources.

A less than significant degradation of the visual character and quality of the planning area would result from implementation of the proposed General Plan policies.

IMPACT 4.1.D

Impacts due to light and glare will be less than significant with implementation of existing zoning standards

The General Plan Update will not directly result in new sources of light or glare, because it would not authorize any specific land altering activities or any site-specific development plans. Development directed by the goals and policies of the General Plan Update will produce new sources of light and/or glare that may potentially cause significant impacts to day and/or nighttime views. Excessive or inappropriately directed lighting can adversely impact nighttime views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. For example, a flood-light attached to the side of a single-family residence could be oriented to shine into a neighbor's house. Reflective surfaces (i.e. polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e. if glare is directed into the eyes of motorists).

The City's Zoning Code regulates glare and outdoor lighting in the Performance Standards section (Chapter 18.42). Direct or reflected glare from light sources originating on a property are prohibited from being visible from the property line. Continued administration of these regulations through the City's routine plan check procedures will ensure that new light sources associated with future development are appropriately designed and maintained to minimize impacts associated with light and glare. Therefore, impacts associated with light and glare will be less than significant.

Mitigation Measures

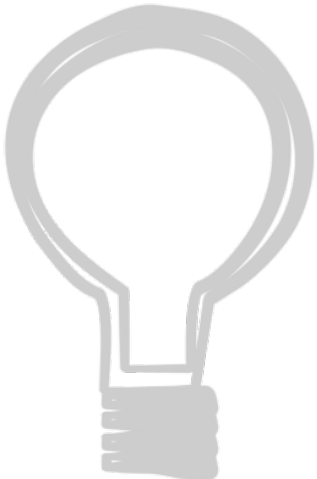
None required

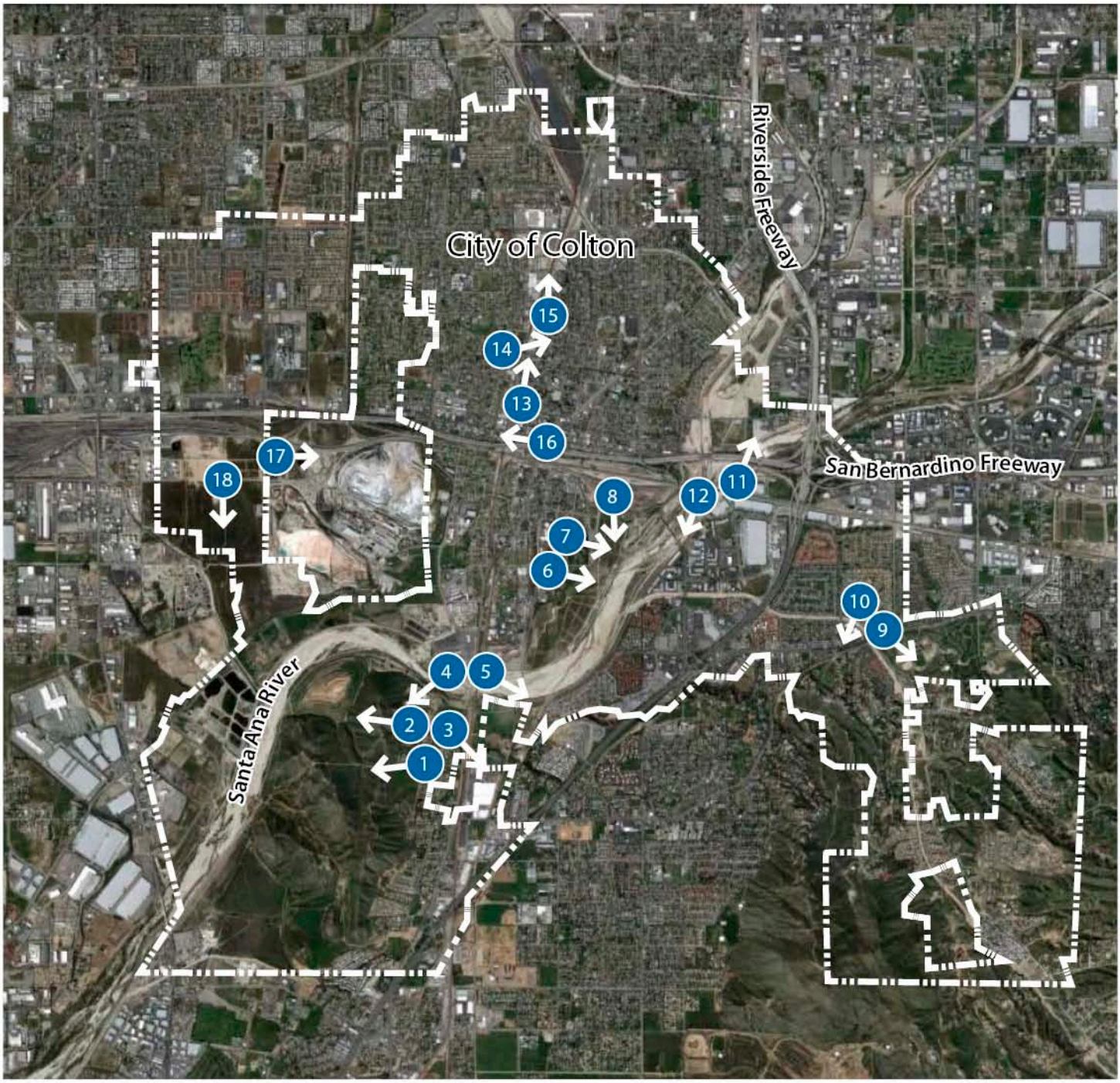
Level of Significance with Mitigation Incorporated

Impacts 4.1.A through 4.1.D will be less than significant with implementation of existing and proposed policies and standards



This Page Intentionally Left Blank





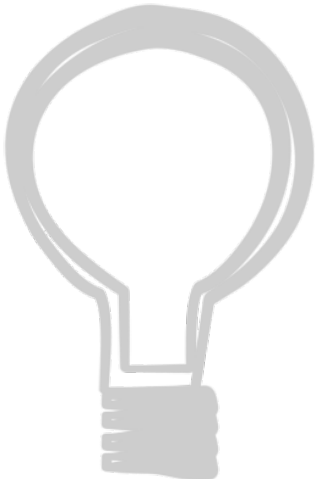
Source: Hogle-Ireland May 5, 2012

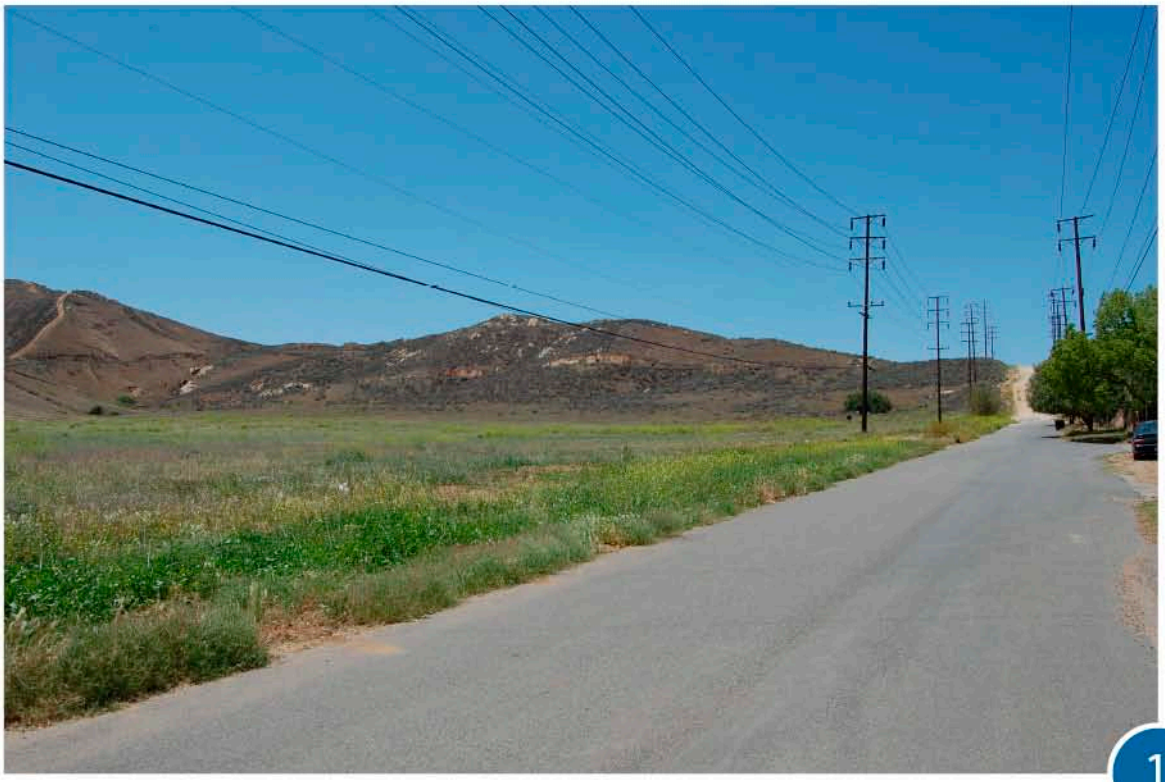
Not to scale

Exhibit 4.1.1 Photographic Survey

City of Colton General Plan EIR

This Page Intentionally Left Blank





1

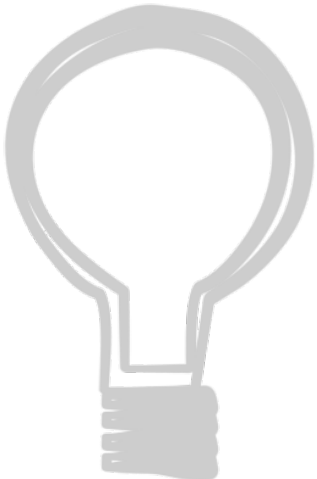
View of Pellissier Ranch from Litton Avenue looking west



2

View of Pellissier Ranch from Litton Avenue looking southwest

This Page Intentionally Left Blank





3

View of Pellissier Ranch from Litton Avenue looking southeast

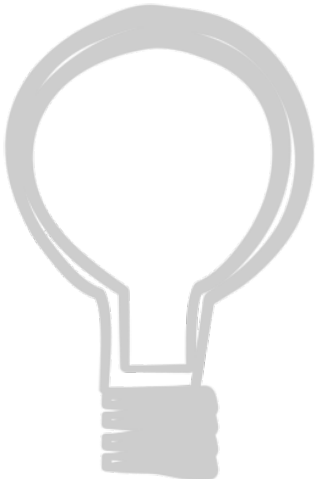


4

View of Santa Ana River from La Cadena Drive looking southwest

Exhibit 4.1.1 Photographic Survey

This Page Intentionally Left Blank





5

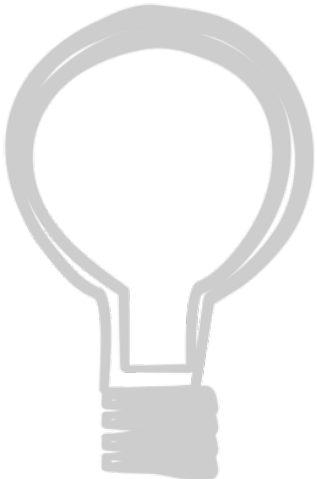
View of Santa Ana River from La Cadena Drive looking southeast



6

View of Residential units at Pine Street and Ash Street looking west

This Page Intentionally Left Blank





7

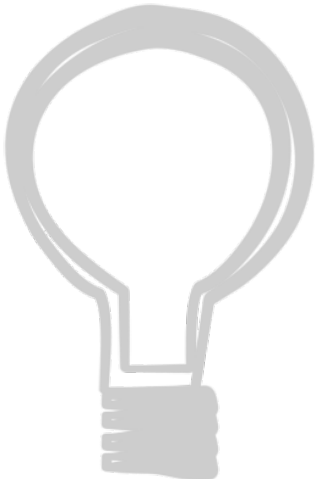
View of Residential units at Kirk Street and Berry Street looking west



8

View of vacant property adjacent to Santa Ana River at M Street and Fogg Street looking south

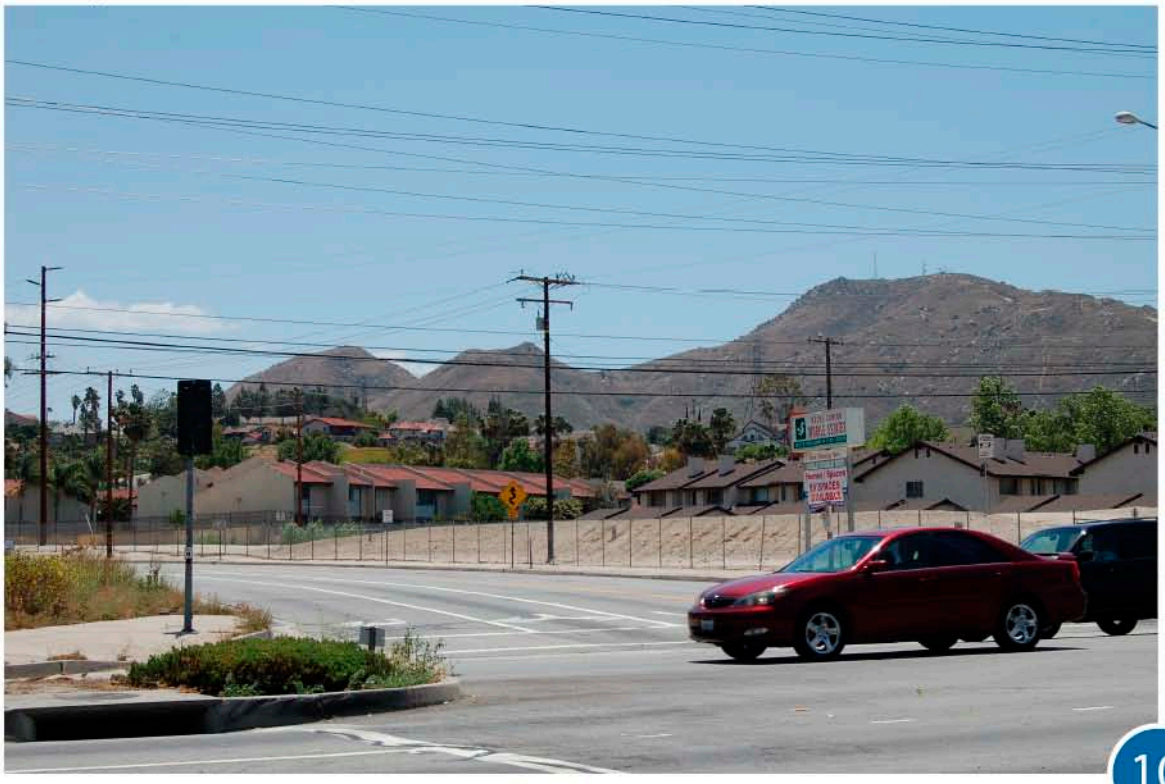
This Page Intentionally Left Blank





9

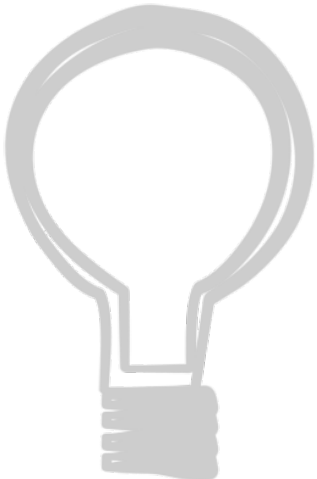
View of southeast corner of Reche Canyon Road and Washington Street looking southeast



10

View of southeast corner of Reche Canyon Road and Washington Street looking southwest

This Page Intentionally Left Blank





11

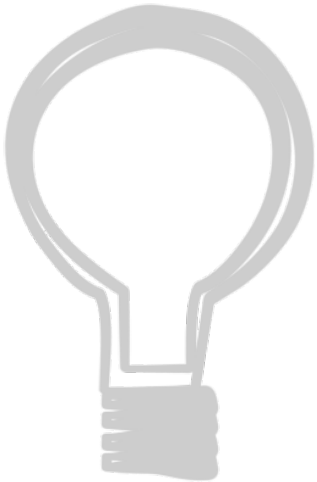
View of Santa Ana River from Mt. Vernon Avenue looking northeast

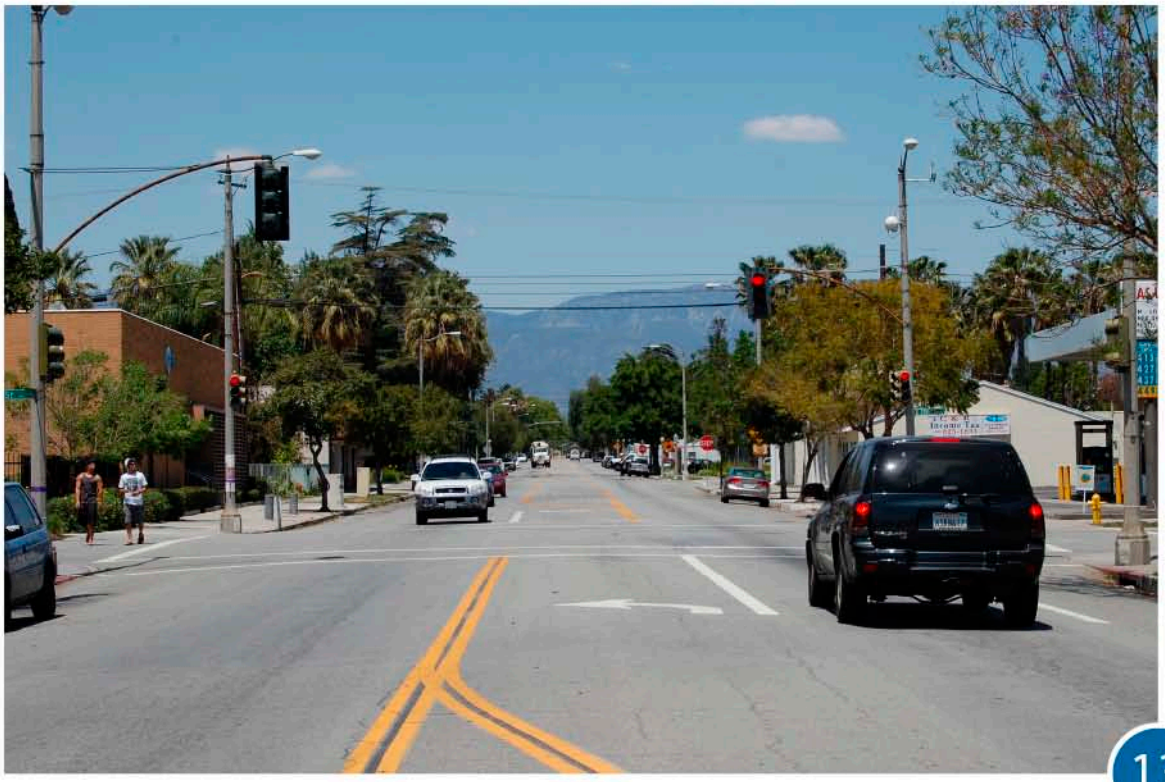


12

View of Santa Ana River from Mt. Vernon Avenue looking southwest

This Page Intentionally Left Blank





13

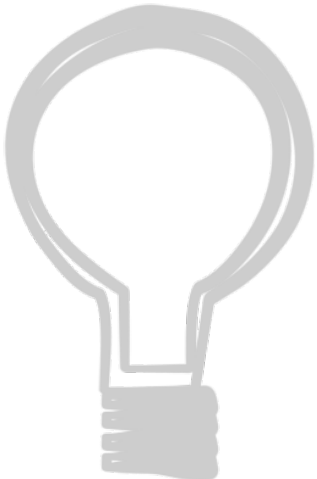
View of Downtown from La Cadena Avenue Drive looking north



14

View of historic home in Downtown from La Cadena Avenue Drive looking east

This Page Intentionally Left Blank





15

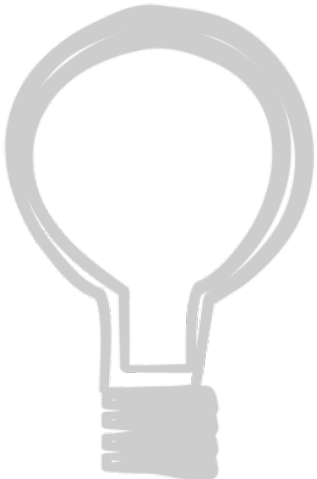
View of lutheran church in Downtown from La Cadena Drive looking north



16

View of bank in Downtown from La Cadena Drive looking west

This Page Intentionally Left Blank



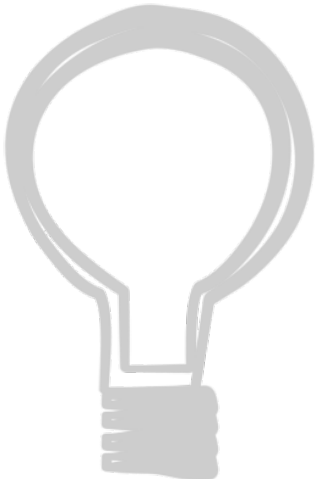


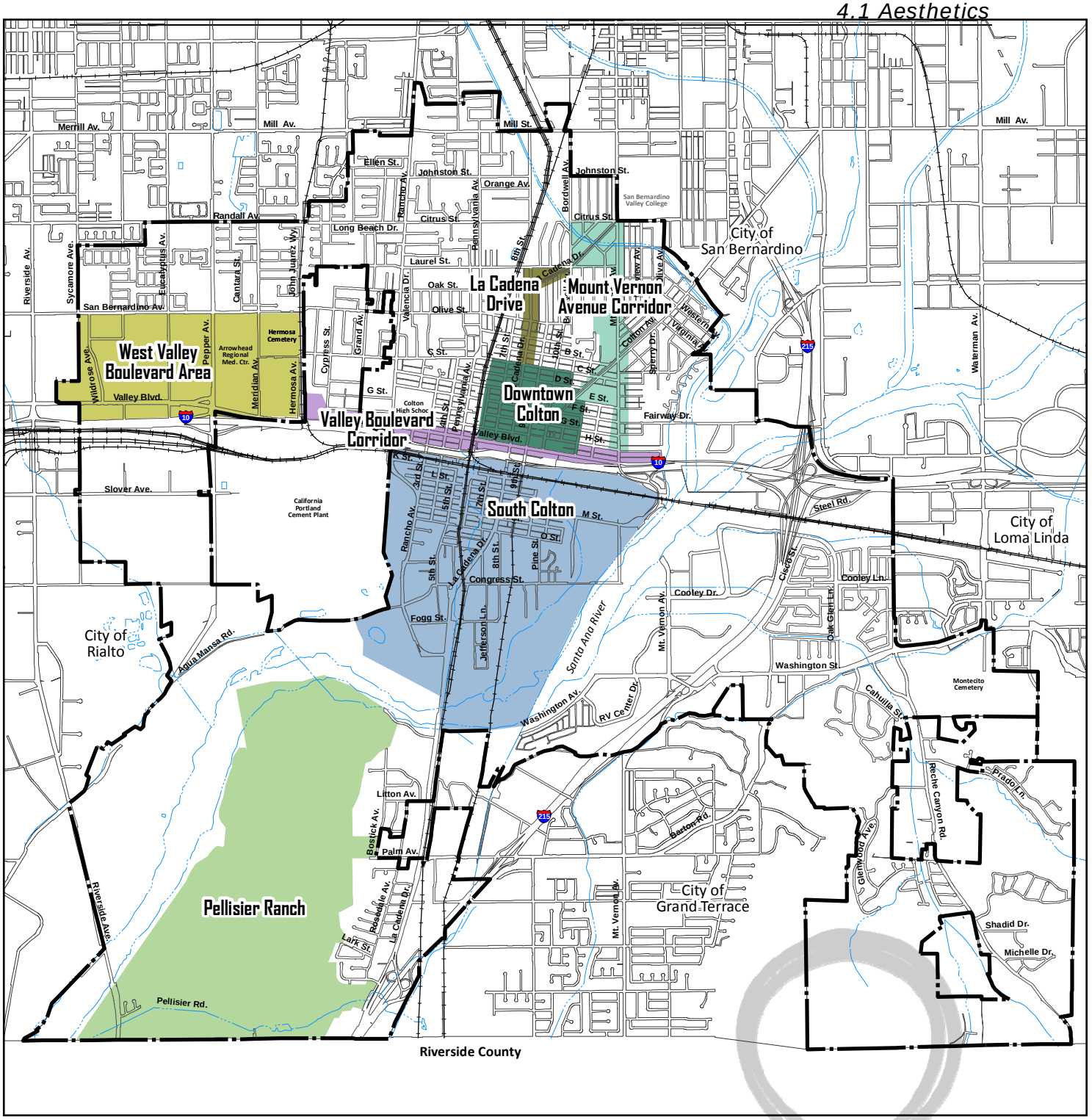
View of Slover Mountain from Pepper Avenue looking east



View of Vacant Property from Slover Avenue looking south

This Page Intentionally Left Blank





Legend

Focus Areas

- West Valley Boulevard
- Valley Boulevard Corridor
- South Colton
- Pellisier Ranch
- Downtown Colton
- Mount Vernon Avenue Corridor
- La Cadena Drive

Base Map

- Railroads
- Hydrology

Date: January 2009
Map Prepared by: Hogle-Ireland, Inc.
Source: City of Colton 2008 and Bernardino County, GIS 2007

0 1,000 2,000 4,000 6,000 8,000 10,000

Exhibit 4.1-2
Focus Areas

This Page Intentionally Left Blank

Agricultural and Forest Resources 4.2

This section analyzes potential impacts to agricultural resources due to the implementation of the General Plan Update. The primary information sources for are:

- California Department of Conservation, 2008 Farmland Data, and
- California Department of Forestry and Fire Protection, 2002 Land Cover Data.

Key acronyms and abbreviations used in this section include:

CDC	California Department of Conservation
FMMP	Farmland Mapping and Monitoring Program
LCMMP	Land Cover Mapping and Monitoring Program
NRCS	Natural Resource Conservation Service
SOI	Sphere of Influence

No comments were submitted in response to the Notice of Preparation or at the public scoping meeting regarding potential agricultural or forest resource impacts.

Environmental Setting

Farmland

The planning area currently has three areas, approximately 12.6 acres, which are designated by the California Department of Conservation (CDC) as Important Farmland (see Exhibit 4.2-1, Farmland and Forest Land). One area is classified as Farmland of Statewide Importance, and the other two are classified as Prime Farmland. The soils in these areas primarily consist of San Emigdio Fine Sandy Loam (ScC) and San Timoteo Loam (SgF2)[1], which are defined as having minimal to severe limitations for cultivation. Other areas within the planning area are classified as Grazing Land, Urban and Built-up Land, and Other Land.

The areas designated as Prime Farmland and Farmland of Statewide Significance are adjacent to one another in the City's SOI; the areas straddle Reche Canyon Road just south of Prado Lane. The Prime Farmland area, approximately 11 acres, is used as a plant nursery and Christmas tree farm. The Farmland of Statewide Significance area, about 1.6 acres, is to the west of the Prime Farmland area and is used as a Christmas tree farm. These areas are immediately surrounded by low-density and very low-density residential housing that makes up the bulk of the Reche Canyon Specific Plan land uses.

Agricultural Zoning

The City of Colton currently has no agriculturally zoned parcels.

Williamson Act Contracts

The Williamson Act (more fully discussed below) is a voluntary program allowing property owners to have their property assessed for taxes based on its agricultural use rather than at the current market value. In return for the lower value assessment, the property owner agrees to keep the land in agricultural production for a period of time. Currently, the County of San Bernardino has not entered into any Williamson Act contracts within the incorporated area of Colton or the SOI.

Forest Resources

California Land Cover Mapping and Monitoring Program (LCMMP)

LCMMP was an annual satellite photo survey conducted between 1992 and 2002 by the California Department of Forestry and Fire Protection (CAL FIRE) and the United States Department of Agriculture Forest Service Region. The survey's purpose was to enhance fire protection and natural resource management on public and private lands in California. The LCMMP designated City and SOI areas as Agricultural, Barren, Herbaceous, Shrub, Urbanized, and Water. In addition, the LCMMP identified 21 areas (19 acres) as having sufficient tree cover to be designated as forest land (see Exhibit 4.2-2, Vegetation Map). Table 4.2-1 lists Forest Resource Areas and their existing and proposed land use designation. All of the areas, save one, are proposed to be designated as protected open space or park. The one exception, Area 18, is a sliver of vacant land located at the north end of the Portland Cement property adjacent to the I-10 freeway. Area 18 is proposed to be designated as Heavy Industrial.

Table 4.2-1: Forest Resource Areas – Land Use Comparison

Area	Acres	Cover Type	City / Sphere	Existing Land Use	Proposed General Plan Designation
1	0.5169	Hardwood	City	Open Space – Resource	Open Space -- Resource
2	0.7237	Mixed Hardwood and Conifer	City	Open Space – Resource	Open Space -- Resource
3	0.5376	Hardwood	City	Open Space – Resource	Open Space -- Resource
4	0.8064	Hardwood	City	Open Space – Resource	Open Space -- Resource
5	0.5996	Hardwood	City	Open Space – Resource	Open Space -- Resource
6	1.4060	Hardwood	City	Open Space – Resource	Open Space -- Resource
7	1.1579	Hardwood	City	Open Space – Resource	Open Space -- Resource
8	0.5996	Hardwood	City	Open Space – Resource	Open Space -- Resource
9	0.3515	Hardwood	City	Open Space – Resource	Open Space -- Resource
10	0.7444	Hardwood	City	Open Space – Resource	Open Space -- Resource
11	0.2688	Hardwood	City	Open Space – Resource	Open Space -- Resource
12	1.9850	Hardwood	City	Open Space – Resource	Open Space -- Resource
13	1.1166	Hardwood	City	Open Space – Resource	Open Space -- Resource
14	0.5169	Mixed Hardwood and Conifer	City	Open Space – Recreation	Open Space -- Recreation
15	2.7846	Mixed Hardwood and Conifer	City	Open Space – Resource	Reche Canyon Specific Plan
16	0.4549	Hardwood	City	Open Space – Resource	Open Space -- Resource

Table 4.2-1: Forest Resource Areas – Land Use Comparison

Area	Acres	Cover Type	City / Sphere	Existing Land Use	Proposed General Plan Designation
17	0.5376	Mixed Hardwood and Conifer	City	Open Space – Recreation	Open Space -- Recreation
18	0.8064	Hardwood	Sphere	Vacant	Heavy Industrial
19	1.3440	Mixed Hardwood and Conifer	City	Open Space – Recreation	West Valley Specific Plan
20	1.1579	Mixed Hardwood and Conifer	City	Public/Institution	Public/Institution
21	0.2688	Mixed Hardwood and Conifer	City	Open Space – Recreation	Open Space -- Recreation

Timberland Resources

The Christmas tree farm in Reche Canyon is the planning area's one area that would qualify as a timberland resource. This 11-acre property is bounded on all sides by residential housing. There is little to no opportunity for the tree farm use to expand to neighboring properties.

Regulatory Framework

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) maps farmlands, urbanized lands, grazing lands, and other land uses. The map is created by using data from the USDA Natural Resource Conservation Service (NRCS) soil survey and current land use information. The most recent mapping for the Colton area occurred in 2010. Colton's land classification areas are:

Prime Farmland (P)

Prime Farmland is land with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date to be included as Prime Farmland.

Farmland of Statewide Importance (S)

Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date to be included as Farmland of Statewide Importance.

Grazing Land (G)

Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Urban and Built-up Land (D)

Urban and Built-up Land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land can be used for residential, industrial, commercial, public administration, institutional, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, construction, and other developed purposes.

Other Land (X)

Other Land is land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act

In 1965, The California Land Conservation Act, also known as the Williamson Act, was adopted. This voluntary program allows property owners to have their property assessed on the basis of its agricultural production rather than at the current market value. The property owner is thus relieved of having to pay higher property taxes, as long as the land remains in agricultural production. The purpose of the Act is to encourage property owners to continue to farm their land, and to prevent the premature conversion of farmland to urban uses. Participation requires that the area consist of 100 contiguous acres of agricultural land under one or more ownerships.

Upon approval of an application by the Board of Supervisors, the agricultural preserve is established, and the land within the preserve is restricted to agricultural and compatible uses for 10 years. Williamson Act contracts are automatically renewed annually for an additional one-year period, unless the property owner applies for non-renewal or early cancellation. The Williamson Act also contains limited provisions for cancellation of contracts. Specific findings regarding the non-viability of the agricultural use must be made, and a substantial penalty for the cancellation is assessed.

California Land Cover Mapping and Monitoring Program

The Fire and Resource Assessment Program (FRAP) of the California Department of Forestry and Fire Protection and the USDA Forest Service coordinate land/vegetation cover mapping and monitoring within California. Remotely sensed data and GIS (geographic information systems) are used to accomplish the program objectives to enhance fire protection and natural resource management on

public and private lands in California. This program generates data that describes the extent and condition of various land cover types, and the magnitude and cause (e.g. urbanization, natural succession, wildfire, and timber harvest) of land cover changes.

The program assigns the following cover types to land within the State:

- Conifer – areas with greater than 10 percent cover as the dominant type
- Mix – areas with greater than 10 percent coniferous cover and greater than 20 percent hardwood cover
- Hardwood – areas with greater than 10 percent hardwood cover as the dominant type
- Shrub – areas with greater than 10 percent shrub cover as the dominant type
- Grass – areas with greater than 10 percent grass cover as the dominant type
- Barren – areas with less than 10 percent cover of any vegetation
- Agriculture – areas covered by agricultural uses
- Urban – urbanized areas
- Ice/snow – areas covered by ice and/or snow

Thresholds of Significance

The General Plan Update may result in potential impacts to agricultural resources if it results in any action which:

A. Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural uses.
B. Conflicts with existing zoning for agricultural use or a Williamson Act Contract.
C. Conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526).
D. Results in the loss of forest land or conversion of forest land to non-forest use.
E. Involves changes in the existing environment that due to their location or nature could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Environmental Impacts

IMPACT 4.2.A

Implementation of the proposed General Plan Update will not result in impacts to farmland.

The City of Colton has one area within city limits and two areas within the SOI that are designated by the CDC as Important Farmland. As discussed above, the area

within the City's limits is classified as Farmland of Statewide Importance, while the two SOI areas are classified as Farmland of Statewide Importance and as Prime Farmland. Land within both SOI and the city is classified as Grazing Land, Urban and Built-up Land, and Other Land.

The properties designated by the CDC as Farmland of Statewide Importance and Prime Farmland, located in the SOI along Reche Canyon Road just south of Prado Lane, are limited in size (less than 13 acres combined) and are completely surrounded by residential housing. The area designated Prime Farmland is being used as a plant nursery and Christmas tree farm. The area with Farmland of Statewide Significance designation is partially occupied by a tree farm. These areas are currently designated Residential Estates and are proposed to be designated as the Reche Canyon Specific Plan, which provides for the area to be developed with low-density residential.

The proposed General Plan Reche Canyon Specific Plan designation would not prohibit the existing agricultural operations to continue. The Reche Canyon Specific Plan designates these properties as Estate Residential, which limits residential development to two dwelling units per acre and allows for "plant cultivation (heavy)" and "animal keeping (heavy)" as permitted uses. Therefore, implementation of the General Plan Update would not directly result in the conversion of designated farmland to non-agricultural uses since these types of operations are allowed by the updated General Plan. However, the General Plan Update and existing Specific Plan would allow for uses other than agriculture that could result in the conversion to non-agricultural uses. Specific analysis of this potential conversion of designated farmland would be performed at the time development is proposed that would necessitate such an analysis and would be based on California Department of Conservation's Land Evaluation & Site Assessment (LESA) Model and specific site information on soil, water resources, and surrounding uses.

IMPACT 4.2.B

Implementation of the proposed General Plan Update will not result in any Williamson Act Contract impacts.

At this time, the County does not have any Williamson Act contracts within the city limits or within Colton's SOI. Future Williamson Act contracts are not anticipated because no agriculturally zoned land exists and the actively farmed SOI area is smaller than 100 acres, the minimum amount of contiguous land required to qualify for a Williamson Act contract. Implementation of the proposed General Plan Update will not result in any impacts.

IMPACT 4.2.C 4.2.D

No impact would occur to existing zoning for forest land or timberland as a result of the General Plan Update.

The California Public Resources Code section 12220(g) defines forest land as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Section 4526 of the Code defines timberland as land, other than land owned by the federal government or land designated by the state as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.

As discussed in the Forest Resources section above, the LCMMP has designated 21 areas totaling just less than 19 acres as forest land. These areas are mapped in Exhibit 4.2-2: Vegetation Map and listed in Table 4.2-1: Forest Resource Areas – Land Use Comparison. From Table 4.2-1 it can be seen that these forest land areas can be broken down into three categories:

1) Areas for which the proposed General Plan designation matches the existing, on-the-ground land use;
2) Areas that fall within a proposed or existing specific plan area; and
3) An area for which the proposed General Plan designation does not match the existing, on-the-ground land use.

Category 1 – Areas for which the proposed General Plan designation matches the existing, on-the-ground land use

Areas: 1 – 14 inclusive, 16, 17, 20, and 21[2]

These areas all have an existing land use designation of either Recreation-Open Space or Resource-Open Space. The proposed General Plan designations match existing uses. The implementation of the proposed General Plan Update will not change the existing General Plan designations nor the existing use; therefore, implementation of the proposed Plan will have a less than significant impact upon these areas.

Category 2 – Areas that fall within a proposed or existing specific plan area

Area 15 – Reche Canyon Specific Plan

The proposed General Plan Update does not change the permitted land uses for the Reche Canyon Specific Plan area. Rather, it simply changes the designation to be "Reche Canyon Specific Plan," which indicates that, as is currently the case, the Specific Plan governs uses for this area. Since the functional land use designation is not changing with the implementation of the proposed General Plan Update, impacts will be less than significant.

Area 19 – West Valley Specific Plan

The draft West Valley Specific Plan area includes an area that is designated as forest land (as shown on Exhibit 4.2-1) due to its capability to accommodate 10-percent native tree cover. This area does not contain any designated timberland. As shown further on Exhibit 4.2-2, this area's specific vegetation type is Non-Native/Ornamental Conifers/Hardwoods that are primarily located within the West Valley Park. Colton does not have a zone allowing for the preservation and/or harvesting of forest land because much of the City is urbanized. In addition, due to the number and type of non-native and ornamental trees, and due to the existing park and urban uses, this area has negligible value as harvestable forest land. Therefore, no impact would occur to existing zoning for forest land or timberland as a result of the General Plan Update.

Category 3 – An area for which the Proposed General Plan designation does not match the existing, on-the-ground land use

Area 18

This 0.8 acre area is a small sliver of land at the north end of a property supporting a Portland Cement manufacturing operation, located between I-10 and the Union Pacific Railroad tracks. Though the property is actively used as heavy industrial, this particular section is vacant. Given Area 18's location between two transportation corridors and given its adjacency to a Portland Cement operation, the parcel is a remnant of an industrial use rather than forest land or timber land. Given its size, existing use, and location, it is unlikely that the parcel could be effectively used as forest land or timberland. Thus, the impact of the proposed General Plan designation as Heavy Industrial will be less than significant.

IMPACT 4.2.E

Implementation of the proposed General Plan Update would not create conflicts involving agricultural zoning and would not result in other changes to the existing environment that could result in the conversion of Farmland.

The City of Colton has not zoned any land as agricultural. The areas designated as Farmland of Statewide Importance and Prime Farmland are located within the Reche Canyon Specific Plan. These properties are partially developed as a plant nursery and Christmas tree farm. The immediate surrounding area is already developed with low-and very low-density residential land uses per the Reche Canyon Specific Plan. Regardless of the Farmland designations, the agricultural operations are relatively minor and do not use the full site. The existing surrounding residential land uses restrict the agricultural operations from expanding any further than currently operating. The proposed General Plan designation does not prohibit the continued use of these operations. Therefore, implementation of the proposed General Plan Update would not create conflicts involving agricultural zoning and would not result in other changes to the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. No impact will occur.

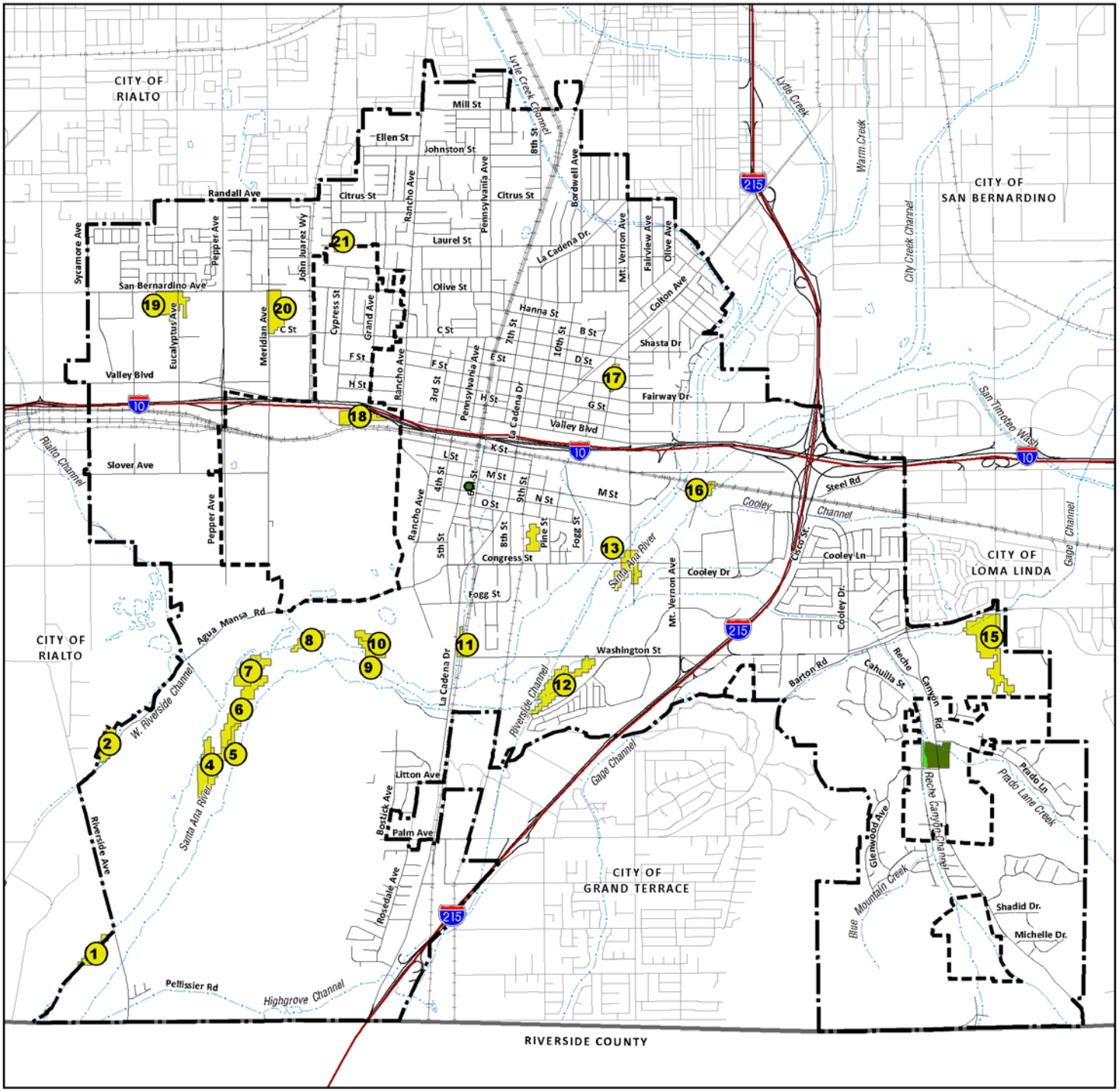
Mitigation Measures

No mitigation is required.

Significance of Impacts with Mitigation Incorporated

Not applicable.

This Page Intentionally Left Blank



Farmland

- Prime Farmland (P)
- Farmland of Statewide Importance (S)

Forest Land

- Land with at least 10% tree cover
- (#) LCMMP designated Forest Area

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroad
- Surface Water

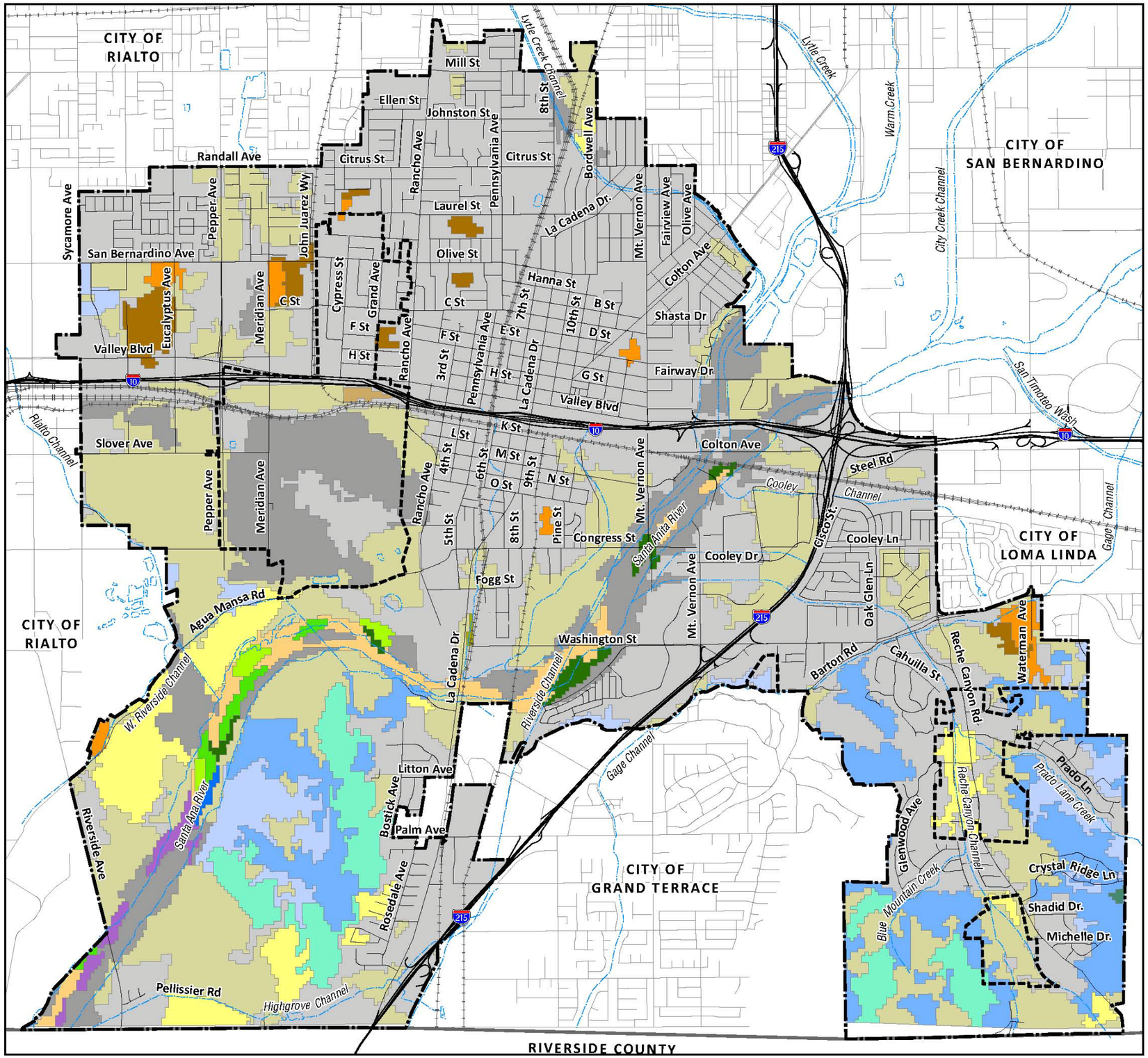
Source: Department of Conservation,
Farmland Mapping and Monitoring Program, 2010.
LCMMP, Vegetation Data, 1997.
California Department of Forestry and Fire Protection

0 0.25 0.5 0.75 1 Mile

Exhibit 4.2-1
Farmland and Forest Land

This Page Intentionally Left Blank

Exhibit 4.2-2
Vegetation Map



Dry Herbaceous
- Annual Grass/Forbs

Harwood Forest/Woodland
- Eucalyptus
- Fremont Cottonwood
- Mixed Riparian Hardwoods
- Willow

Non-Forest
- Agriculture
- Barren/Rock
- Urban/Developed
- Water

Shrub
- Baccharis (riparian)
- Buckwheat (White Sage)
- California Sagebrush
- Encelia Scrub
- Northern Mixed Chaparral

Urban/Non-Native Vegetation
- Giant Reed/Pampas Grass
- Non-native Hardwood
- Non-native/Ornamental CON/HDW
- Non-native/Ornamental Grass

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroads
- Surface Water

Use constraints:
This is not an official map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For official boundary information, the pertinent Agency or Municipality should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source: LCMMP, Vegetation Data, 1997.
California Department of Forestry and Fire Protection.

0 0.25 0.5 0.75 1 Miles

This Page Intentionally Left Blank

References

[1] U.S. Department of Agriculture. Natural Resources Conservation Service. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm [April 19, 2012]
[2] Areas are mapped on Exhibit 4.2-1.

Air Quality 4.3

This section analyzes potential air quality impacts that could result from implementation of the proposed General Plan Update. The following discussion is based on the *Colton General Plan Update Air Quality and Climate Change Assessment* prepared by Hogle-Ireland, Inc. (Appendix C). Comments regarding air quality impacts were submitted in response to the City's Notice of Preparation of the Draft EIR, from the South Coast Air Quality Management District (SCAQMD), and the City of Riverside during the NOP period. In addition, comments regarding air quality impacts were expressed at the scoping meeting from John Anaya Sr. These comments are included in Appendix B and addressed in this section.

4.3.1 Existing Conditions

The City of Colton and Inland Empire are defined by a semi-arid Mediterranean climate characterized by mild winters and warm summers. Annual rainfall averages 15.32 inches, with the rainy season occurring during the winter.[1] The coolest month of the year is January, with an average monthly low of 44.0° Fahrenheit (F). The warmest month is July, with an average monthly high of 95.0° F. The annual average maximum temperature is 79.4° F, and the annual average minimum temperature is 52.3° F. Colton is located at an elevation of approximately 1,000 feet above mean sea level (AMSL).

Regional Air Quality

The City is located within the South Coast Air Basin (Basin).[2] The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside counties. The Basin is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; these topographic features trap ambient air and pollutants within the Los Angeles and Inland Empires valleys below. The Basin is managed by the SCAQMD. Pursuant to the California Clean Air Act (CCAA), SCAQMD is responsible for bringing air quality within the Basin into conformity with federal and state air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. SCAQMD works with federal, state, and local agencies to reduce pollutant emissions from stationary, mobile, and indirect pollutant sources through the development of rules and regulations.

Both California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as *criteria pollutants*). These pollutants are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM^{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM^{2.5}$), and lead (Pb). The state has also established AAQS for the additional pollutants of visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where state and federal standards differ, state AAQS are more stringent than federal AAQS. Federal and state standards are shown in Table 4.3-1 (Ambient Air Quality Standards). Descriptions of each criteria pollutant are provided below.

Ozone. Ozone is a pungent, colorless, and highly reactive gas that forms from the atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight. Ozone is most commonly associated with smog. Ozone precursors such as reactive organic gases (ROG) and oxides of nitrogen (NO_X) are released from mobile and stationary sources. Ozone is a respiratory irritant and can cause cardiovascular diseases, eye irritation, and impaired cardiopulmonary function. Ozone also causes damage to building materials and plant leafs.

Carbon Monoxide. Carbon monoxide is primarily emitted from vehicles due to the incomplete combustion of fuels. Carbon monoxide has wide ranging impacts on human health because it combines with hemoglobin in the body and reduces the amount of oxygen transported in the bloodstream. Carbon monoxide can result in reduced tolerance for exercise, impairment of mental function, impairment of fetal development, headaches, nausea, and death at high levels of exposure.

Nitrogen Dioxide. Nitrogen dioxide and other oxides of nitrogen (NO_X) contribute to the formation of smog and results in the brownish haze associated with it. They are primarily emitted from motor vehicle exhaust but can be omitted from other high-temperature stationary sources. Nitrogen oxides can aggravate respiratory illnesses, reduce visibility, impair plant growth, and form acid rain.

Particulate Matter. Particulate matter is a complex mixture of small-suspended particles and liquid droplets in the air. Particulate matter between ten microns and 2.5 microns is known as PM^{10}, also known as coarse or inhalable particulate matter. PM^{10} is emitted from diverse sources including road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM^{10} can also be formed secondarily in the atmosphere when NO_2 and SO_2 react with ammonia. Particulate matter less than 2.5 microns in size are called $PM^{2.5}$ or fine particulate matter. $PM^{2.5}$ is primarily emitted from point sources such as power plants, industrial facilities, automobiles, wood-burning fireplaces, and construction sites. Particulate matter is deposited in the lungs and cause permanent lung damage, potentially resulting in lung disease and respiratory symptoms like asthma and bronchitis. Particulate matter has also been linked to cardiovascular problems such as arrhythmia and heart attacks. Particulate matter can also interfere with the body's ability to clear the respiratory tract and can act as a carrier of absorbed toxic substances. Particulate matter causes welfare issues because it scatters light and reduces visibility, causes environmental damage such as increasing the acidity of lakes and streams, and can stain and damage stone, such as that applied in statues and monuments.

Sulfur Dioxide. Sulfur dioxide and other oxides of sulfur (SO_X) are reactive gasses emitted from the burning of fossil fuels, primarily from power plants and other industrial facilities. [3] Other less impacting sources include metal extraction activities, locomotives, large ships, and off-road equipment. Human health impacts associated with SO_X emissions include bronchoconstriction and increased asthma symptoms.

Table 4.3-1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3.5]	Secondary[3.6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		-		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/ m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m³)		-	-	-
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemiluminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m³)		100 ppb (see footnote 8)	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	-	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	-		-	0.5 ppm (1,300 µg/m³)	
	1 Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)	-	-
Lead[9] (Pb)	30 Day Average	1.5 µg/m³	Atomic Absorption	-	-	-
	Calendar Quarter	-		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[10]	-		0.15 µg/m³		
Visibility Reducing Particles	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: ARB, February 2012

PPM, parts per million
µg/m3, micrograms per cubic meter

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California

ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9. On June 2, 2010, the US EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM has adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO2 standard of 0.14 ppm and the annual primary SO2 standard of 0.030 ppm, effective August 23, 2010. The secondary SO2 standard was not revised at that time; however, the secondary standard is undergoing separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

11. National lead standard, rolling 3-month average: final rule signed October 15, 2008.

12. Extinction coefficient of 0.23 per kilometer visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.

Lead. Lead is primarily emitted from metal processing facilities (i.e. secondary lead smelters) and other sources such as manufacturers of batteries, paints, ink, ceramics, and ammunition. Historically, automobiles were the primary sources before lead was phased out of gasoline. The health effects of exposure to lead include gastrointestinal disturbances, anemia, kidney diseases, and potential neuromuscular and neurologic dysfunction. Lead is also classified as a probable human carcinogen.

Non-Attainment Status

Air pollution levels are measured at monitoring stations located throughout the Basin. Areas that are in nonattainment with respect to criteria pollutants are required to prepare plans and implement measures that will bring the region into attainment. Table 4.3-2 (South Coast Air Basin Attainment Status) summarizes the attainment status in the Basin for the criteria pollutants. The Basin is currently in nonattainment status for ozone (O_3) and fine and inhalable particulate matter ($PM^{2.5}$ and PM^{10}).

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

Table 4.3-2
South Coast Air Basin Attainment Status

Pollutant	Federal	State
O_3 (1-hr)	N/A	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM^{10}	Nonattainment	Nonattainment
$PM^{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Attainment	Nonattainment
Sources: CARB 2010, USEPA 2010		

Local Air Quality

The City of Colton is located in the Central San Bernardino Valley air monitoring and source receptor area (SRA 34). Air quality in Area 34 is monitored in San Bernardino at Anderson Elementary School (24302 East 4th Street), approximately seven miles northeast of the project site and in Fontana at 14360 Arrow Boulevard, approximately eight miles northwest of Colton. Air monitoring results for these two areas over the last three years of available data is summarized in Table 4.3-3 (2008-2010 Local Air Quality).[4] [5] [6] [7] Note that these stations do not monitor SO_2. Table 4.3-4 (2008-2010 Air Quality Standards Exceedance) summarizes the number of days for each monitoring year that air quality standards were exceeded. Based on the 2008-2010 air quality monitoring data, the San Bernardino Valley area experiences ozone pollution and has exceeded the State 8-hr maximum concentration a minimum of 33 days at the Fontana monitoring station and a minimum of 40 days at the San Bernardino monitoring station between 2008 and 2010. This is not necessarily due to local production of ozone, but due to how ozone forms and travels over the Basin. Ozone precursors are emitted primarily in the urban centers of the Basin such as Los Angeles. Ozone does not form immediately but rather forms over the day. This combined with prevailing winds blowing ozone precursors inland cause the highest concentrations of ozone in the Basin to occur in the San Bernardino valley and mountain regions. The Central San Bernardino Valley area also experiences particulate matter pollution, with up to 19 PM^{10} samples in any year exceeding the state standard.

Table 4.3-3
2008-2010 Local Air Quality

Monitoring Station	CO		O_3 (PPM)		NO_2 (PPM)		PM^{10} (µg/m³)		$PM^{2.5}$ (µg/m³)		TSP (µg/m³)		Pb (µg/m³)		SO_4 (µg/m³)
	Max 1-hr	Max 8-hr	Max 1-hr	Max 8-hr	Max 1-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max Month	Max Qtr	Max 24-hr
Fontana (Central Valley 1)															
2010	3	1.4	0.143	0.100	0.07	0.0648	62	33.9	42.6	12.0	142	73.3	--	--	6.3
2009	2	1.5	0.142	0.128	0.11	0.0235	75	40.2	46.4	14.3	185	84.3	--	--	6.7
2008	2	1.9	0.162	0.124	0.10	0.0207	75	40.3	49.0	15.4	139	80.0	--	--	9.5
San Bernardino (Central Valley 2)															
2010	2	1.7	0.129	0.105	0.07	0.0566	63	32.4	39.3	11.1	106	57.7	0.01	0.01	11.4
2009	3	1.9	0.150	0.126	0.08	0.0196	66	41.5	37.9	13.0	125	74.3	0.01	0.00	7.1
2008	2	1.8	0.157	0.122	0.09	0.0217	76	42.7	43.5	13.5	166	83.6	0.02	0.02	8.6

Source: SCAQMD 2008-2010
-- pollutant not monitored
PPM, parts per million
µg/m³, micrograms per cubic meter
AAM, annual arithmetic mean

Table 4.3-4
2008-2010 Air Quality Standards Exceedance

Monitoring Station	O_3 (PPM)			PM^{10} (µg/m³)		$PM^{2.5}$ (µg/m³)
	Fed* 8-hr	State 1-hr	State 8-hr	Fed 24-hr	State 24-hr	Fed^ 24-hr
Fontana (Central Valley 1)						
2010	33	28	55	0	9	2
2009	48	45	65	0	13	2
2008	58	55	82	0	14	6
San Bernardino (Central Valley 2)						
2010	40	27	63	0	3	2
2009	62	53	79	0	11	3
2008	62	62	90	2	19	3

Source: SCAQMD 2008-2010
-- pollutant not monitored
* 0.075 ppm
^35 µg/m³

This Page Intentionally Left Blank

Local Emissions

Based on the existing land uses shown in Exhibit 3.0-4 (Existing Land Use), CalEEMod was utilized to provide a general snapshot of existing emissions generated by the City and its sphere-of-influence. These emissions are shown in Table 4.3-5 (Existing Daily Emissions).

Table 4.3-5
Existing Daily Emissions (lbs)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Summer						
Area Sources	2,958.89	104.76	7,396.78	14.24	944.11	943.89
Energy Demand	29.15	254.99	148.93	1.59	20.14	20.14
Mobile Sources	3,682.07	9,861.45	35,902.80	51.42	5,864.57	554.24
Summer Total	**6,670.11**	**10,221.20**	**43,448.51**	**67.25**	**6,828.82**	**1,518.27**
Winter						
Area Sources	2,958.89	104.76	7,396.78	14.24	944.11	943.89
Energy Demand	29.15	254.99	148.93	1.59	20.14	20.14
Mobile Sources	3,672.94	10,408.77	33,504.34	46.60	5,869.94	559.61
Winter Total	**6,660.98**	**10,768.52**	**41,050.05**	**62.43**	**6,834.19**	**1,523.64**

Sensitive Receptors

Some populations are more susceptible to the effects of air pollution than the population at large; these populations are defined as sensitive receptors. Sensitive receptors include children, the elderly, the sick, and people who spend hours outdoors in vigorous exercise. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Pollutants of particular concern when relating to sensitive receptors include carbon monoxide, toxic air contaminants, and odors. The City currently has numerous sensitive land uses, in particular residences, schools, health care facilities, and playgrounds. These are primarily concentrated in the area of the City north of I-10, with some such uses in clusters south of I-10 on either side of La Cadena Drive and east of I-215. These sensitive land uses will continue to exist and new sensitive land uses will be established pursuant to General Plan policies.

Toxic Emission Sources

According to the EPA, nine identified toxic air emitters operate within the planning area, as listed in Table 4.3-6 (Colton Toxic Air Emitters).[8] Of these, six are generally identified as industrial- or utility-related toxic air emissions. Warehouse and other similar industrial uses exist within the western and southern portion of the City, including the Colton rail yard operated by Union Pacific Railroad. These

land uses may generate high volumes of truck traffic resulting in diesel-particulate matter emissions, an identified toxic air contaminant.

Table 4.3-6
Colton Toxic Air Emitters

Facility Name	Address	General Description
Al'S Garden Art Inc. ("Fiori Stone")	425 S Rancho	Motion Picture Production
Arrowhead Regional Medical Center	400 North Pepper	General Medical & Surgical
Calnev Pipe Line Company Colton Terminal	2051 E Slover Ave	Petroleum Bulk Stations
Calportland Co Colton Plant	695 S Rancho Ave	Cement, Hydraulic
Ei Colton, Llc	2040 Agua Mansa Rd	Electric Services
Gatx - Colton, Ca Tank Car Facility	20878 Slover Ave	Motor Vehicle Parts & ACC
Pureenergy Operating Services Llc	559 Pepper Ave	Electric Services
Purenergy Operating Services,Llc-Century	661 S Cooley Dr	Electric Services
San Bernardino Co- Solid Waste Mgmt	850 Tropicana Ranch Rd	Refuse Systems

Local Transportation

Regional access to Colton is provided I-10, which traverses the western central portion of the planning area in an east-west direction, and I-215 along the eastern boundary in a north-south direction. Colton's roadway network is generally based on a grid system, with major roadways located half-mile to one-mile apart providing access to most portions of the City. Currently, the intersection of Wildrose Avenue and San Bernardino Avenue operates at LOS E during the evening peak hours.[9] No other intersection analyzed by the traffic study operates at LOS E or F during the morning or evening peak hours.

Odors

According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). The only identified potential odor generating land uses within the planning area are the Colton Wastewater Reclamation Facility (1201 S Rancho Avenue) and Colton Wastewater Treatment Facility (1990 Agua Mansa Road). In addition, three crematoriums currently operate in Colton, as do numerous light and heavy industrial uses that have the potential for substantial odor generation.

4.3.2 Planning and Regulatory Framework

Clean Air Act

The Federal Clean Air Act (CAA) defines the Environmental Protection Agency's (EPA) responsibilities for protecting and improving the United States air quality and ozone layer.[10] Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

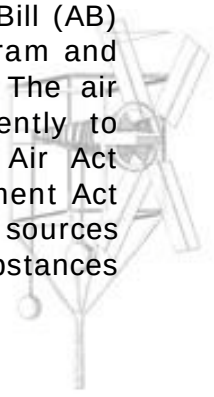
Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain National Ambient Air Quality Standards (NAAQS). Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the state or the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and state and federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its AQMPs and updates. Currently, SCAQMD implements the 8-hr Ozone and $PM^{2.5}$ SIP in the 2007 AQMP and the PM^{10} SIP in the 2003 AQMP. The $PM^{2.5}$ SIP is currently being revised by SCAQMD in response to partial disapproval by the EPA.

California Clean Air Act

The California Clean Air Act (CCAA) of 1988 was enacted to develop plans and strategies for attaining California Ambient Air Quality Standards (CAAQS). The California Air Resources Board (ARB), which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The CCAA is more stringent than federal law in a number of ways including revised standards for PM^{10} and ozone and State for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Toxic Hotspots

State requirements specifically address air toxics issues through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the State air toxics program and the Air Toxics Hot Spots Information and Assessment Act (AB 2588). The air quality regulations developed from these bills have been modified recently to incorporate the Federal regulations associated with the Federal Clean Air Act Amendments of 1990. The Air Toxics Hot Spots Information and Assessment Act (Hot Spots Act) was enacted in September 1987. Under this bill, stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release into the air.



The SCAQMD is required to prepare an annual report on the status and forecast of air toxic *hotspots* pursuant to Section 44363 of the California Health and Safety Code. SCAQMD monitors facilities that are not exempt from the fee and reporting requirements of AB2588.

Some facilities are covered under *umbrella* permits that address industry-wide categories. SCAQMD has issued general permits for the following seven activities:

- Retail gasoline dispensing
- Perchloroethylene dry cleaning
- Auto body shops
- Fiberglass molding
- Printing
- Metal plating
- Wood stripping and finishing

Emissions inventories and risk assessment guidelines have been prepared for the seven industry-wide categories. Approximately 1,400 auto body shops, 3,200 gasoline stations, and 1,400 perchloroethylene dry cleaners within the District are covered under these umbrella permits.

Depending on the severity of the facilities' TAC releases, SCAQMD requires either public notification of toxic hot spots or preparation of a risk reduction plan, as follows:

	Cancer Risk (per million)	Acute Risk	Chronic Risk
Action Risk Level	>= 25	>= 3.0	>= 3.0
Public Notification Level	>= 10	>= 1.0	>= 1.0
Exempt	<1	<0.1	<0.1

Air Quality Management Plan

The purpose of an Air Quality Management Plan (AQMP) is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs.[11] The 2003 AQMP was adopted in August 2003 and demonstrated O_3 and PM^{10} for the covered Basins. It also provides the maintenance plans for CO and NO_2, which the Basins have been in attainment for since 1997 and 1992, respectively. The 2007 AQMP for the Basins was approved by the SCAQMD Board of Directors in June 2007. The 2007 AQMP builds on the 2003 AQMP and is designed to address the federal 8-hour ozone and $PM^{2.5}$ air quality standards for attainment beyond 2024 for each.

The 2007 AQMP was adopted by the SCAQMD board on June 1, 2007, approved by ARB on September 27, 2007, and submitted to the EPA as part of the 2007 SIP on November 16, 2007. On July 14 2011, the EPA issued a notice of proposed partial approval and partial disapproval of the 2007 South Coast SIP for the 1997 $PM^{2.5}$ Standards and corresponding 2007 State strategy. The EPA proposed to approve the emissions inventories, modeling, control measures and technologies, progress

and attainment demonstrations, and transportation emissions budgets of the SIP with an attainment extension to April 5, 2012; however, the EPA identified deficiencies in the SIP's contingency measures and would not accept the assignment of 10 tons per day NO_X emissions reductions to the EPA. SCAQMD prepared revised contingency measures that were approved by the SCAQMD Board on October 7, 2011 and forwarded to ARB for approval and submission to the EPA. The AQMP identifies short- and long-term control measures designed to reduce stationary, area, and mobile source emissions, organized into four primary components:

1. District Stationary and Mobile Source Control Measures
2. Air Resources Board (ARB) State Strategy
3. Supplement to ARB Control Strategy
4. SCAG Regional Transportation Strategy and Control Measures

The 2012 AQMP (anticipated to be adopted in December 2012) also further builds on the 2007 AQMP to address the federal $PM^{2.5}$ air quality standard, which has a deadline for resubmittal to U.S. EPA by December 14, 2012 as well as proactively addressing the federal 8-hour ozone air quality standard to be attained by 2023. Overall, the 2012 AQMP projects a 3 percent reduction in NO_X and 17 percent reduction in $PM^{2.5}$ emissions by 2014 and a 3 percent reduction in NO_X and 1 percent reduction in VOC emissions by 2023 compared to respective 2014 and 2023 projected baselines for each pollutant based on the measures presented below. The AQMP anticipates attainment of the 24 hour $PM^{2.5}$ standard by 2014 and attainment of the 8-hour ozone standard by 2023.

Stationary source control measures in the 2012 AQMP are based on implementation of all feasible control measures through the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero- and near-zero technologies and control methods. These would be applied to both point source (typically facilities permitted by SCAQMD) as well as area sources associated with smaller/non-permitted emissions. Notable $PM^{2.5}$ stationary control measures that will begin implementation in 2013 include further reductions from the Regional Clean Air Incentives Market (RECLAIM) a NO_X and SO_X cap-and-trade program, further reductions from residential and open wood burning, and reductions from under-fired charbroilers. Notable ozone stationary control measures that will begin implementation in 2015 include targeting reducing emissions from coatings and solvents, combustion sources, petroleum operations and fugitive volatile organic compounds (VOCs) as well as incentive and education programs.

Mobile source reduction includes actions seeking further emission reductions from both on-road and off-road mobile sources, such as accelerated penetration of zero- and near-zero emission vehicles and early retirement of older vehicles as well research and development of advanced control technologies from various mobile sources. These measures are designed to achieve attainment for both $PM^{2.5}$ and ozone; however, greater reductions in ozone are necessary to achieve attainment, so a more robust program to reduce NO_X emissions that contribute to ozone levels

to evaluate, develop, demonstrate, fund, and deploy new technologies is designed to achieve the necessary reductions. NO_X emissions contribute greatly to ozone levels and are the primary target for reduction to achieve ozone attainment.

SCAG's Regional Transportation Strategy and Transportation Control Measures included in SCAG's 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) are designed to expand infrastructure to limit congestion and expand transportation choices as well as encouraging population and employment growth in high quality transit areas to make transit more feasible. While these measures are primarily intended to affect road congestion and transportation choices, they are also intended to achieve substantial measurable reductions in emissions that are incorporated into the 2012 AQMP.

SCAQMD Rule Book

To control air pollution in the Basins, SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by ARB or the United States Environmental Protection Agency (EPA). Rules that will be applicable during construction of the proposed warehouse include Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent opacity in the air). Rule 403 requires the implementation of Best Available Control Measures (BACM) and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres. Rule 1113 establishes maximum concentrations of volatile organic compounds (VOCs) in paints and other applications and establishes the thresholds for low-VOC coatings.

4.3.3 Thresholds of Significance

The General Plan Update could result in potentially significant impacts related to air quality if it:

A. Conflicts with or obstructs implementation of the applicable air quality plan.
B. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
C. Results in a cumulatively considerable net increase of any criteria pollutant that the region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
D. Exposes sensitive receptors to substantial pollutant concentrations.
E. Creates objectionable odors affecting a substantial number of people.

As a policy document, the proposed General Plan elements will not directly result in construction or operation of any new land use and the impacts to air quality from them. However, implementation of the General Plan elements will influence future development that will potentially result in criteria pollutant and toxic contaminant emissions. Background information is provided on what levels of emissions are anticipated to be generated as a result of implementation of the General Plan Update. However, since the update would not directly result in emissions, the update will be analyzed primarily in terms of its consistency with the AQMP to determine impacts on region-wide emissions as well as how implementing projects pursuant to the General Plan will be analyzed individually to determine potentially substantial impacts.

Implementing projects will be required to determine if maximum daily criteria pollutant emissions from construction and operation are individually and/or cumulatively significant. To determine this, the SCAQMD significance thresholds would be used. These thresholds are identified in Table 4.3-7 (SCAQMD Maximum Daily Emissions Thresholds (lbs/day)). Cumulative impacts are typically determined by analyzing vehicle miles traveled, long-term pollutant reductions, or average vehicle ridership, depending on the use.

Table 4.3-7
SCAQMD Maximum Daily Emissions Thresholds (lbs/days)

Pollutant	Construction	Operation
NO_X	100	55
VOC/ROG	75	55
PM^{10}	150	150
$PM^{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3
Source: SCAQMD 2011		

SCAQMD has also established thresholds for emissions of toxic air contaminants. Toxic air emissions from a project are considered potentially significant if maximum incremental cancer risk is greater than ten persons in 1,000,000 (1E-05). Cancer risk is determined by calculating the annual average toxic concentration ($\mu g/m^3$) and multiplying it by the unit risk factor (URF) for the toxic and the lifetime exposure adjustment (LEA) of the receptor. URF represents the estimated probability that a person will contract cancer as a result of inhalation of a toxic of one $\mu g/m^3$ continuously over 70 years. Because some receptors are exposed to toxics for less than 70 years (i.e. off-site workers), the LEA adjusts the receptors exposure to represent actual exposure time. The LEA for residential uses and other sensitive receptors is 1.0, representing an assumed exposure of 70 continuous years.

Acute and chronic non-cancer risks are considered significant if the project toxic air contaminant emissions result in a hazard index greater than or equal to one. The hazard index is determined by calculating the average annual toxic concentration ($\mu g/m^3$) divided by the reference exposure level (REL) for a particular toxic. The REL is the concentration at which no adverse health impacts are anticipated and is established by OEHHA.

4.3.4 Environmental Impact

IMPACT 4.3.A 4.3.B 4.3.C

The proposed General Plan Update has the potential to conflict with the 2007 and 2012 Air Quality Management Plans because land use policy does not support the same level of population growth projected. Also, projected cumulative daily pollutant emissions program-wide have the potential to exceed SCAQMD thresholds for criteria pollutants. Impacts at the program level are significant and unavoidable.

Construction Emissions

The proposed General Plan Update will not directly result in construction of any development or infrastructure; however, future development supported by the policies of the updated Land Use, Mobility, and Housing Elements General Plan will result in short-term criteria pollutant emissions. Short-term criteria pollutant emissions will occur during site preparation, grading, building construction, paving, and painting activities associated with new development. Emissions will occur from use of equipment, worker, vendor, and hauling trips, and disturbance of onsite soils (fugitive dust). Pursuant to proposed General Plan Policy LU-5.6 and CEQA, short-term, project specific construction-related emissions will be analyzed on as development proposals are submitted. Mitigation will be applied, where necessary, and typically includes requirements for use of low-VOC paints, installation of diesel particulate filters on older construction equipment, and limitations on hauling distances and or daily trips.

AQMP Consistency and Pollutant Emissions

A significant impact could occur if the proposed project conflicts with or obstructs the implementation of SCAQMD 2012 AQMP. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Because of this program-level analysis, Thresholds A through C are discussed as a whole in this section.

As a policy document, no development is authorized or will directly occur from the adoption of the General Plan Update. However, development will occur within the

planning area as guided by the policies of the General Plan Update. Short-term criteria pollutant emissions will occur during site preparation, grading, building construction, paving, and painting/coating activities. Emissions will occur from use of construction equipment, worker, vendor, and hauling trips, and disturbance of on-site soils (fugitive dust). Long-term criteria air pollutant emissions will result from the operation of potential development. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions will result from automobile, truck, and other vehicle sources associated with daily trips to and from future development.

Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the SCAQMD 2007 and proposed 2012 Air AQMP is affirmed when a project: (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP.[12] These criteria are discussed below.

Criterion 1

To address the first criterion, an air quality modeling analysis is typically performed to determine if a project could regionally or locally cause a violation of any air quality standard. Using the California Emissions Estimator Model (CalEEMod), long-term emissions from the planning area were modeled. Table 4.3-8 (General Plan Remaining Capacity Daily Emissions) summarizes the operational daily emissions that could occur from new development in the remaining capacity of the planning area. Table 4.3-9 (General Plan Buildout Total Buildout Daily Emissions) summarizes the total operational daily emissions combining the existing development and remaining buildout capacity. These represent a worst-case scenario based on complete buildout of the General Plan.

Table 4.3-8
General Plan Remaining Capacity Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Summer						
Area Sources	1,062.74	30.78	2,173.71	4.17	276.74	276.68
Energy Demand	13.35	118.52	80.95	0.73	9.23	9.23
Mobile Sources	1,891.82	5,078.05	18,488.95	26.52	3,025.82	285.85
Summer Total	**2,967.91**	**5,227.35**	**20,743.61**	**31.42**	**3,311.79**	**571.76**
Winter						
Area Sources	1,062.74	30.78	2,173.71	4.17	276.74	276.68
Energy Demand	13.35	118.52	80.95	0.73	9.23	9.23
Mobile Sources	1,888.01	5,360.72	17,239.84	24.04	3,028.56	288.59
Winter Total	**2,964.10**	**5,510.02**	**19,494.50**	**28.94**	**3,314.53**	**574.50**
Threshold	55	55	550	150	150	55
Substantial?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Table 4.3-9
General Plan Buildout Total Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Summer						
Area Sources	4,021.63	135.54	9,570.49	18.41	1,220.85	1,220.57
Energy Demand	42.50	373.51	229.88	2.32	29.37	29.37
Mobile Sources	5,573.89	14,939.50	54,391.75	77.94	8,890.39	840.09
Summer Total	**9,638.02**	**15,448.55**	**64,192.12**	**98.67**	**10,140.61**	**2,090.03**
Winter						
Area Sources	4,021.63	135.54	9,570.49	18.41	1,220.85	1,220.57
Energy Demand	42.50	373.51	229.88	2.32	29.37	29.37
Mobile Sources	5,560.95	15,769.49	50,744.18	70.64	8,898.50	848.20
Winter Total	**9,625.08**	**16,278.54**	**60,544.55**	**91.37**	**10,148.72**	**2,098.14**
Year-1 Increase	*91.55*	*166.07*	*632.64*	*0.96*	*100.82*	*18.16*
Threshold	55	55	550	150	150	55
Year-1 Substantial?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Based on the modeling data, total emissions from new development in the planning area guided by the proposed General Plan Update total buildout would on average increase reactive organic gases (volatile organic compounds) (ROG/VOC) by 45 percent, oxides of nitrogen (NO_X) by 51 percent, carbon monoxide (CO) by 48 percent, sulfur dioxide (SO_2) by 47 percent, coarse particulate matter (PM^{10}) by 49 percent, and fine particulate matter ($PM^{2.5}$) daily by 38 percent. After just the first year of growth, emissions of ROG/VOC would increase by 91.55 lbs/day, NO_X emissions by 166.07 lbs/day, CO emissions by 632.64 lbs/day, SO_2 emissions by 0.96 lbs/day, PM^{10} emissions by 100.82 lbs/day, and $PM^{2.5}$ emissions by 18.16 lbs/day and would increase proportionally as growth occurs over the long-term. Even in the first year of growth, these volumes of pollutants will exceed the SCAQMD daily operational thresholds identified in Section 6.1 above for ROG, NO_X, and CO, emissions, as summarized in Table 4.3-9. It should be noted that the daily thresholds are not intended to be applied to the program-level; however, they do provide a guidepost for comparing incremental increases in emissions guided by the program.

To determine if the proposed General Plan Update could potentially contribute or cause a new air quality violation by exceeding applicable ambient air quality standards, consistency with the growth projections used in the AQMP is appropriate, as discussed in criterion 2 below.

Criterion 2

As is detailed in the Project Description, the proposed land use plan can accommodate a build-out population of 67,182 and 29,874 total jobs within the incorporated City boundaries. However, SCAG's 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), for year 2035, assumes that

population growth within the current incorporated boundaries of the City will be 7 percent higher than the City's projections. With regard to employment, General Plan build-out would provide approximately 1 percent greater capacity than anticipated in the RTP/SCS.

Due to changes in proposed land uses (as discussed in the Project Description) from the existing General Plan land use plan, upon which the 2007 AQMP is partially based, and the proposed General Plan Update, potential future development supported by implementation of the proposed General Plan Update will not be consistent with the growth projections utilized in the 2007 AQMP. This could result in potentially significant impacts because air quality attainment goals could be delayed because the strategies adopted in the AQMP will not account for land use changes in the planning area. The proposed General Plan Update has the potential to support 5,190 more dwelling units, 16,445 more residents, and approximately 12.4 million square feet more of non-residential development when compared to the existing General Plan.

The 2007 AQMP is anticipated to be replaced in December 2012 by the 2102 AQMP, prior to adoption of the proposed General Plan. The 2012 AQMP long-term emissions inventory is based on the growth and land use projections included in the SCAG's 2012 Regional Transportation Plan/Sustainable Communities Strategy. According to the RTP/SCS, by 2035 Colton's population is projected to be 71,700 and the total employment base is project to be 29,600. These forecasts represent a 38 percent increase in population and 23 percent increase in employment compared to baseline (2008) levels. As previously stated, the projected population growth is not completely accommodated by the capacity of the proposed General Plan, while the projected employment growth is accommodated. Ultimate build-out of the proposed General Plan land use plan can accommodate a total population of 67,182 and a total employment of 29,874 within the current incorporated boundaries; therefore, the proposed General Plan is inconsistent with the growth projections used in the RTP/SCS and would be inconsistent with the 2012 AQMP.

Despite this inconsistency, the following policies in the updated General Plan (and the existing Air Quality Element, which is not being updated as part of this program) support attainment of air quality goals through assessment and mitigation of future development projects and City operations in regards to construction and operational pollutants, vehicle miles traveled and trips generated, alternative transit systems, and use of alternative energy. These policies support reductions in operational criteria pollutant emissions by reducing reliance on single-rider automobile trips in favor of walking, biking, bus riding, and carpooling. Traffic congestion and associated pollutants will also be reduced through programs such as flex-scheduling and telecommuting that reduces peak hour trip generation. Construction-related emissions will be reduced through scheduling and programming techniques and reduced fugitive dust emissions through daily site watering.

Land Use Element

Policy LU-4.2: Facilitate the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar programs in both private and public projects.

Policy LU-4.3: Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements.

Policy LU-5.1: Require the incorporation of energy conservation features into the design of all new construction and site development, as required by State law and local regulations.

Policy LU-5.2: Provide incentives, as funding opportunities become available, for the installation of energy conservation features in existing multi-family residential and commercial developments, including technical assistance and possible low interest loans.

Policy LU-5.3: Educate the public using a variety of outreach channels regarding the need for energy conservation, techniques which can be employed, and systems which are available.

Policy LU-5.6: Require detailed air quality and climate change analyses for all applications that have the potential to adversely affect air quality, and incorporate the analyses into applicable CEQA documents. Projects with the potential to generate significant levels of air pollutants and greenhouse gases, such as manufacturing facilities and site development operations, shall be required to incorporate mitigation into their design and operation, and to utilize the most advanced technological methods feasible.

Policy LU-5.7: Work with the South Coast Air Quality Management District and the Southern California Association of Governments to implement the *Air Quality Management Plan* (AQMP) and *Regional Transportation Plan/Sustainable Communities Strategy,* with the objective of meeting federal and state air quality standards for all pollutants. To ensure that new measures can be practically enforced in the region, participate in future amendments and updates of the AQMP.

Policy LU-6.7 Require that specific types of industrial uses – as defined in the Zoning Code and at the time a development or building permit application is filed – that are proposed to locate within 1,000 feet of existing or planned residential development include preparation of an air quality analysis that, at a minimum, analyzes the potential impacts of toxic air contaminants and cancer risks on existing or potential residents or sensitive receptors.

Policy LU-6.8 Require that any residential use or sensitive receptor use – at the time a development or building permit application is filed – that is proposed to locate within 1,000 feet of an existing industrial use or within 500 feet of a freeway include preparation of an air quality analysis that, at a minimum, analyzes the potential impacts of toxic air contaminants and cancer risks on the future residents or sensitive receptors.

Policy LU-8.4: Pursue opportunities to locate higher-density residential development near activity centers such as parks and recreation facilities, commercial areas, employment centers, and transit.

Policy LU-10.4: Establish land use patterns and provide pedestrian amenities within the mixed-use districts that minimize the need for vehicle travel among the uses within a district.

Mobility Element

Policy M-1.3: Require all new nonresidential, mixed-use, and large-scale residential development projects, through the development review process, to include public transit, bicycle, and pedestrian facilities.

Policy M-1.5: Minimize vehicle emissions by encouraging land use patterns and multi-modal transportation improvements that reduce the need for automobile trips by making biking, walking, and use of public transit for short trips more convenient and available.

Policy M-2.1: Work with Omnitrans to increase the use of public transit, establish or modify routes, and improve connectivity to regional services that respond to the needs of the Colton community.

Policy M-2.5: Work with Metrolink and the Southern California Regional Rail Authority to establish a Metrolink station in Colton along existing Metrolink rail lines.

Policy M-2.6: Develop and maintain a citywide comprehensive bicycle network of off-street bike paths, on-street bike lanes, and bike streets to provide connections between neighborhoods, schools, parks, civic center/facilities, recreational facilities, and major commercial centers.

Policy M-3.8: Require new developments of more than 100 employees (per building or per tenant/company) to develop Transportation Demand Management programs to minimize automobile trips and to encourage use of transit, ridesharing, bicycling, and walking.

Policy M-7.3: Consult with Caltrans, SCAG, the South Coast Air Quality Management District, SANBAG, Omnitrans, San Bernardino County, Riverside County, and the cities of Rialto, San Bernardino, Loma Linda, Grand Terrace, and Riverside to coordinate regional transportation facilities, and to pursue Federal, State, and regional funds for local and regional traffic improvements.

Housing Element

Policy H-7.1 Promote higher density residential development and mixed-use in Downtown Colton and along major transit corridors.

Air Quality Element

Program 1.1.2: Establish an ongoing air quality implementation and project referral process within the San Bernardino portion of the South Coast Air Basin, adapting it as necessary to local circumstances, resources and procedures.

Policy 1.3: Cooperate actively with Los Angeles, Orange and Riverside Counties to comprehensively improve air quality at the emission source.

Policy 1.5: Advocate and support innovative strategies to improve air quality.

Program 1.5.1: Support new approaches to improving air quality through:

- Supporting legislation;
- Cooperating with regional bodies;
- Establishing pilot programs; and
- Funding and/or participating in private/public partnerships.

Policy 2.1.1: Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips which would otherwise be made.

Policy 2.1.2: Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to reduce the vehicle miles traveled for auto trips which still need to be made.

Policy 2.3.1: Cooperate in efforts to expand bus, rail and other forms of transit in the portion of the South Coast Air Basin within San Bernardino.

Policy 2.3.2: Promote expansion of all forms of transit in the urbanized portions of San Bernardino, Orange, Los Angeles, and Riverside Counties.

Policy 2.6.1: Promote state and federal legislation which would improve vehicle/transportation technology and which would establish differential pricing mechanisms to assess the true cost of emissions.

Policy 5.1: Reduce particulate emissions from roads, parking lots, construction sites and agricultural lands.

Policy 5.2: Reduce emissions from building materials and methods which generate excessive pollutants.

Policy 6.1: Reduce energy consumption through conservation improvements and requirements.

Program 6.1.1: Implement plans and programs to phase in energy conservation improvements through the annual budget process.

Program 6.1.2: Adopt incentives and regulations to enact energy conservation requirements for private development.

Program 6.3.1: Implement provisions of AB 939 and adopt incentives, regulations and procedures to specify local recycling requirements.

While these policies will work to reduce criteria pollutant emissions, there is no guarantee that the proposed land use changes will not conflict with the attainment goals of the 2007 or 2012 AQMP. No additional programs or mitigation are available at the program level to further reduce criteria pollutant emission. Additional mitigation will need to be identified at the project level. Because of the

proposed General Plan land use changes, inconsistency with growth projections, and lack of additional, feasible mitigation, the short- and long-term impacts related to conflicts with the 2007 and 2012 AQMP remain significant and unavoidable.

Regarding potential violation to an existing or projected air quality violation, the 2007 and 2012 AQMPs are projected to achieve attainment of criteria pollutants based on the projections, measures, and timeframes included in each as described in Section 4 (Regulatory Framework) of this report. The proposed General Plan Update would actually support AQMP implementation to achieve the attainments through the measures included in the AQMPs through the proposed policies; however, as previously stated, the proposed General Plan could potentially interfere with the implementation of either the 2007 or 2012 AQMP.

IMPACT 4.3.D

The proposed General Plan Update has the potential to result in the exposure of sensitive receptors to pollutant emissions associated with industrial uses. However, potential impacts can be addressed at the project level. Impact will be less than significant with implementation of General Plan policies and application of standard development practices.

Concentrations of Criteria Pollutants

The proposed General Plan Update would not authorize any specific construction; however, future development projects constructed pursuant to General Plan land use policies could potentially expose sensitive receptors to temporary, localized pollutant concentrations in excess of air quality standards, even if the broader region is in attainment. Examples include emissions of fugitive dust and vehicle and machinery exhaust during large-scale grading activities and roadway construction. Under limited circumstances, large-scale construction activities could result in emissions of fugitive dust, nitrogen oxides, and other criteria pollutants that could exceed SCAQMD daily thresholds of significance and thereby could result in a significant impact. Emissions of fugitive dust near sensitive receptors are a primary concern because, unlike gaseous pollutants that quickly rise and affect the upper atmosphere, particulate matter tends to remain close to the ground.

As noted above, proposed General Plan Policy LU-5.6 requires preparation of an air quality impact analysis for individual development projects where possible emissions could impact sensitive receptors. Such analyses will include project-specific mitigation measures, as appropriate. Furthermore, future construction activities will be subject to routine control measures as required by SCAQMD (Rules 402, 403, 1108, and 1113). It should be noted that SCAQMD guidance indicates that analysis of localized criteria pollutant impacts is *voluntary*; therefore, future construction projects will be assessed for localized criteria pollutant impacts on a case-by-case basis under the purview of the City. Impacts related to local criteria

pollutant emissions will not be significant with implementation of existing regulations and the proposed policies of the General Plan update.

According to the *Air Quality and Land Use Handbook*, ARB recommends that sensitive land uses not be located within 500 feet of highways or major arterials having average annual daily traffic (AADT) that exceeds 100,000 vehicles. This is due to the concentration of pollutants that accumulate in this proximity to freeways and other major arterials. No non-freeway roadways within the planning area either currently or over the long term are projected to have an AADT that exceeds 100,000 vehicles. Interstate 10 and Interstate 215 currently and will likely continue to both have an AADT that exceeds 100,000.[13] Based on ARB guidelines, a significant impact could occur if the General Plan would permit new residential or other sensitive uses within 500 feet of I-10 or I-215.

Today, residential land uses exist within 500 feet of I-10 and I-215. Also, approximately 10 to 20 vacant parcels designated for residential land use lie within 500 feet of either freeway. With the implementation of proposed Policies LU-5.6, 6.7, and 6.8 of the General Plan Update to require specific analysis of impacts of industrial projects on existing or potential sensitive receptors and sensitive receptors from existing industrial projects, significant impacts to residents from heavy traffic roadway criteria pollutants would not occur.

Toxic Air Contaminants

Some industrial land uses have the potential to generate substantial toxic air contaminant (TAC) concentrations that could adversely affect sensitive receptors. Such emissions could be produced by a variety of interior processes and outdoor activities that generate emissions of TACs. TACs are air pollutants that may cause or contribute to an increase in deaths or serious illnesses or that may pose a present or potential hazard to human health. Unlike criteria pollutants, there are no levels of exposure to TACs that do not produce adverse health effects. The Tanner Bill requires implementation of risk reduction measures for toxic contaminant releases with cancer risks that are equal to or greater than 25 per million and the SCAQMD has established a TAC emissions cancer risk threshold of equal to or greater than ten per million. For example, common facilities within the District that have a cancer risk of approximately ten per million include forges, refineries, fuel distribution and storage facilities, and heavy plating facilities. Common facilities with a cancer risk of approximately 25 per million or more include aircraft manufacturing, large plating and machining facilities, and chemical manufacturing.

The proposed General Plan land use plan includes an Industrial Park (IP), Light Industrial (LI), and Heavy Industrial (HI) land use categories that permit varying degrees of manufacturing, processing, and distribution activities. Future businesses of these types that may be developed within the designated industrial areas could result in emissions of a variety of toxic air contaminants.

ARB research has documented increased potential health risks for sensitive receptors as the distance to sources of hazardous emissions is reduced. Based on these findings, they have developed guidelines to assist local government agencies in siting new land uses that could be occupied by "sensitive individuals" at a safe distance from such sources.[14] Sensitive individuals refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals and residential communities (also known as sensitive sites or sensitive land uses).

The recommended distances are based on a variety of health studies and air pollution monitoring and modeling. Major air pollution source categories currently found in Colton, or that could be developed in the future within designated industrial zones, and their associated air pollutant risks, are described below.

Freeways and High-Traffic Roadways: High-traffic roadways such as freeways or other major roadways with traffic volumes at 100,000 vehicles per day or more. Primary pollutants of concern include diesel particulate matter, benzene, and 1,3-butadiene.

Distribution Centers: Distribution warehouses result in the generation of heavy diesel truck traffic and have been linked with high emissions of diesel particulate matter (DPM), established as an air toxic contaminant by ARB in 1998.[15] DPM was identified as a toxic because of its potential to cause cancer, premature deaths, and other health problems. Health hazards associated with DPM are especially hazardous for children because their lungs are still developing, and the elderly who may have other serious health problems.

Perchloroethylene Dry Cleaners: Perchloroethylene is the most common used solvent in the dry cleaning industry to clean clothes and other materials. Although dry cleaning operations are subject to regulations enforced by ARB and SCAQMD, continued studies still show a substantial risk even near well-controlled operations. Perchloroethylene is a carcinogen and also presents other non-cancer health risks including dizziness, impaired judgment and perception, and liver and kidney damage.

Gasoline Dispensing Facilities: Common, local gas stations present a relatively low-risk to land uses in the general proximity. However, large-volume, high throughput gas stations have become a concern due to the high amounts of gasoline being pumped (in excess of 2.4 million gallons per year) and are the main target of the recommended buffer. The pollutant of concern associated with gasoline stations is benzene.

Five years of monitoring indicates that strong winds at the Fontana and San Bernardino air quality monitoring stations come primarily from the southwest with some strong winds also coming from the northeast less frequently, which should generally representative of the wind pattern in Colton.[16] In those cases where

residential uses and other sensitive land uses are located immediately northeast or southwest of industrial land uses, a potentially significant impact could occur because sensitive uses could be exposed to emissions carried by wind from the industrial land uses. Based on the ARB recommended siting standards, land designated for residential development within 1,000 feet downwind of a designated industrial land use concentration is considered to be a potentially significant pollutant exposure area. Existing school and park facilities and ¼-mile buffer areas are shown on Exhibit 4.3-1 (Air Quality Sensitivity) and the 1,000 foot industrial buffer areas, regardless of wind direction, are identified in Exhibit 4.3-2 (Existing Emission Locations) and Exhibit 4.3-3 (Potential Emission Locations) and the residential land uses are shown previously in Exhibit 3.0-3. (Draft Land Use Plan).

Since existing and planned industrial land uses exist throughout much of the planning area, much of the City may be affected by any potential substantial industrial emission source that currently exists or may be developed in the future regardless of wind direction. This does not mean that any existing homes in the identified 1,000-foot buffer areas are currently exposed to significant health risks; this is intended simply as a guideline for estimating where there is the most potential for exposure of sensitive receptors to substantial toxics concentrations generated within areas of industrial uses. Actual levels of risk can only be determined through site-specific analysis and specialized air pollutant modeling, based on an actual relationship between an industrial emission source and a specific residential site. Such assessments might determine that there are less than significant health risks, or that there could be some significant level of exposure to pollutants that need to be mitigated through siting, site design, or operational restrictions. General Plan policies for development to prepare air quality analysis, which would include health risk assessments where appropriate, would address any potential impact that could occur in these identified areas or any other area of the City. With implementation of proposed General Plan programs and existing regulations that regulate and monitor toxic emitters, potential health impacts to sensitive receptors due to exposure to toxic air contaminants will be less than significant.

Land Use Element

Policy LU-6.2: Discourage the establishment of incompatible uses in proximity to each other.

Policy LU-6.7: Require that specific types of industrial uses—as defined in the Zoning Code and at the time a development or building permit application is filed—that are proposed to locate within 1,000 feet of existing or planned residential development include preparation of an air quality analysis that, at a minimum, analyzes the potential impacts of toxic air contaminants and cancer risks on existing or potential residents or sensitive receptors.

Policy LU-6.8: Require that any residential use or sensitive receptor use—at the time a development or building permit application is filed—that is proposed to locate within 1,000 feet of an existing industrial use or within 500 feet of a freeway include preparation of an air quality analysis that, at a minimum, analyzes the potential impacts of toxic air contaminants and cancer risks on the future residents or sensitive receptors.

Air Quality Element

Policy 4.3: Support a regional approach to regulating the location and design of land uses which are especially sensitive to air pollution.

Program 4.3.1: Participate with the SCAQMD in jointly formulating appropriate standards for regulating the location and protection of sensitive receptors (schools, day care facilities, hospitals and the like) from excessive and hazardous emissions.

Carbon Monoxide Hotspots

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to violate state and federal CO standards at intersections, even if the broader Basin is in attainment for federal and state levels. In general, the California Department of Transportation *Project-Level Carbon Monoxide Protocol* (CO Protocol) recommend analysis of CO hotspots when a project increases the number of vehicles operating in cold start mode by more than two percent, increases traffic volumes by more than five percent, or worsens average traffic speeds. In addition, CO hotspots are typically associated with intersections with lower ratings of Level of Services (LOS), such as LOS E or F, which indicate high congestion and high amounts of idling vehicles that have the potential to generate a CO hotspot. Currently the following intersections operate at LOS E, with no intersections operating at LOS F:[17]

- Wildrose Avenue and San Bernardino Avenue

The following intersections—without implementation of recommended circulation system improvements—are anticipated to operate at LOS E or F in either or both of the morning or evening peak hours.

- Wildrose Avenue and San Bernardino Avenue
- Colton Avenue and F Street
- Colton Avenue and 10th Street and G Street
- Hermosa Avenue and Valley Boulevard

- Rancho Avenue and Valley Boulevard
- Rancho Avenue and I-10 Westbound Ramps
- La Cadena Drive and I-10 Westbound On-Ramp
- Rancho Avenue and I-10 Eastbound Ramps
- 9th Street and I-10 Eastbound Ramps
- Rancho Avenue and N Street
- Mount Vernon Avenue and N Street
- Rancho Avenue and Agua Mansa Road
- Mount Vernon Avenue and Washington Street
- Reche Canyon Road and Washington Street
- Hunts Lane and Washington Street
- La Cadena Drive and Washington Street
- La Cadena Drive and I-10 Ramps

Pursuant to proposed General Plan Policy LU-5.6, future development projects will be screened and analyzed pursuant to the CO Protocol to determine if a CO hotspot may occur at congested intersections. Mitigation may be required, if necessary, to alleviate traffic congestion and minimize the hotspot potential. Other mitigation could include operational restrictions on future development. With implementation of the proposed General Plan Update policies to require air quality analyses and traffic Level of Service (LOS) requirements, impacts related to carbon monoxide hotspots will be less than significant.

Mobility Element

Policy M-3.5: Maintain intersection traffic flows at Level of Service of D during peak hours for all roadways in Colton, except at those locations identified in this Mobility Element where peak-hour LOS E is allowed.

IMPACT 4.3.E

The proposed General Plan Update has the potential to result in the exposure of sensitive receptors to odors from industrial uses. However, potential impacts can be addressed at the project level. Impact will be less than significant with implementation of General Plan policies and application of standard development practices.

According to the *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). While odors do not present a health risk in themselves, they are often considered a nuisance by people who live, work, or otherwise are located near outdoor odor sources. Odor controls are routinely established by cities during the development project review/entitlement process, based on the unique characteristics of the development proposal. As noted previously in Existing Conditions, the two wastewater treatment facilities, crematoriums as well as the numerous light and heavy industrial uses within the city are existing or potential odor sources. Future development within the area of these and other potential odor

sources will have to consider potential impacts individually. Conversely, future potential sources of odors will have to be considered in light of potential impacts to surrounding land uses. Pursuant to Policy LU-5.6 of the proposed General Plan Update, projects will be evaluated in regards to potential impacts related to odors. While siting is the primary mitigation to prevent exposure to odors, odors can also be mitigated in similar fashion to air pollutant emissions (i.e. filtering). Impacts related to odors will be less than significant with implementation of the proposed General Plan programs.

4.3.5 Mitigation Measures

No mitigation beyond continued implementation of the General Plan policies cited in this section is proposed, as the key way to attain consistency with the 2007 and 2012 AQMPs would be to adjust land use policies to allow for more residential growth in Colton during the planning horizon extending to 2035. This consideration is addressed in Section 5.0 - Alternatives.

Pursuant to proposed General Plan policies, CEQA, and SCAQMD regulations, individual development projects will be required to perform project-specific air quality analyses to determine potential impacts and mitigation measures to comply with the applicable AQMP and maximum daily emission thresholds.

4.3.6 Level of Impact with Mitigation Incorporated

Consistency with the AQMP and Exceeds Standards or Worsen Non-Attainment Emissions (A, B, C)

Short-term Impacts

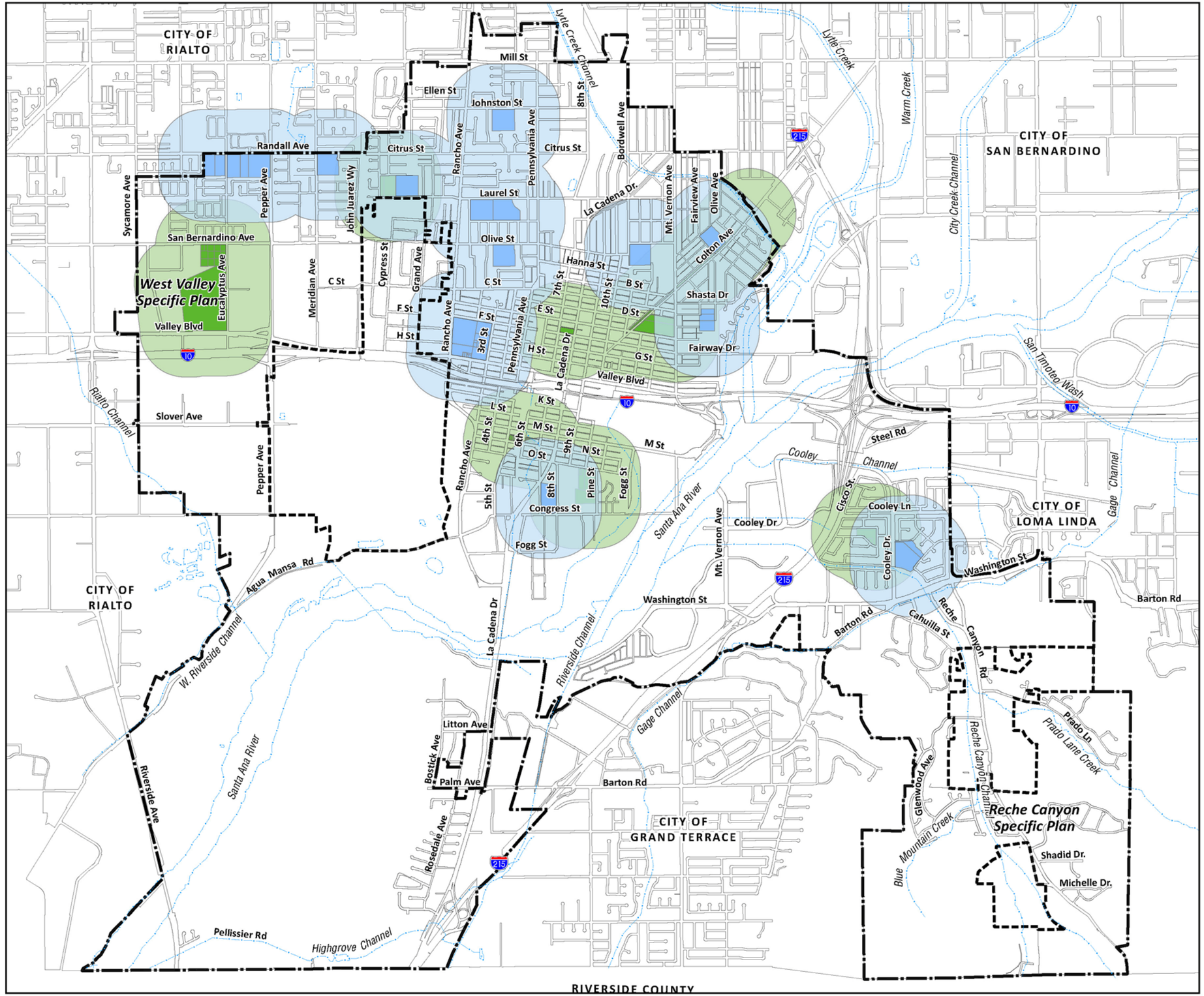
Construction activities that implement land use policies associated with the General Plan Update over the long term will produce air quality emissions. Short-term air quality impact will be determined on a project-by-project basis; if significant, then mitigation measures are required by SCAQMD Rules to reduce construction emissions and to be implemented on an individual basis.

Long-term Impacts

The projected long-term net increase in emissions associated with the General Plan Update will exceed the SCAQMD thresholds and therefore, mitigation measures required by SCAQMD should be implemented to the greatest extent possible. The project emissions with the recommended mitigation measures will be reduced to an extent. As indicated above, because of the General Plan's inconsistency with SCAG's population growth projections for Colton, the potential still remains for an interference with the implementation of the current 2007 or proposed 2012 AQMP. Thus, long-term impacts to air quality remain potentially significant and unavoidable.

Exhibit 4.3-1

Air Quality Sensitivity



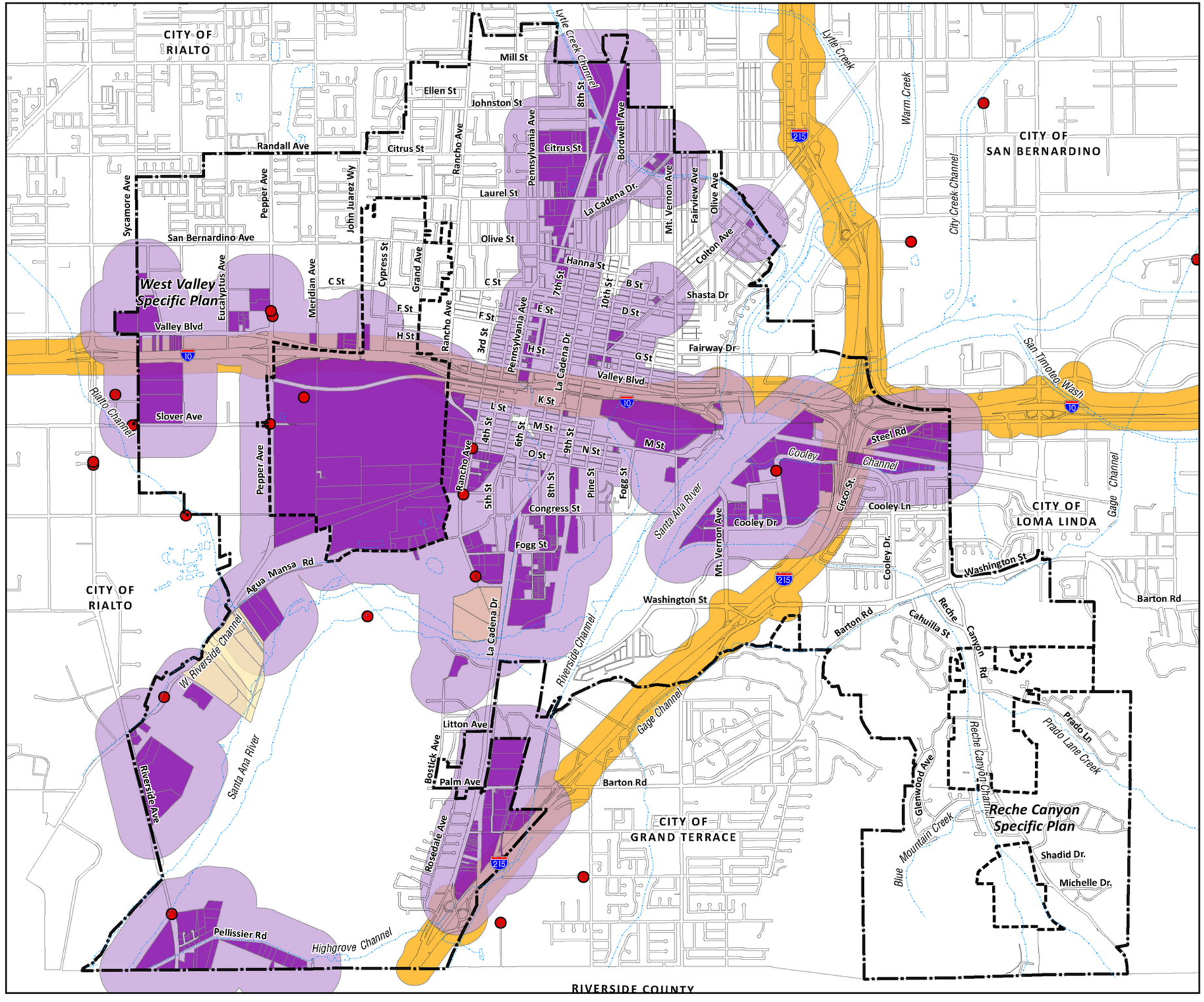
Date: November 26, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.3-2

Existing Emission Locations

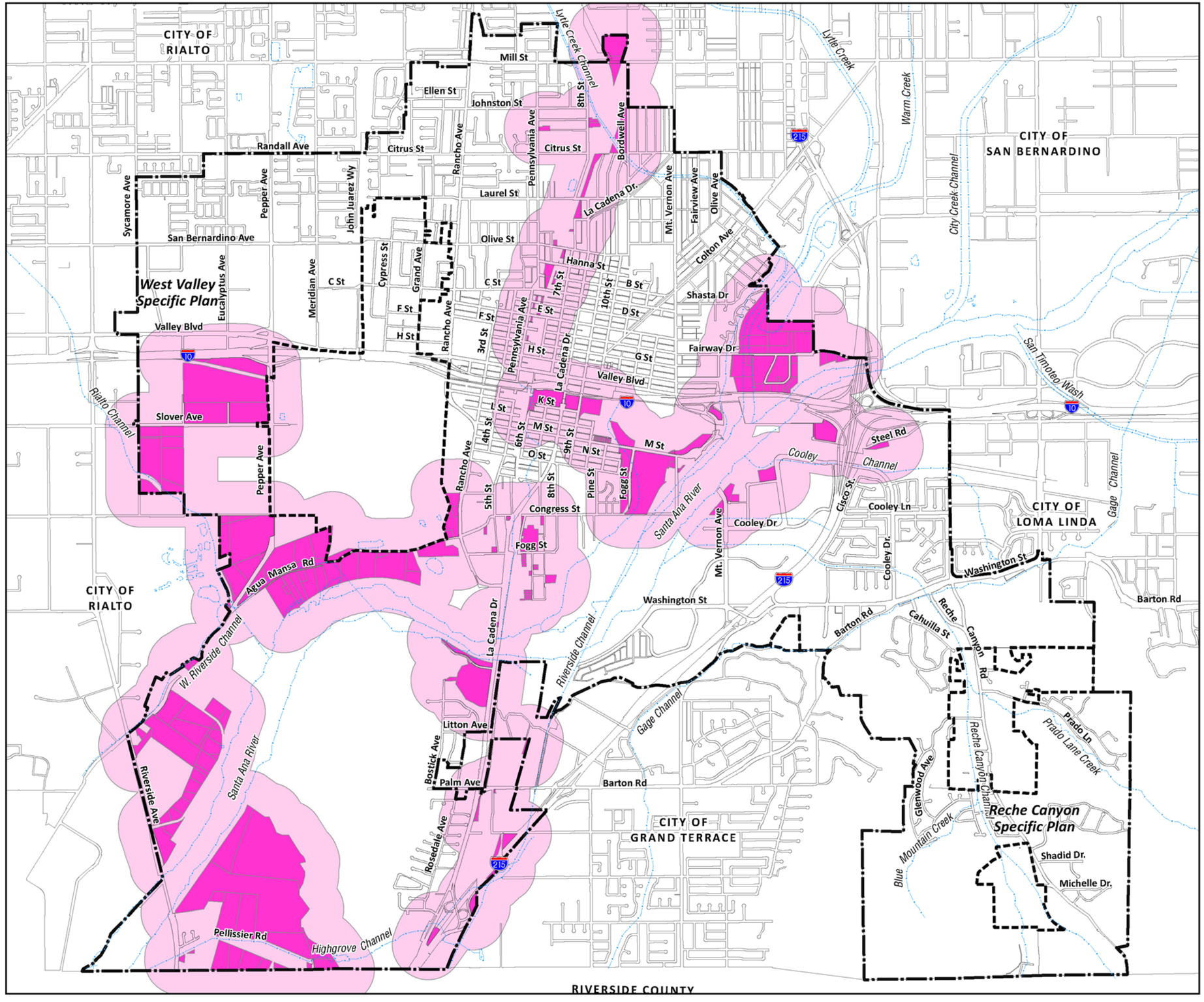


Date: November 26, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

This Page Intentionally Left Blank

Exhibit 4.3-3

Potential Emission Locations



Date: November 26, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

References

[1] Western Regional Climate Center. Period of Record Monthly Climate Summary: Fontana Kaiser, California (043120). http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3120 [November 14, 2012]
[2] South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993
[3] United States Environmental Protection Agency. Particulate Matter. http://www.epa.gov/air/particlepollution/index.html [November 14, 2012]
[4] South Coast Air Quality Management District. Air Quality. 2008
[5] South Coast Air Quality Management District. Air Quality. 2009
[6] South Coast Air Quality Management District. Air Quality. 2010
[7] South Coast Air Quality Management District. Air Quality Monitoring Network Plan. July 2010
[8] United States Environmental Protection Agency. EnviroMapper for Envirofacts. http://www.epa.gov/emefdata/em4ef.home [November 14, 2012]
[9] KOA Corporation. Traffic Impact Analysis for The City of Colton Circulation Element and EIR. September 27, 2012.
[10] United States Environmental Protection Agency. Clean Air Act. www.epa.gov/air/caa/ [November 14, 2012]
[11] South Coast Air Quality Management District. Air Quality Management Plan. June 2007
[12] South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993
[13] CalTrans Traffic and Vehicle Data Systems Unit. 2011 All Traffic Volumes on CSHS. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2011all/index.html [November 21, 2012]
[14] California Air Resources Board. Air Quality and Land Use Handbook. April 2005.
[15] California Air Resources Board. Facts about California's Accomplishments in Reducing Diesel Particulate Matter Emissions. http://www.arb.ca.gov/diesel/factsheets/dieselpmfs.pdf [November 16, 2012]
[16] South Coast Air Quality Management District. Wind Rose Plots font and snbo. January 2009
[17] KOA Corporation. Traffic Impact Analysis for the City of Colton Circulation Element and EIR. September 27, 2012.

The analysis is this section is based in part on the:

- California Department of Fish and Game (CDFG) California Natural Diversity Database,
- West Valley Specific Plan Draft Environmental Impact Report, and
- California Land Cover Mapping and Monitoring Program

Additional information on special status species and habitats was acquired from the NatureServe Explorer, the University of California, and other publically available resources. This section discusses potential impacts of the General Plan Update's implementation on vegetation communities, wildlife habitat and species, wildlife migration, wetlands, and riparian habitat. No comments were received regarding biological resources during circulation of the Notice of Preparation.

Existing Conditions

Climate

The San Bernardino Valley is characterized by warm dry summers and mild winters. The average winter high temperature is 51° Fahrenheit (F) and the average summer high temperature is 75° F. Daytime winds are from the northwest at six to eight miles per hour (MPH) as air moves onshore from the Pacific Ocean. Rainfall in the area is infrequent and variable. Most precipitation occurs from December through March averaging 13.6 inches per year.[1]

Vegetation

Although much of Colton is urbanized, portions of the planning area accommodate native and other vegetation. Particularly, the Santa Ana River, the West Valley Specific Plan area, the Agua Mansa Specific Plan area, the Pellisier Ranch Plan area that contains La Loma Hills, and the Reche Canyon area that contains portions of the Box Springs Mountains all contain undeveloped areas that support varying degrees of native, natural vegetation, and other non-native vegetation. These areas are discussed in detail below. General vegetation cover and dominant species are illustrated in Exhibit 4.4-1 (Habitat and Plant Communities).

<u>Santa Ana River</u>

Reach 4 of the Santa Ana River transects the planning area. Reach 4 experiences perennial flows due to discharges from wastewater treatment plants in the area. The Santa Ana River is operated as a flood control facility but does support riparian habitat, particularly Southern Cottonwood Willow Riparian Forest habitat. Riparian floodplains support unique habitat through scouring action and sediment deposition associated with infrequent flooding. Reach 4 is characterized by a mix of species including alluvial sage scrub, juniper, cottonwood, buckwheat, yucca, mulefat, and California wild rose. Other herbaceous species include non-native giant reed and

pampas grass and riparian baccharis. Portions of the River area are considered *barren* by the California Land Cover Monitoring and Mapping Program (LCMMP) meaning that those areas contain less than 10 percent of any vegetation type.[2] [3] [4]

West Valley Specific Plan Area

Vegetation in the West Valley Specific Plan (WVSP) area is a mixture of native vegetation and ruderal vegetation. Ruderal vegetation is any number of plant species first to occupy disturbed soil areas and can thrive in poor soil conditions. The primary native vegetation species include California buckwheat, telegraph weed, and California croton. Primary ruderal components include non-native grasses such as ripgut grass, Mediterranean grass, and wild oat. Ruderal species are collectively invasive within the WVSP area. Additional non-native plant species include tumbleweed, mustard, shortpod mustard, redstern filaree, and puncture vine.[5]

Agua Mansa Specific Plan Area

The Agua Mansa Specific Plan area is generally developed with little natural vegetation remaining. Natural vegetation that remains includes cottonwood-willow riparian habitat and a mix of ruderal and disturbed areas. The stand of willow riparian woodland includes black willow, mulefat, tree tobacco, scalebroom, Fremont cottonwood, castor bean, and coastal prickly pear.[6]

Pellisier Ranch Area

The Pellisier Ranch area, located in the southwest portion of the City, is characterized by a mix of herbaceous and scrub vegetation. Herbaceous growth is located at the lower elevations under La Loma Hills, dominated by annual grasses and forbs. Scrub vegetation is located in La Loma Hills and is dominated by buckwheat, encilia scrub, and California sage scrub.[7]

Reche Canyon Area

Similar to La Loma Hills, the Box Springs Mountains in the Reche Canyon area are generally characterized by scrub habitat in the higher elevations and herbaceous growth at lower elevations. The Reche Canyon area also contains Southern Riparian Scrub habitat.

Special Status Wildlife, Plants, and Habitat

Special status wildlife species are those listed under federal or state Endangered Species acts, listed as *Species of Special Concern* by the state, protected under official conservation programs (e.g., Multi-Species Conservation Programs), and/or those designated by local legislation as requiring protection. Special status plants are those listed under federal or state endangered species acts, protected under official conservation programs (e.g., Multi-Species Conservation Programs), and/or considered *sensitive*, such as those listed by the California Native Plant Society (CNPS). The CNPS utilizes a ranking system to define the status of sensitive plant species, as follows:

1A: Plants presumed extinct in California

1B: Plants that are rare, threatened, or endangered in California and elsewhere
2: Plants that are rare, threatened, or endangered in California but more common elsewhere
3: Plants about which the CNPS needs more information. This is a review list.
4: Plants of limited distribution. This is a watch list.

The California Natural Diversity Database (CNDDB) inventories occurrences of rare, threatened, endangered, and sensitive animals, plants, and natural communities in California. The CNDDB inventories both aquatic and terrestrial natural communities that are extremely high quality, very limited distribution, or threatened. The CNDDB inventory for the South San Bernardino 7.5' Quadrangle provides species occurrences within and near the planning area. These species and natural communities are mapped in Exhibit 4.4-2 (Sensitive Species Occurrences and Habitat). Species occurrences and status within and near the planning area are summarized in Table 4.4-1 (CNDDB Species Occurrences). According to the CNDDB, 27 species and natural communities occur within or near the Colton planning area. Additional information regarding these species is provided herein. Information related to species listing is provided in the *Planning and Regulatory Framework* section.

Occurrences of species illustrated in Exhibit 4.4-2 are defined by a number of parameters including species type and accuracy class. Species type is illustrated by the color of the feature: green indicates a plant, red indicates an animal, black indicates multiple species occurrences, and purple represents a natural community. Accuracy Class identifies the confidence in the location of the occurrence. Accuracy Classes 1 to 3 are highly confident and are represented by bounded areas that delineate the area where the species is known to occur or the area where habitat supporting the species occurs. Accuracy Classes 1 and 2 are known *specific bounded areas* and are represented by a solid border. Accuracy Class 3 is known as a *non-specific bounded area* and is represented by a dotted border. The remaining Accuracy Classes, Accuracy Classes 4 through 10, are represented by circular features. Circular features represent a moderate to low level of confidence in the occurrence location and source data with confidence decreasing as the circle size increases. The size of the circle represents precision between 1/10 mile and 5 miles.

Wildlife

Western Yellow-Billed Cuckoo

The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a State endangered and federal candidate bird found throughout the western United States. Breeding habitat is characterized by deciduous riparian woodland, especially in dense stands of cottonwood and willow but also in mesquite and tamarisk stands. Non-breeding habitat includes a variety of forest, woodland, and scrub areas. The western yellow-billed cuckoo is non-migratory, neither long distance or locally. Threats to the species include habitat loss and degradation, habitat fragmentation, tamarisk invasion in native riparian areas, pesticides, and tower strikes (collisions

with communication towers). Locally, this species was recorded at the confluence of Warm Creek and the Santa Ana River.

Burrowing Owl

The burrowing owl (*Athene cunicularia)* is a small, long-legged owl and a California *Species of Special Concern* found throughout western and central North America. Habitat includes open grasslands such as prairies, plains, and savanna although can also be found in any open space, such as a vacant lots. Burrowing owls are opportunistic residents nesting and roosting in burrows dug by other mammals or in other burrow-like features. Although most burrowing owl breeders are migratory, both locally and long distance, Southern California populations are generally considered resident. Threats to the burrowing owl include habitat loss, degradation, and fragmentation. Particularly in western North America, eradication of prairie dog populations, conversion of rangeland to agricultural land, and suburbanization have contributed to population declines. In Colton, owl activity was recorded on the northeast intersection of Wildrose Avenue and Wood Pine Avenue in the West Valley Specific Plan area.

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) is a federally threatened song bird. Preferred habitat includes riparian and terrestrial shrubland or chaparral, particularly several distinct sub-associations of coastal sage scrub communities. This species is non-migratory and found only from southwestern California to northwestern Baja California. The primary threat to this species is habitat loss and fragmentation. Occurrences of coastal California gnatcatcher include the Slover Mountain vicinity and the Reche Canyon area. Critical habitat for this species has been established in La Loma Hill and the Box Springs Mountains.

Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*) is a small song bird listed as a State and federal endangered species. Habitat includes riparian and terrestrial fields, shrubland, chaparral, and woodlands. Particularly found in dense brush, mesquite, willow-cottonwood forest, streamside thickets, scrub oak, moist woodlands, and woodland edges. Least Bells' vireo is migratory, migrating into Southern California near the end of March and leaving for the cape region of Baja California in late July to September, although some may overwinter in the US. Primary threats include loss of habitat to urbanization and infrastructure projects and nest parasitism by cowbirds. Locally, this species has been reported within the Santa Ana River near the Colton Landfill and near the confluence of the Santa Ana River and Warm Creek. No critical habitat for this species has been established within or near the planning area.

Arroyo Chub

The arroyo chub (*Gila orcuttii*) is a freshwater fish listed as a California *Species of Special Concern*. This species is limited to the coastal drainages of Southern California and is native to the Los Angeles, San Gabriel, Santa Ana, San Luis Rey, and Santa Margarita rivers and the Malibu and San Juan creeks. This is a non-

migratory fish spawning between March and May. Threats include degradation of streams due to urbanization, dewatering, and predation by non-native species. The arroyo chub has been reported in the Santa Ana River near Riverside Avenue and La Loma Hills.

Santa Ana Sucker

The Santa Ana sucker is a blotched or faintly striped sucker (fish) listed as federally threatened and as a California *Species of Special Concern*. This species is native to the Los Angeles, San Gabriel, and Santa Ana River systems. It is generally found in small pools and small to medium runs and shallow streams that flood periodically and at times have high turbidity. This species is generally associated with substrates of boulders, rubble, and sand. The Santa Ana sucker is non-migratory and prefers high quality water. Threats to the species include dams and other water diversion and flood control projects, pollution and degradation of water quality, and introduction of competing species. The Santa Ana sucker has been reported in the Santa Ana River near Riverside Avenue and La Loma Hills. Critical habitat for this species has been established along the length of the Santa Ana River through the planning area and beyond.

Western Yellow Bat

The western yellow bat (*Lasurus xanthinus*) is a California *Species of Special Concern* and is located throughout the southwestern US and western Mexico. This species is found in woodland areas and urban areas where taller structures and landscaping can serve as roosts. They prefer to roost in trees and are generally found in palms in the US. The western yellow bat is non-migratory and hibernal. This species was recorded in the vicinity of Grand Terrace.

Western Mastiff Bat

The western mastiff bat (*Europs perotis californicus*) is also known as the California bonneted bat and the California mastiff bat. This is a large bat with sooty brown or chocolate-brown dorsum, a long tail, and large ears and is listed as a California *Species of Special Concern*. The western mastiff bat is generally found in open, semi-arid to arid habitats including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. This bat roosts in small colonies of less than 100 and roosts in small crevices in cliff faces, tall buildings, trees, and tunnels. This species is non-migratory and non-hibernal. Occurrences of this species have been reported throughout central Colton.

Los Angeles Pocket Mouse

The Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a small rodent and is listed as a California *Species of Special Concern*. The historical distribution of this species is from the coastal basins of Southern California, from the San Fernando Valley to Cabazon and south through the San Jacinto and Temecula Valleys. The Los Angeles pocket mouse is found in lower elevation grassland, alluvial sage scrub, and coastal sage scrub. This species generally hibernates between October and February. The main threat to this species is

habitat loss. Occurrences of this species have been reported in the Slover Mountain area.[8]

Stephen's Kangaroo Rat

Stephen's kangaroo rat (*Dipodomys stephensi*) is a federally endangered and State threatened medium sized, long tailed, nocturnal, hopping rodent. Habitat includes annual grassland and coastal sage scrub with sparse shrub cover. Habitat is generally vegetated with loose, well-drained soil, and flat or gently rolling terrain. This species is non-migratory, locally and long range. Threats to this species are largely due to habitat loss from urbanization. Other threats include field plowing, grazing, off-road vehicle activity, and rodenticides. Locally, this species has been reported in the Box Springs Mountains area. There is no critical habitat for this species established within or near the planning area.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a California *Species of Special Concern*. They are found in habitat similar to that of the Stephen's kangaroo rat. This species was reported in the Reche Canyon area.[9]

Southern Grasshopper Mouse

The Southern Grasshopper Mouse (*Onychomys torridus Ramona*) is a California *Species of Special Concern*. This species is common in arid desert habitats, particularly alkali desert scrub and desert scrub. It also may be found in coastal scrub and mixed chaparral habitats, such as those located within and near the planning area. This species is non-migratory, non-hibernal, and nocturnal. Occurrence of this species was reported in the Reche Canyon area.[10]

Coast Horned Lizard

The coast horned lizard (*Phrynosoma coronatum blainvilli*) is a relatively large, horned lizard and is listed as a California *Species of Special Concern*. This lizard is distributed throughout the foothills and coastal areas of the Los Angeles basin to northern Baja California. Habitat is characterized by areas with abundant, open vegetation such as chaparral or coastal sage scrub. This subspecies is extinct in approximately 45 percent of its original range primarily due to habitat loss. This species has been reported in the Highgrove area of Riverside County, south of the planning area.[11]

Southern Cottonwood-Willow Riparian Forest

The Southern Cottonwood-Willow Riparian Forest natural community encompasses approximately 133 acres within the Santa Ana River near La Loma Hills. This habitat is characterized as a tall, open, broad-leafed winter-deciduous riparian forest dominated by cottonwoods and willows. Least Bell's vireo, arroyo chub, Santa Ana sucker, and Santa Ana River wollystar have been reported within or near this natural community.

Southern Riparian Scrub

The Southern Riparian Scrub community (also known as Southern Alluvial Fan Scrub) is characterized as an open to moderately dense, broad-leaved, deep-rooted evergreen scrub approximately 1.5 meters in height. This community is generally dominated by scalebroom with various coastal sage scrub and chaparral species as subdominants. This community occupies approximately 91 acres in the Reche Canyon area. The northwestern San Diego pocket mouse has been reported near this natural community.

Delhi Sands Flower-Loving Fly

The Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) is a large fly with a tubular proboscis used to extract nectar from flowers. This species is listed as federally endangered. This fly has a very narrow habitat consisting of fine, sandy soils of the Delhi series with wholly or partially consolidated dunes. The range of this species has been reduced by over 97 percent due to past agricultural conversion and more recent urbanization. This species has been reported east of the West Valley Specific Plan (West Subarea), andsouth of Interstate 10, between Pepper Avenue and Riverside Avenue.

Busck's Gallmoth

Busck's gallmoth (*Carolella busckana*) is not a federally or State listed species. This species is a type of moth. No additional information on this species is available. A historical reference in the CNDDB reported this species in the City of Loma Linda, east of the planning area.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (Empidonax traillii extimus) is a federally and state listed endangered small bird that is found in the southwest United States, including portions of Southern California. The flycatcher is a summer breeder within its known areas within the United States and migrates to winter areas in Central America. Preferred habitat includes dense riparian tree and shrub communities typically associated with saturated soils, standing water, or nearby streams or pools are components of nesting habitat. Loss and degradation of dense riparian habitats are the primary habitat threat to the flycatcher. Although there are no occurrence records for the flycatcher within the planning area, it has been detected in the San Timoteo Creek, which is tributary to the Santa Ana River.[12]

San Bernardino Kangaroo Rat

The San Bernardino kangaroo rat (Dipodomys merriami parvus) is a federally endangered small, yellowish-brown, burrowing rodent that is a subspecies of Merriam's kangaroo rat that is found in San Bernardino and Riverside counties. Its preferred habitat includes alluvial floodplains and adjacent upland habitats which typically includes Riversidean alluvial fan sage scrub vegetation. Given the species preferred habitat location in floodplain areas, they are subject to natural loss as flooding occurs in areas where the species exists. In addition, channelization and development within floodplains that segment species populations and associated loss of vegetation are also threats to the species' habitat.

Plants

Los Angeles Sunflower

The Los Angeles sunflower (*Helianthus nuttallii parishii*) flower plant of the Aster family is not a federal or State listed species. The California Native Plant Society (CNPS) presumes this species is extinct in California. Historical occurrences of this species are documented in the Warm Creek Basins area.

Smooth Tarplant

The smooth tarplant (*Centromadia pungens laevis*) is an annual herb native to California and is not a federal or State listed species. The CNPS indicates that this species is seriously endangered in California. Its preferred habitat is valley and foothill grasslands near alkaline soils. This species was documented in Loma Linda to the east of the planning area.[13]

San Bernardino Aster

The San Bernardino Aster (*Symphyotrichum defoliatum*) is a perennial flower endemic to Southern California and is not a federal or State listed species. The CNPS indicates that it is fairly endangered in California. General habitat associations include meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, and lower montane coniferous forest. This species was reported in the Warm Creek Basins area.

Gambel's Water Cress

Gambel's water cress (*Rorippa gambelii*) is a perennial herb and is listed as a federally endangered and State threatened species. It blooms between April and August and produces white flower clusters and numerous, narrow fruit. This species requires permanent fresh or brackish water wetland areas. Encroachment by competing species, urbanization, changes in hydrology, and off-road vehicle use are contributing to this species extinction. This species was recorded near historic Lytle Creek to the east of the planning area in the City of San Bernardino.

Pringle's Monardella

Pringle's monardella (*Monardella pringlei*) is an annual herb with tight clusters of purple flowers that blooms in May and June. This species is not a federal or State listed species and is presumed to be extinct by the CNPS. This species was recorded near the intersection of Pepper Avenue and San Bernardino Avenue in the West Valley Specific Plan area.

Parry's Spineflower

Parry's spineflower (*Chorizanthge parryi parryi*) is not a federal or State listed species and is considered extremely endangered by the CNPS. This species is an annual herb commonly found in coastal scrub and chaparral communities, particularly on dry slopes and flats and blooms between April and June.

Urbanization is the primary threat to this species, although weed invasion has also been noted. Locally, this species was recorded in the Warm Creek Basins area.[14]

Santa Ana Woollystar

The Santa Ana woollystar (*Eriastrum densifolium sanctorum*) is a perennial herb with large, bright lavender blue flowers occurring in heads of approximately twenty blossoms. It is endemic to the Santa Ana River drainage of San Bernardino, Riverside, and Orange counties. The Santa Ana woollystar is a federal and State endangered species. This species occurs in chaparral and coastal scrub communities on fluvial deposits above the Santa Ana River where flooding and scouring have been infrequent enough to allow the persistence of open scrublands. Urbanization, sand and gravel mining, flood control projects, and intrusion by non-native plants are identified threats to this species. This species has occurred extensively within and near the planning area including south of Pellisier Street in Riverside County, near Riverside Avenue, near Colton Landfill and La Loma Hills, near Washington Avenue, and south of the Colton Railyard.

Mesa Horkelia

The mesa horkelia (*Horkelia cuneata puberula*) is a perennial herb native to California. It has no status pursuant to federal or State law; however, the CNPS indicates that it is seriously endangered in California. This species is found in chaparral, cismontane woodland, and coastal scrub communities, particularly on sandy or gravelly sites. This species was historically reported in the vicinity where Arrowhead Regional Medical Center is now located.

Alvin Meadow Bedstraw

Alvin meadow bedstraw (*Galium californicum primum*) is also known as California bedstraw. It is not a listed species and is coded as fairly endangered by the CNPS. This herb is endemic to California and is found in chaparral and lower montane coniferous forest communities. This species was recorded in the Reche Canyon area.

Bristly Sedge

Bristly sedge (*Carex comosa*) is a coarse, perennial, grass-like plant with clustered stems and cyndrical spikes as flowers. This species is not listed and is considered seriously endangered in California by the CNPS. This species is widely distributed throughout North America in marshes and swamps. Locally, this species was historically recorded in the Warm Creek Basins area in the vicinity of the historic Urbita Hot Springs.

Table 4.4-1
CNDDB Species Occurrences

Feature	Last Seen	Species	Status		
			USFWS	CDFG	CNPS
1	1930	Western Yellow-Billed Cuckoo	C	E	-
2	1998	Burrowing Owl	-	SSC	-
6-7	2000	Coastal California Gnatcatcher	T	-	-
9-10	2007	Least Bell's Vireo	E	E	-
13, 15	2000	Arroyo Chub	-	SSC	-
19-20	2000	Santa Ana Sucker	T	SSC	-
21	1992	Western Yellow Bat	-	SSC	-
24	1933	Western Mastiff Bat	-	SSC	-
27-28	2002	Los Angeles Pocket Mouse	-	SSC	-
31, 33	1988	Stephen's Kangaroo Rat	E	T	-
39	2001	Northwestern San Diego Pocket Mouse	-	SSC	-
41	1923	Southern Grasshopper Mouse	-	SSC	-
45	1992	Coast Horned Lizard	-	SSC	-
60	1985	Southern Cottonwood Willow Riparian Forest	-	-	-
64	1985	Southern Riparian Scrub	-	-	-
68	2001	Delhi Sands Flower-Loving Fly	E	-	-
70	- -	Busck's Gallmoth	-	-	-
*	- -	Southwestern Willow Flycatcher	E	E	-
35-37	**	San Bernardino Kangaroo Rat	E	-	-
71	1917	Los Angeles Sunflower	-	-	1A
74	1948	Smooth Tarplant	-	-	1B.1
77	1917	San Bernardino Aster	-	-	1B.2
83	1935	Gambel's Water Cress	E	T	1B.1
85	1941	Pringle's Monardella	-	-	1A
87	1882	Parry's Spineflower	-	-	1B.1
93-95, 98-99	2008	Santa Ana River Wollystar	E	E	1B.1
100	1888	Mesa Horkelia	-	-	1B.1
103	1967	Alvin Meadow Bedstraw	-	-	1B.2
104	1882	Bristly Sedge	-	-	2.1

Source: CDFG 2010

USFWS
E Endangered
T Threatened
C Candidate Species

CDFG
E Endangered
T Threatened
SSC Species of Special Concern

CNPS Categories
1A Plants presumed extinct in California
1B Plants that are rare, threatened, or endangered in California and elsewhere
2 Plants that are rare, threatened, or endangered in California but more common elsewhere
3 Plants about which the CNPS needs more information. This is a review list.
4 Plants of limited distribution. This is a watch list.

CNPS Threat Code Extensions
None Plant is lacking threat information
.1 Seriously endangered in California
.2 Fairly endangered in California
.3 Not very endangered in California

* - No record of the species is noted on the 2010 CDFG CNDDB USGS Quadrangle San Bernardino South
** - Although record of the species is noted on the 2010 CDFG CNDDB USGS Quadrangle San Bernardino South, no record is included within the planning area

Wildlife Movement and Migratory Routes

Wildlife movement is essential to wildlife survival. Local movement is required for individuals seeking food, shelter, and mates. Long range movement is necessary to satisfy the seasonal migratory needs of species to find favorable climatic conditions. Opportunities for movement are also essential for the dispersal of young to new homes. Opportunities for movement and migration are also important for gene flow, population recolonization, and range shifts. Movement corridors are particularly important for larger, terrestrial animals such as mountain lions, badgers, and bighorn sheep that require wide ranges to roam. Impediments to wildlife movement include roads, railroads, dams, urban development, and agriculture.

Migration behavior is the regularly occurring, seasonally oriented movement of a species. Migration may consist of short- or long-distance dispersal and one-and two-way migratory trips over time cycles consisting of hours to years. A migratory route is the geographic path a species takes as it acts on its migratory behavior. Aquatic species typically migrate along streams and rivers. Avian species utilize wetlands and other open space areas as resting and feeding nodes as they migrate. Groundborne species generally require wildlife corridors to migrate. Least Bell's vireo is the only migratory special status species reported within or near the planning area, although other non-listed migratory species could migrate through the planning area.

The South Coast Wildlands, in collaboration with the US Forest Service, the National Park Service, and numerous conservation groups, have designed the South Coast Ecoregion wildland network as part of the South Coast Missing Linkages project. The South Coast Missing Linkages project is designed to maintain and restore connections between wildlands by identifying and prioritizing linkages that conserve essential biological and ecological processes. There are no linkage designs within or near the Colton planning area.[15]

The San Bernardino County General Plan Open Space Element identifies Lytle Creek in the northeast portion of the planning area and the Santa Ana River in the southern portion of the planning area as *Wildlife Corridors*. The reach of Lytle Creek within and near the planning area is channelized and, therefore, would not be anticipated to serve as a terrestrial wildlife corridor although it can support the movement of aquatic species. The Santa Ana River near and within the planning area is relatively wide and natural; therefore, it would be anticipated to serve as a movement corridor for both terrestrial and aquatic species.[16]

Southern California forms a portion of the Pacific Flyway, a generic term used to categorize the numerous and complex migratory routes used by bird species migrating from the Bering Straight to South America. Essentially, any waterbody or

open space within the Pacific Flyway can serve as a travel node on a migratory path. Major California nodes include the Salton Sea, San Luis Reservoir, Mono Lake, and the Eel River. The Santa Ana River presents an opportune candidate as a node on a migratory path due to the expanse of open space and water.

Wetlands and Riparian Habitat

Wetlands are areas of soil that are saturated with moisture such as a swamp, marsh, or bog. A wetland is subject to Section 404 of the federal Clean Water Act (CWA) with the legal definition of a wetland defined under Title 33, Part 328.3(a) of the Code of Federal Regulations (CFR). Delineating a wetland is implemented through the US Army Corps of Engineers' (ACOE) Wetland Delineation Manual that includes identification of such things as the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.[17]

Wetlands serve not only as nodes on avian and aquatic migratory routes but also provide a unique habitat for various species. The USFWS maintains the National Wetlands Inventory and Mapping System and according to the most recent data, the planning area contains no known wetlands. However, the presence of the Santa Ana River in the planning area allows some potential for wetlands, although the wetlands may not have been delineated yet.[18]

Riparian habitat is composed of trees and other vegetation and physical features found on stream banks and floodplains associated with streams, lakes, and other bodies of water. Riparian habitat is unique in its support of an abundance of fish and wildlife species. The CDRG recognizes riparian habitat within the Santa Ana River.[19]

Wildlife Nurseries

A native wildlife nursery includes facilities and protected habitat for the rehabilitation of injured or rare species for eventual release into the wild. There are no existing or proposed native wildlife nurseries within or adjacent to the planning area.

Planning and Regulatory Framework

A variety of Federal, State and local regulations address sensitive plants and wildlife resources. These plans and programs have been enacted through Federal, State and local action, and are administered by agencies and special districts. The following paragraphs summarize the regulatory context that biological resources are managed within the planning area.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is administered by the United States Fish and Wildlife Service (USFWS) and was established to protect wildlife species and habitats from extinction and diminishment. FESA applies to federally listed species and habitat occupied by federally listed species. FESA Section 9 forbids acts that directly or indirectly harm listed species. Section 9 also prohibits 'taking'

of any species of wildlife or fish listed as endangered. These restrictions apply to all federal agencies and all persons subject to U.S. jurisdiction. Specifically, Section 9 (16 U.S.C. 1538) identifies prohibited acts related to endangered species and prohibits all persons, including federal, State and local governments, from 'taking' listed species of fish and wildlife except as specified under the provisions for exemptions (16 U.S.C. 1539). The term *take* is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (16 U.S.C. 1532[18]).

Critical Habitat

Critical habitats are specific geographic areas, whether occupied by a species under FESA or not, that area essential for its conservation and that have been formally designated by rule published in the Federal Register. Critical habitat receives protection under Section 7 of FESA through prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal Agency. USFWS-designated critical habitat for the coastal California gnatcatcher and the Santa Ana sucker is mapped on Exhibit 4.4-2 (Sensitive Species Occurrences and Habitat).[20] [21]

Incidental Take Permits

An incidental take permit is issued under Section 10(a)(1)(B) of the FESA to a non-Federal party undertaking an otherwise lawful project that might result in the take of an endangered or threatened species. Application for an incidental take permit is subject to certain requirements including preparation by the permit applicant of a Habitat Conservation Plan (HCP). An HCP outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species. The HCP usually includes measures to minimize impacts and may include provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area. Two current individual take permits with associated HCPs are in effect in the planning area due to incidental taking of the Delhi sands flower-loving fly.[22] A 30-year permit (Reichel et al) was issued for 43.8 acres containing 29.9 acres of suitable to degraded habitat where 11 acres are managed for conservation. A 10-year permit was issued for the realignment of Valley Boulevard at Pepper Avenue realignment covering 1.84 acres.

Delhi Sands Flower-Loving Fly Recovery Plan

The Delhi sands flower-loving fly was listed as a federally endangered species as of September 23, 1993. Further information regarding this species is provided in the *Special Status Wildlife, Plants, and Habitat* section above. A recovery plan was adopted for this species on September 14, 1997. Although no critical habitat was designated, a recovery plan was prepared by the USFWS and delineates actions to fully recover listed species. The plan identifies three Recovery Units (RUs) where suitable habitat or potentially restorable habitat exists for the Delhi sands flower-loving fly named the Colton, Jurupa, and Ontario RUs.[23]

The western portion of the planning area is within the Colton RU for the Delhi Sands flower-loving fly (see Exhibit 4.4-2, Sensitive Species Occurrences and Habitat). A recovery unit is a management sub-unit of the listed entity, geographically or

otherwise identifiable, that is essential to the recovery of the entire listed entity; conserves genetic or demographic robustness, important life history stages, or other feature for long-term sustainability of the entire listed entity. Every RU must be recovered before a species can be delisted. Specifically for the Recovery Plan for the Delhi Sands flower-loving fly, an RU is defined as an area containing one or more populations or restorable habitat for management of at least two viable populations.

Recovery plans are advisory in nature and do not require any party or governmental entity to undertake specific tasks. However, the prohibitions against take of the Delhi Sands flower-loving fly pursuant to the FESA apply to any person, business, government agency, or other entity subject to the jurisdiction of the United States.

The 5-year review of this recovery plan was completed in March 2008. The review summarizes recent information and research regarding the species since the adoption of the recovery plan. The 5-year review concluded that a species status adjustment is warranted and recommends continuing protection and management of habitat, monitoring of existing populations, extended research into the species biology, and revising the recovery plan to reflect current land use patterns and available habitat. The next 5-year review of this recovery plan began in May 2011.[24] [25]

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 et seq.) generally parallels the main provisions of FESA and is administered by the California Department of Fish and Game (CDFG). Under CESA the term *endangered species* is defined as a species of plant, fish, or wildlife that is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California. CESA prohibits the taking of listed species, except as provided in State law. Specifically, section 2053 of CESA prohibits projects that would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat that would prevent jeopardy. Any future development or redevelopment in the planning area that has the potential to affect wildlife is subject to the restrictions contained in CESA.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) program of the CDFG takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program, established pursuant to the 1991 NCCP Act (Fish and Game Code 2003) is broader in its orientation and objectives than the CESA or FESA. While the CESA and FESA are designed to identify and protect species that have already declined significantly in numbers, the NCCP program seeks to prevent species listing by focusing on the long-term stability of wildlife and

plant communities. Currently, there are no NCCP programs active within the planning area.[26]

Native Plant Protection Act

California's Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900-1913) requires all State agencies to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFG at least 10 days in advance of any change in land use that would adversely impact listed plants. This requirement allows CDFG to salvage listed plant species that would otherwise be destroyed.

Streambed Alteration Agreements

The CDFG, through provisions of the Fish and Game Code Sections 1600-1603, is empowered to issue agreements (Streambed Alteration Agreements) for projects that would "divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake" (Fish and Game Code Section 1602[a]). Streams and rivers are defined by the presence of a channel bed, banks, and intermittent flow. The limits of CDFG jurisdiction are also based on riparian habitat and may include wetland areas that do not meet US Army Corps of Engineers (ACOE) criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703) implements various treaties and conventions between the U.S., Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the MBTA, the taking, killing or possessing of migratory birds is unlawful, unless expressly permitted by other federal regulations. The MBTA provides that it is unlawful to pursue, hunt, take, capture or kill any migratory bird, part, nest, egg or product. The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (1 February to 31 August, annually). Migratory bird species protected by this act are defined in Title 50, CFR Section 10.13.

Clean Water Act

Section 401 of the CWA requires an applicant to obtain certification for any activity that may result in a discharge of a pollutant into waters of the United States. As a result, proposed fill in waters and wetlands requires coordination with the appropriate State Regional Water Quality Control Board (RWQCB) that administers Section 401 and provides certification. The RWQCB also plays a role in review of water quality and wetland issues, including avoidance and minimization of impacts.

Section 401 certification is required prior to the issuance of a Section 404 permit, as discussed below.

Under Section 404 of the CWA the U.S. Army Corps of Engineers (ACOE) has jurisdiction over *Wetlands* and *Waters of the United States*. Permitting of activities that could discharge fill or dredge materials or otherwise adversely modify wetlands or other waters of the United States and associated habitat is required. Permits authorized by ACOE under the Act typically involve mitigation to offset unavoidable impacts on wetlands and other waters of the United States in a manner that achieves no net loss of wetland acres or values.

Local Regulations

The San Bernardino County General Plan also includes a *Biotic Resources (BR) Overlay* to identify areas that include habitat for sensitive species. No portion of the planning area is within a *BR Overlay*.[27]

The City of Colton does not have any regulations or policies designed to protect biological resources.

Thresholds of Significance

Implementation of the General Plan Update would result in a significant impact if it would:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
C. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
F. Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

Environmental Impacts

IMPACT 4.4.A

Impacts to special status species and their habitat resulting from implementation of the General Plan Update will be less than significant with mitigation incorporated.

The planning area is highly urbanized with little opportunity to support native wildlife or special status species. Special status species would be anticipated to occur in the Santa Ana River area, the West Valley Specific Plan area, La Loma Hills, and the Box Springs Mountains due to the presence of natural habitat. Impacts to special status species would be considered significant if the proposed General Plan Update converts open space areas or other vacant areas to developable areas that have a reasonable potential for a special status species occurrence. A *reasonable* potential for occurrence includes relatively recent sightings and presence of appropriate habitat.

The CNDDB identifies a variety of occurrences within and near the planning area (see Table 4.4-1); however, many of these occurrences are historical, recorded before urbanization of the planning area. For example, the western yellow-billed cuckoo, western mastiff bat, southern grasshopper mouse, Los Angeles sunflower, smooth tarplant, San Bernardino aster, gambels water cress, Pringle's mondardella, Parry's spineflower, mesa horkelia, and bristly sedge have not been reported in the planning area in over 60 years. Some of these occurrences were reported prior to the turn of the 20th century. Additionally, some of the species are presumed extinct, such as Pringle's monardella and the Los Angeles sunflower. These species are not anticipated to be significantly impacted by potential future development allowed by the General Plan Update because they have not recently been sighted or have a low potential for occurrence.

Other species identified by the CNDDB have recently been sighted within or near the planning area and have appropriate, existing habitat within the planning area vicinity. For example, the Santa Ana wollystar has been sighted multiple times near the intersection of Congress Street and Fogg Street and in the Santa Ana River near the intersection of Washington Street and Washington Avenue, as late as of 2008. These occurrences have an Accuracy Class 2, indicating that there is a high degree of confidence and precision in these sightings. The Los Angeles pocket mouse was sighted in the grassland habitat west of Slover Mountain, with a high degree of confidence at Accuracy Class 3. The Santa Ana sucker and arroyo chub have the opportunity to occur anywhere in the Santa Ana River.

One species of particular concern that has been sighted in the planning area is the burrowing owl. The opportunistic nature of this species' nesting habits in existing burrows, culverts, or other appropriately sized holes allows it to theoretically occur on any vacant site in the planning area, from a single vacant lot in the South Colton to the open spaces of the West Valley Specific Plan area. Any future development on vacant land pursuant to the proposed Land Use Element could potentially impact this species.

The Land Use Element proposes some land use designation changes from Open Space to a number of developable land use designations and, visa-versa. These areas are discussed below.

- South of Slover Mountain, in the Agua Mansa industrial Corridor area, approximately 66 acres are proposed to be re-designated from Open Space to Heavy Industrial. This change would permit development in an area that would have previously been preserved; therefore, potentially significant impacts to special status species occurring within this grassland area could occur.
- In the South Colton area, southeast of the intersection of Congress Street and Fogg Street, approximately 35 acres are proposed to be changed from the Open Space land use designation to the Low Density Residential land use designation. This would permit development in an area that would have previously been preserved and therefore could impact special status species in the area, particularly the Santa Ana wollystar.
- In the northeast portion of the planning area, near the Warm Creek Basins, approximately 26 acres are proposed to be re-designated from Open Space to Business Park. These areas have been previously disturbed and according to the vegetation map, are barren. Impacts to special status species or their habitat would not be anticipated in this area.
- In the western portion of the planning area, west of Slover Mountain, approximately 145 acres are proposed to be re-designated from Heavy Industrial to Open Space-Resource Conservation. This change will preserve grassland habitat in the area as well as the 'Delhi' series sand located throughout the area. This will have a beneficial impact on special status species occurring in the area, particularly the Los Angeles pocket mouse and the Delhi Sands flower-loving fly. This area also encompasses a portion of the Colton RU for the Delhi Sands flower-loving fly.

In addition to the proposed land use designation changes, the proposed Housing Element identifies vacant and underutilized areas of the planning area as focus areas for future residential development. These areas include the West Valley Specific Plan area, the Pellissier Ranch area, the Reche Canyon area, and scattered sites throughout the central portion of the City. The focus areas identified in the Pellissier Ranch and Reche Canyon areas are located within critical habitat for the coastal California gnatcatcher. This habitat is protected from destruction or modification pursuant to FESA; therefore, any proposed housing within these areas will be subject to Federal review and approval under the Endangered Species Act.

The focus areas identified in the West Valley Specific Plan area are located within the Colton RU of the Delhi Sands flower-loving fly (DSF) recovery plan. A Habitat Conservation Plan (HCP) has been prepared for the West Valley Area east of the City of Rialto City limits, west of Meridian Avenue, North of Valley Boulevard, and south of San Bernardino Avenue. The draft HCP has been accepted by the USFWS and final programs are being prepared including an Environmental Assessment and an Implementation Plan. This area has been identified by the USFWS as essential

for the recovery of this species; therefore, impacts to this habitat could constitute a potentially significant impact to the long-term survival of the Delhi Sands flower-loving fly.

As discussed above, the proposed General Plan Update has the potential to impact a variety of special status species and their associated habitat. In order to minimize impacts to these species, Mitigation Measures 4.4.A-1 and 4.4.A-2 will be incorporated into the City's standard environmental review process. These mitigation measures require preparation of biological assessments for individual development projects to determine occurrences of special status species or habitat. Measures 4.4.A-1 and 4.4.A-2 establish performance measures that minimize impacts to such species through project-level mitigation. Examples of project-level mitigation include relocation, on-site conservation, off-site banking, and avoidance. Potential impacts to special status species and their habitats caused by future development provided for by the General Plan Update will be less than significant with mitigation incorporated.

IMPACT 4.4.B ***No impact to Southern Cottonwood Willow Riparian Forest or Southern Riparian Scrub habitat will occur as a result of implementation of the General Plan Update.***

The CNDDB identified two areas of sensitive riparian habitat within the planning area: Southern Cottonwood Willow Riparian Forest within the Santa Ana River and Southern Riparian Scrub in the Reche Canyon Area. The proposed Land Use Element, Housing Element, and Circulation Element Updates do not propose any land use or transportation changes that would impact these areas. No impact to these sensitive habitats could occur.

IMPACT 4.4.C ***No impact to Section 404 wetlands will occur as a result of implementation of the General Plan Update.***

There are no wetlands located within the planning area. Implementation of the proposed General Plan Update could not impact any wetlands as defined by Section 404 of the Clean Water Act.

IMPACT 4.4.D ***No impact to the Lytle Creek and Santa Ana River wildlife corridors or any wildlife nurseries will occur as a result of implementation of the General Plan Update.***

The proposed General Plan Update does not include any land use policies nor circulation changes that could fragment the Santa Ana River or Lytle Creek and impede their use as local or migratory wildlife corridors. There are no wildlife nurseries in the planning area. No impacts will occur.

IMPACT 4.4.E

No impact related to conflicts with the proposed General Plan Update and other existing policies, regulations, or standards would occur.

There are no existing County or City policies, regulations, or standards designed to protect biological resources applicable to the planning area; therefore, the proposed General Plan could not conflict with such policies, regulations, or standards. No impact could occur.

IMPACT 4.4.F

No impact related to conflicts between the proposed General Plan Update and existing Habitat Conservation Plans will occur.

The General Plan Update designates active Habitat Conservation Plans for the Delhi Sands flower-loving fly as open space and does not include land use changes or proposed circulation improvements within any other adopted Habitat Conservation Plan area; therefore, the General Plan Update will have no effect upon such conversation plans.

Mitigation Measures

MITIGATION 4.4.A-1

A biological resources assessment shall be prepared for any land use plan or development proposal located on any undeveloped land within a Critical Habitat designation or identified in the General Plan Environmental Impact Report as dry herbaceous, hardwood forest-woodland, shrub, or giant reed-pampas grass vegetation communities or mapped Delhi sands habitat. This assessment shall identify the habitat types and quality, identify species occurrence and distribution, determine the specific impacts to biological resources and characterize the biological significance of those impacts, and define measures to avoid, reduce or compensate for any significant impacts attributable to a proposed project. The reduction in impacts may include a redesign of the project. The compensation may include creating and/or preserving in perpetuity equivalent or better quality habitat at a minimum 1:1 ratio, as will be determined through project-specific analysis. The biological resources assessment shall be prepared by a qualified biologist and submitted to the Development Services Director for review/approval in consultation with the biologist and other as appropriate to the project. The biological resources assessment shall be included in the CEQA compliance documentation for all such proposals.

MITIGATION 4.4.A-2

A focused survey for burrowing owls shall be conducted by a qualified professional biologist for any new development project proposed on a vacant site of two acres or larger, with a landscape of annual and perennial grasslands, desert, or arid scrubland with low-growing vegetation or agricultural use or vegetation. The purpose of the survey is to determine if burrowing owls are foraging or nesting on or adjacent to the project site. If surveys confirm that the site is occupied habitat,

mitigation measures to minimize impacts to burrowing owls, their burrows, and foraging habitat shall be identified. The results of this survey, including any mitigation recommendations, shall be incorporated into the project-level CEQA compliance documentation. Owl surveys and approaches to mitigation shall be in accordance with the Staff Report on Burrowing Owl Mitigation, issued by the California Department of Fish and Game on March 7, 2012.

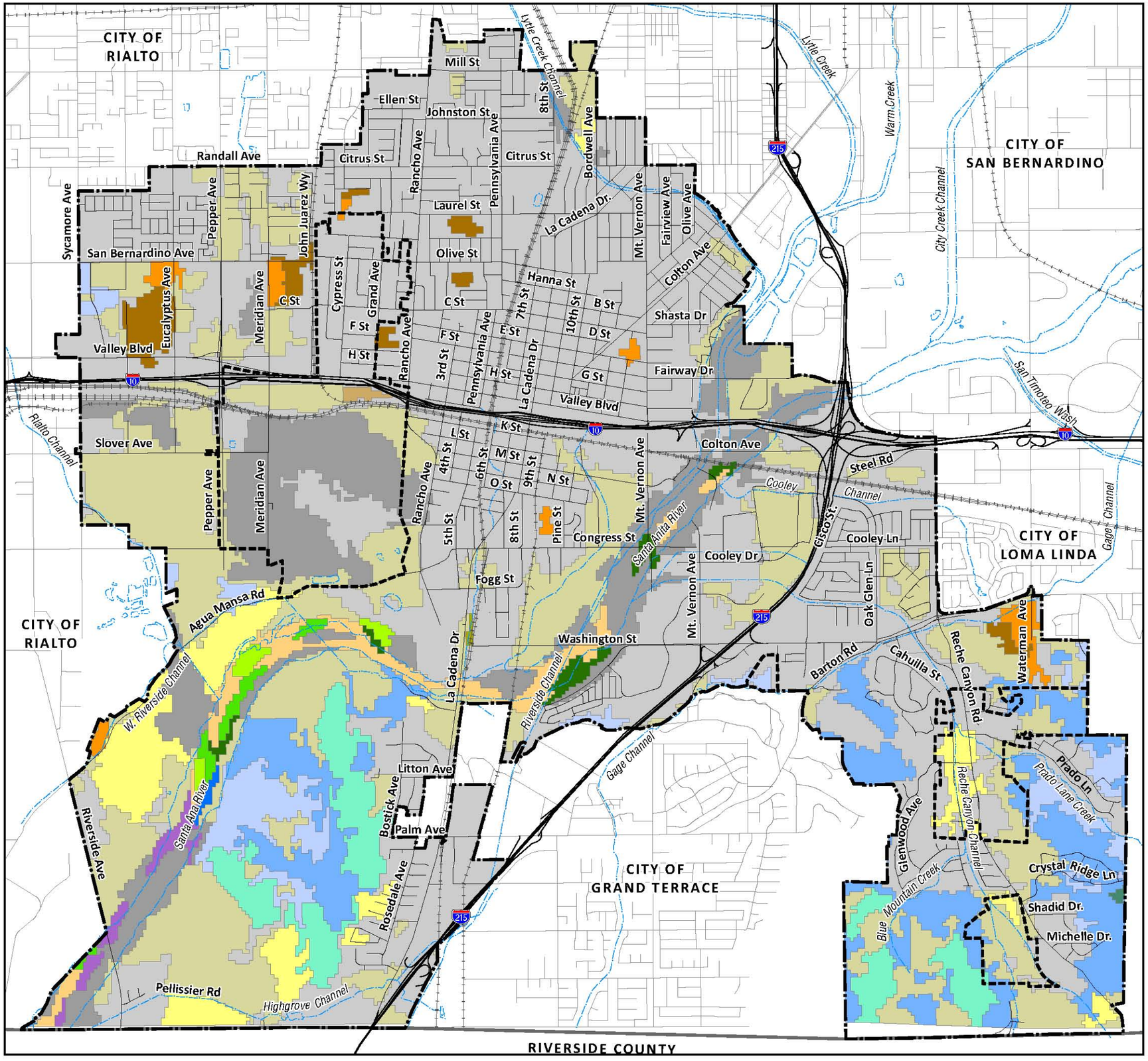
Level of Impact with Mitigation Incorporated

Impact 4.4.A will be less than significant with incorporation of Mitigation Measures 4.4.A-1 and 4.4.A-2. All other impacts do not require mitigation.

This page intentionally left blank

Exhibit 4.4-1

Habitat and Plant Communities



Dry Herbaceous
- Annual Grass/Forbs

Harwood Forest/Woodland
- Eucalyptus
- Fremont Cottonwood
- Mixed Riparian Hardwoods
- Willow

Non-Forest
- Agriculture
- Barren/Rock
- Urban/Developed
- Water

Shrub
- Baccharis (riparian)
- Buckwheat (White Sage)
- California Sagebrush
- Encelia Scrub
- Northern Mixed Chaparral

Urban/Non-Native Vegetation
- Giant Reed/Pampas Grass
- Non-native Hardwood
- Non-native/Ornamental CON/HDW
- Non-native/Ornamental Grass

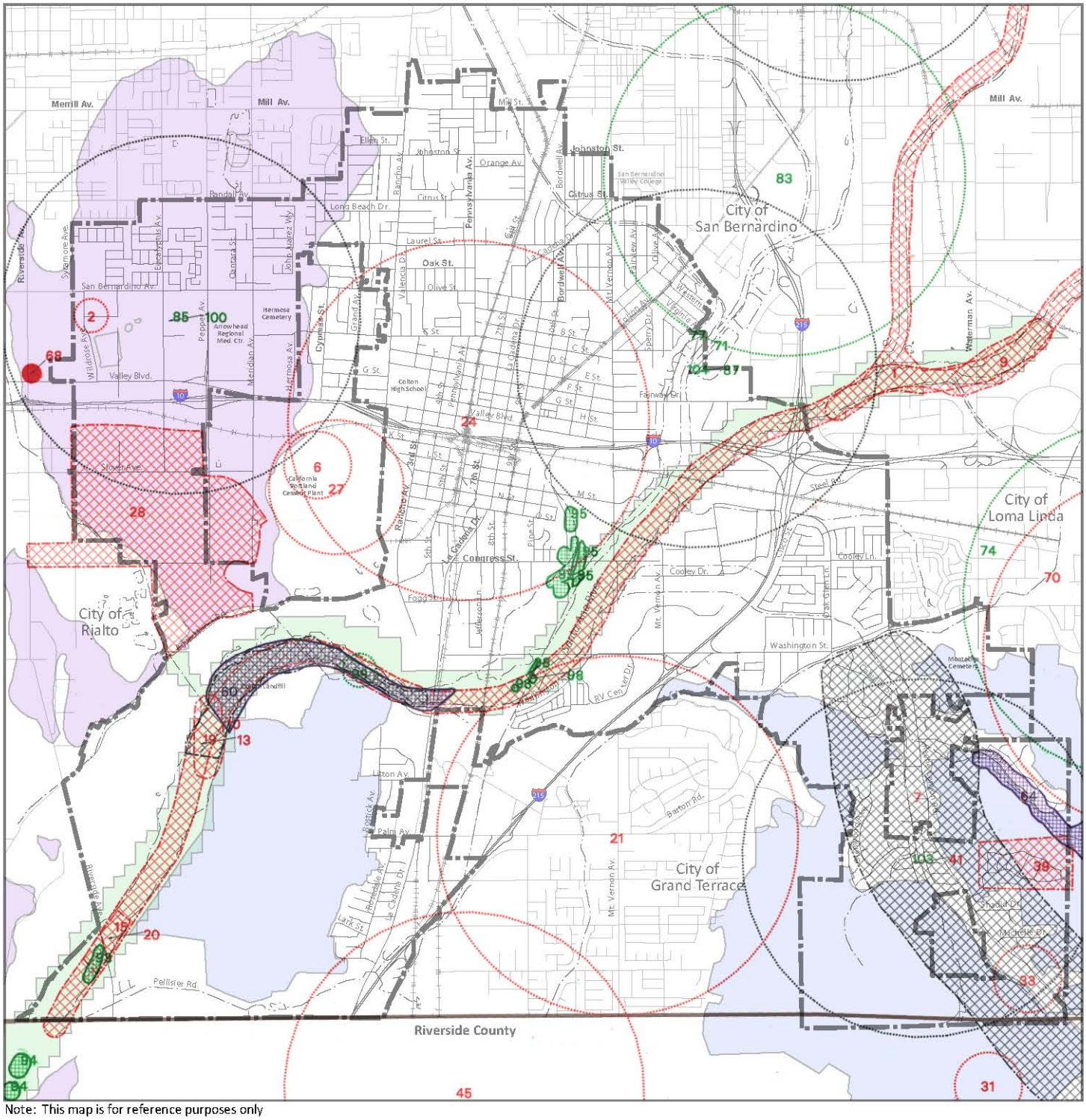
- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroads
- Surface Water

Use constraints:
This is not an official map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For official boundary information, the pertinent Agency or Municipality should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source: LCMMP, Vegetation Data, 1997.
California Department of Forestry and Fire Protection.

Miles
0 0.25 0.5 0.75 1

This Page Intentionally Left Blank



Note: This map is for reference purposes only

Legend

- City Boundary
- County Boundary
- Plant Occurrence
- Animal Occurrence
- Multiple Occurrence
- Natural Community Occurrence
- Delhi Sands Flower-Loving Fly Recovery Unit
- Coastal California Gnatcatcher Critical Habitat
- Santa Ana Sucker Critical Habitat

0 2,000 4,000 Feet

0 0.5 1 Miles

Occurrences

1	western yellow-billed cuckoo
2	burrowing owl
6	coastal California gnatcatcher
9-10	least Bell's vireo
13, 15	arroyo chub
19-20	Santa Ana sucker
21	western yellow bat
24	western mastiff bat
27-28	Los Angeles pocket mouse
31, 33	Shephens' kangaroo rat
39	northwestern San Diego pocket mouse
41	southern grasshopper mouse
45	coast horned lizard
60	Southern Cottonwood Willow Riparian Forest
64	Southern Riparian Scrub
68	Delhi Sands flower-loving fly
70	Busck's gallmoth
71	Los Angeles sunflower
74	smooth tarplant
77	San Bernardino aster
83	Gambel's water cress
85	Pringle's monardella
87	Parry's spineflower
93, 95, 98-99	Santa Ana River woollystar
100	mesa horkelia
103	Alvin Meadow bedstraw
104	bristy sedge

Exhibit 4.4.2

Sensitive Species Occurrences and Habitat

Source: CDFG 2010, USFWS 2010

This Page Intentionally Left Blank

References

[1] City of Colton. West Valley Specific Plan Amendment Draft Environmental Impact Report. 2008
[2] Santa Ana Watershed Project Authority. Draft Santa Ana Integrated Watershed Plan. 2009
[3] City of Colton. San Bernardino Valley Enterprise Zone Draft Program Environmental Impact Report. November 2007
[4] California Department of Forestry. LCMMP, Vegetation Data: cveg. San Bernardino County. 2005
[5] City of Colton. West Valley Specific Plan Amendment Draft Environmental Impact Report.
[6] City of Colton. Agua Mansa Commerce Center Draft Impact Environmental Impact Report. February 2008
[7] California Department of Forestry. LCMMP, Vegetation Data: cveg. San Bernardino County. 2005
[8] Brylski, Phillip V. California Department of Fish and Game. Terrestrial Mammal Species of Special Concern in California: Los Angeles Pocket Mouse. 1998
[9] City of Fontana. Ventana at Duncan Canyon Specific Plan Draft Environmental Impact Report. August 2006
[10] Brylski, Phillip V. California Department of Fish and Game. California's Wildlife: Southern Grasshopper Mouse. 1999
[11] Schwenkmeyer, Dick and Brad Hollingsworth. San Diego Natural History Museum. Field Guide: Phrynosoma coronatum. www.sdnhm.org/fieldguide/herps/phry-cor.html [March 24, 2010]
[12] United States Fish and Wildlife Service. Species Profile. http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B094#lifeHistory
[13] Reiser, Craig H. Rare Plants of San Diego County, Smooth Tarplant. sandiego.sierraclub.org/rareplants/115.html [March 24, 2010]
[14] University of California. Jepson Manual Treatment for Chorizanthe parryi parryi. ucjeps.berkeley.edu/interchange/I_treat_indexes.html [March 24, 2010]
[15] South Coast Wildlands. South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion. March 2008
[16] San Bernardino County. General Plan. Open Space Element. March 2007
[17] United States Army Corps of Engineers. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Version 2.0. September 2008
[18] United States Fish and Wildlife Service. Wetlands Online Mapper. Wetlandsfws.er.usgs.gov/wtlnds/launch.html [March 1, 2010]
[19] California Wildlife Conservation Board. California Riparian Habitat Conservation Program. www.wcb.ca.gov/Pages/california_riparian_habitat_conservation_program.asp [March 25, 2010]
[20] California Department of Fish and Game. Biographic Information and Observation System. Santa Ana Sucker – Final Critical Habitat, USFWS [ds150]. impas.dfg.ca.gov [March 22, 2010]
[21] California Department of Fish and Game. Biographic Information and Observation System. Coastal California Gnatcatcher – Final Critical Habitat, USFWS [ds404]. impas.dfg.ca.gov [March 22, 2010]
[22] United States Fish and Wildlife Service. Habitat Conservation Plans: Regional Summary. ecos.fws.gov/conserv_plans/servlet/gov.doi.hcp.servlets.PlanReport [March 28, 2012]

[23] United States Fish and Wildlife Service. Delhi Sands Flower-Loving Fly Recovery Plan. September 1997
[24] United States Fish and Wildlife Service. Delhi Sands Flower-Loving Fly 5-Year Review. March 2008
[25] United States Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; 5-Year Reviews of Species in California, Nevada, and the Klamath Basin of Oregon. Federal Register Vol 76 No 101. May 25, 2011
[26] California Department of Fish and Game. Natural Community Conservation Planning (NCCP). www.dfg.ca.gov/habcon/nccp/ [March 25, 2010]
[27] San Bernardino County. Development Code. 2007

Cultural Resources 4.5

This section evaluates the potential environmental effects of the General Plan Update on cultural and paleontological resources. The analysis is based in part on cultural resources data provided by the San Bernardino Archaeological Information Center (SBAIC) dated July 25, 2008 and the General Plan Cultural Resources Preservation Element. No comments regarding cultural resources were received in response to the Notice of Preparation or at the public scoping meeting.

Existing Conditions

The History of Colton

The Serrano Indians occupied the territory of the San Bernardino Mountains east to Mount San Gorgonio, the San Gabriel Mountains west to Mount San Antonio, and portions of the desert to the north and the fringe of the San Bernardino Valley to the south. Numbering no more than perhaps 1,500 people, the Serrano were scattered over a rugged, expansive landscape. The Serrano were Shoshonean peoples, speakers of languages in the Takic sub-family of the larger Uto-Aztecan language group, and their ancestors are presumed to have entered southern California some 1,500 years ago from the Great Basin. Their most intensive cultural contacts were with the Pass Cahuilla, who occupied the territory to the southeast, and the Gabrielino, who occupied the lands westward to the Pacific coast.

Archaeological evidence also suggests that numerous Serrano villages may have been located within the vicinity of Colton. The Rialto bench, which stretches from Etiwanda Avenue in the City of Rialto north to Walnut, appears to have been extensively utilized by the Serrano. In particular, the west bank of Lytle Creek, to the north of Colton, where thousands of Indian artifacts have been found throughout the years, appears to have been a major Serrano occupation area sometime prior to the entry of the Spanish into the area in 1776.

During the early historic era, the Spanish began establishing missions in California in 1769; however, the Native Americans living in the localized study region likely had very little direct contact with the non-native settlers until the turn of the century. The San Gabriel Mission was established in 1771 in the Los Angeles area, and baptisms of Serrano individuals began by 1785. Research into the baptismal and other records of Mission San Gabriel, indicates that the native peoples who occupied and used the general study area during the late 1700s and early 1800s spoke the Serrano, Gabrielino, Cahuilla, and Luiseño languages.

In 1822, Mexican independence from Spanish rule gave rise to another cultural entity, the Californios. Wealthy Mexican landowners established a feudal-like domination over vast tracts of land. The Ranchero system preserved a number of Spanish institutions. Colton was part of the land holding of the Lugo Brothers Rancho San Bernardino, with Juan Bandini's Rancho Jurupa nearby.

In the 1830s, the Old Spanish Trail was opened, linking Colton directly with the Southwest. The City became the site of an annual rendezvous for traders using the

route. Although the exact location of the rendezvous site has not yet been discovered, Colton played an important role in the development of the trail.

Facilitated by the opening of the Old Spanish Trail, and finding it necessary to protect their cattle herds from theft, the Lugos decided to invite a group of people living in Abiquiu, New Mexico to live on their land. Of Spanish, Spanish-Jewish, and mixed Indian and Spanish descent, a contingent came west to colonize. When the arrangement with the Lugos proved unsatisfactory, the immigrants established their own Catholic agricultural villages. They first settled La Politana, then reestablished the community of San Salvador consisting of two villages, Agua Mansa and La Placita, all within present day Colton's Sphere of Influence. Their descendents constitute the nucleus of Colton's modern Hispanic community, and their legacy is shared in the historic cultural resources of the San Salvador neighborhood.

In 1848, Mexico ceded its northern territories to the United States in the Treaty of Guadalupe Hidalgo; three years later Colton became a Mormon possession, when Mormon colonist leaders Lyman and Rich purchased Lugo's Rancho San Bernardino. Although the Mormons did not build a settlement in Colton, the site of Fort Benson reflects their influence in the area.

The town of Colton was founded in 1875 by the Southern Pacific Railroad with the intent of making it the railroad center of Southern California. The railroad had the greatest role in the development of Colton, which was named after a Southern Pacific Railroad official David R. Colton. Incorporated in 1887, Colton began to be known as *The Hub City* because it was the point where the Santa Fe, Union Pacific, Burlington, and the Southern Pacific railroads all converged. As a hub, Colton became an important shipping and distribution point, connecting the City to all of Southern California. Colton was also a rich citrus and farm area that gave rise to the large citrus processing industry. Local farmers cultivated fruit trees; after processing, access to the rail network allowed the shipping of harvest north and east. The network further expanded in 1886 after the Santa Fe Railway established a transcontinental link, which led to population growth and urban development. Although the Southern Pacific railroad line connected Colton to other areas of Southern California and provided accessible transport services, the rail lines unofficially divided the City into north and south Colton. The City experienced relatively steady population growth from 1920 to 1980. The most dramatic growth occurred between 1980 and 1990, in which the population nearly doubled.

Cultural Records

A cultural resources records and literature search were conducted at the San Bernardino Archaeological Information Center (SBAIC) of the California Historical Resources Information System, housed at the San Bernardino County Museum, in July 2008. For purposes of this investigation, the map examined for the entire 9,981-acre study area was the San Bernardino South 1:24,000-scale United States Geologic Survey (USGS) topographic map.

Results of the archaeological literature and records search at the SBAIC indicate that more than 135 cultural resources investigations have been completed within the City's study area; due to the sheer volume of documents, copies of the reports were not gathered at the SBAIC.

These cultural resources studies resulted in the identification and documentation of more than 190 cultural resources. Included are approximately 54 historical archaeological resources, 100 historic structures, and 18 prehistoric archaeological resources; two historical and seven prehistoric isolated artifacts have also been documented.

One historical site has been listed and one site is eligible to be listed on the National Register of Historic Places (NRHP), four other sites are listed as California Historical Points of Interest (CHPI), and two sites are listed as California Historical Landmarks (CHL). Again, due to the sheer volume of site records, copies of these site records were not gathered at the SBAIC.

A brief description of the seven listed sites and one eligible historic site follows.

National Register of Historic Places

- Carnegie Public Library Building, 380 North La Cadeña Drive – one of nearly 1,700 libraries funded by the industrialist Andrew Carnegie across the United States. The library's construction began in 1891 and was completed in 1908. Only two of the four Carnegie libraries in San Bernardino County are still standing. The building is now home to the Colton Museum.
- Power line (eligible) – In 1896, Colton established the State's second municipal electric utility.

California Historical Landmarks

- Agua Mansa Cemetery, 70 East Agua Mansa Road – Don Juan Bandini, owner of the Jurupa Rancho, donated parts of his rancho to a group of New Mexican colonists in 1845 on the understanding that they would aid in repelling Indian raids on his stock. The community was named Agua Mansa (Gentle Water) and was prosperous until 1862, when a great flood suddenly swept down the Santa Ana, carrying away the village of adobe buildings and covering the fields with sand and gravel. The village was rebuilt on higher ground, but never regained its former prosperity.
- Fort Benson, 10600 Hunts Lane – This is the site of an adobe fortification erected about 1856-57 by the *Independent* faction in a dispute with the Mormons over a land title. The fort was maintained for about a year. This also is the site of the Indian village of Jumuba, and Jedediah Smith camped here in January 1827.

California Historical Points of Interest

- Campsite/San Salvador School
- Slover Mountain Quarry
- Cooley Adobe Site
- Mill Site for Slover Mountain

- Fort Benson Monument
- Los Angeles-Sonora Road

Prehistoric Archaeological Resources

The information received from the SBAIC indicates that 25 prehistoric archaeological resources have been recorded within the planning area. It also notes that the planning area is located within an area of high sensitivity for prehistoric archaeological resources based on these records, maps and comparison to similar areas. The SBAIC notes that the areas along the terraces of the Santa Ana River and the sand dune areas in and near the La Loma Hills, Blue Mountain/Reche Canyon area, and along the old Warm Creek and Lytle Creek alignments have a particularly high potential for prehistoric archaeological resources to exist. However, it is also possible that significant prehistoric archaeological resources could be found in subsurface contexts in other portions of the planning area.

Of the recorded prehistoric archaeological sites, many consist of bedrock milling stations containing bedrock milling slicks and/or mortar cups. Other prehistoric site types include flaked and ground stone scatters and rock art. In regards to prehistoric archaeological sites, relatively few recorded sites exist, partly because few cultural resources surveys have been conducted in the area, but also because the City is located on an alluvial fan so that sites may have been covered by alluvial wash. When additional cultural resources studies are conducted within the planning area, prehistoric and ethnohistoric archaeological sites are likely to be found.

Historic Archaeological Resources

The information received from the SBAIC indicates that 158 historic resources (built environment) and historic archaeological resources have been recorded within the planning area. It also notes that the planning area is located within an area of high sensitivity for historic resources and historic archaeological resources based on the local development history of the City.

Recorded historic resources generally include numerous houses, as well as church and commercial buildings and water conveyance features (e.g., canals and canal remnants, standpipes, weirs, pump houses). Recorded historic archaeological resources are generally associated with scattered refuse associated with a certain time period or activity/use within a given area. It should be noted that other types of historical archaeological resources, such as buried hollow features (e.g., cisterns, privies) containing historical refuse deposits are often associated with former homestead locations.

The City's historical town center has a high potential to yield historic resources and historical archaeological resources, the surrounding areas that were developed later have a moderately high potential, and the remaining areas, to the north and south, a moderate potential to yield resources.

Locally Important Historic Resources

As with other cities in the San Bernardino Valley, historical property types characteristic of the early colonization and subsequent growth of the City may include houses and churches, agri-industrial buildings, railroad structures, cultural institutions and parks, bridges and street patterns, early water distribution features and canals, and land-use patterns. Early houses were typically vernacular, wood frame, one- or two story structures with a simple rectangular or *L* plans and gable roofs. Ornamentation utilizing styles of Queen Ann, Stick, Eastlake, Italianate, and Greek, Gothic, and Colonial revivals was usually confined to the porches and at the gable peaks. Commercial structures were usually brick with cast iron storefronts, while agri-industrial buildings were either brick or wood frame.

Other property types may also encompass references to American Colonial Revival in residential buildings and Beaux Arts Classicism in major civic and institutional buildings. Following World War I, historical resource property types may be represented by Arts and Crafts styles, including the California Bungalow, two-story Craftsman, Prairie, and English cottage/Tudor Revival. In addition, styles that referenced the American Colonial period and French, Spanish-Italian Renaissance, and English architecture may have also been popular. Beaux Arts Classicism reached its peak in the post-World War I period civic architecture, while Gothic Revival and Spanish Colonial Revival influenced designs for churches. Finally, historical resource property types characteristic of the post-World War II years may include tracts of post-war vernacular style houses. These one-story residences were modest in size and typically had wood or stucco siding and attached garages; the tracts themselves were designed with curving street patterns.

Paleontology

Paleontology is the study of the fossil record of past geological periods and of the phylogenetic relationships between ancient and contemporary plant and animal species. Specifically, paleontology is the study of what fossils tell us about the ecologies of the past, about evolution, and about our place, as humans, in the world. Paleontology incorporates knowledge from biology, geology, ecology, anthropology, archaeology, and even computer science to understand the processes that have led to the origination and eventual destruction of the different types of organisms since life arose.

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. This includes vertebrates (with a skeleton, segmented spinal column and brain inside a skull) and invertebrates (without a backbone or internal skeleton). These resources are valued for the information they yield about the history of the earth and its past ecological settings. Paleontological sites are those areas that show evidence of pre-human activity.

Paleontological Resources

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) conducted a literature review and records search for the Colton planning area.

Previous geologic mapping of Colton indicates that the planning area contains surface exposures of several sedimentary rock units including (from oldest to youngest): older fan deposits of middle to late Pleistocene age (Qof); old eolian deposits (Qoed, Qoes); young eolian deposits (Qyes); young alluvial fan deposits (Qyf); young axial channel deposits (Qya); and recent wash deposits (Qw, Qyw). Of these sedimentary units, the Pleistocene sediments mapped at the surface have high potential to contain significant nonrenewable paleontologic resources, and so are assigned high paleontologic sensitivity. Pleistocene alluvial sediments elsewhere throughout Riverside and San Bernardino counties and the Inland Empire have been reported to yield significant fossils of extinct animals from the Ice Age. Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, saber-toothed cats, large and small horses, large and small camels, and bison, as well as plant macro- and microfossils.

Holocene (recent) sedimentary deposits identified in the planning area are geologically too young to contain significant nonrenewable paleontologic resources, and so are assigned low paleontologic sensitivity. In many areas, however, these deposits form a thin sedimentary veneer overlying subsurface sediments of Pleistocene age. This subsurface Pleistocene older alluvium has high potential to contain significant fossil resources, and so is assigned high paleontologic sensitivity.

Additionally, previous geologic mapping indicates that surface exposures of Paleozoic marble (Pzmp) and schist (Pzsp) traverse portions of the planning area. These metamorphic rocks have no potential to contain paleontologic resources.

A search of the Regional Paleontologic Locality Inventory (RPLI) determined that no previously known paleontologic resource localities are recorded by the SBCM from within the planning area; however, paleontologic resource locality SBCM 5.1.11, located in Fontana and situated approximately two miles west of the study area, yielded fossil remains of the extinct saber-toothed cat, Smilodon, from Pleistocene older alluvium similar to that present at the surface and at depth within the planning area. Additionally, locality SBCM 1.102.2 is located approximately two miles east of the proposed study area. This locality yielded fossil wood portions from depths of approximately 437 feet to 725 feet below the existing ground surface along the project alignments. The proximity of these localities to the proposed project area demonstrates the high paleontologic potential of Pleistocene older alluvium in this area.

Regulatory Framework

The treatment of cultural resources is governed by federal and state laws and guidelines. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. Federal and state significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. Some resources that do not meet federal

significance criteria may be considered significant under state criteria. The laws and regulations are intended to preserve significant prehistoric or historic resources. Federal and state laws and guidelines for protecting historic resources that are pertinent to a local community development and planning program are summarized below.

The National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) has become the foundation and framework for historic preservation in the United States. The NHPA authorizes the Secretary of the Interior to expand and maintain a National Register of Historic Places (NRHP); it establishes an Advisory Council on Historic Preservation as an independent federal entity; requires federal agencies to take into account the effects of their undertakings on historic properties, and affords the Advisory Council a reasonable opportunity to comment on any undertakings that may affect historic properties listed, or eligible for listing, in the NRHP; and makes the heads of all federal agencies responsible for the preservation of historic properties owned or controlled by their agencies. In addition, the NHPA authorizes funding for state programs with provisions for pass-through funding and participation by local governments. In summary, the NHPA provides the legal framework for most state and local preservation laws.

The National Park Service has issued regulations governing the NRHP (36 CFR 60). Among the topics covered in detail in these regulations are the effects of listing under federal law, definition of key terms (e.g. building, site, structure, and district), nomination procedures, nomination appeals, and removing properties from the NRHP. Importantly, Section 60.4 of the regulations presents the criteria by which historic properties are evaluated for the NRHP.

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or that are associated with lives of persons significant in our past; or
B. that are associated with lives of persons significant in our past; or
C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. that have yielded, or may be likely to yield, information important in prehistory or history.

A point to be emphasized is that a historic property does not have to be nominated for or listed in the NRHP to be afforded protection under the NHPA. Indeed, most of the properties managed under this and other federal historic-preservation

authorities have never been nominated for the NRHP. The significance of a historic district, site, building structure or object—and thus its required consideration under the law—is determined by the property's eligibility for the NRHP with respect to the criteria set forth in 36 CFR 60.4.

The Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items—human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Native American tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking.

Federal Curation of Archaeological Collections

Federal curation regulations are also provided in 36 CFR Part 79, which apply to collections that are excavated or removed under the authority of the Antiquities Act (16 USC. 431-433), the Reservoir Salvage Act (16 USC. 469-469c), Section 110 of the National Historic Preservation Act (16 USC. 470h-2), or the Archaeological Resources Protection Act (16 USC. 470aa-mm). Such collections generally include those that are the result of a prehistoric or historic resources survey, excavation, or other study conducted in connection with a federal action, assistance, license, or permit.

California Environmental Quality Act (CEQA)

Enacted in 1971, the California Environmental Quality Act (CEQA) directs lead agencies to first determine whether a cultural resource is a *historically significant* cultural resource. In the protection and management of the cultural environment, CEQA guidelines provide definitions and standards for cultural resources management. The term *historical resource* is defined as follows:

A. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Registrar of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
B. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
C. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a

historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852).

D. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Sections 5020.1(j) or 5024.1.

CEQA also applies to effects on *unique* archeological resources. This is defined in Section 21083.2 of Public Resources Code as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archeological resource is neither a unique archeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment; however, a project with an effect that may cause a substantial adverse change in the significance of a historical resource or unique archeological resource is a project that may have a significant effect on the environment. Effects on cultural properties that qualify as historical resources or unique archeological resources can be considered adverse if they involve physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

The California Office of Historic Preservation

The State of California Office of Historic Preservation (OHP) administers the California Register program. As a recipient of federal funding, the OHP meets the requirements of the NHPA with a State Historical Preservation Officer (SHPO) who enforces a designation and protection process, has a qualified historic preservation review commission, maintains a system for surveys and inventories, and provides for adequate public participation in its activities. As the recipient of federal funds that require pass-through funding to local governments, the OHP also administers the Certified Local Government program for the State of California. The OHP also

administers the California Register of Historical Landmarks and California Points of Historical Interest programs. In addition, the State of California Governor's Office of Planning and Research (OPR) published a supplement to the 2003 General Plan Guidelines on November 14, 2005 which provides advisory guidance to cities and counties on the process for consulting with Native American Indian tribes during the adoption or amendment of local general plans, such as the City's General Plan Update, or specific plans, in accordance to Senate Bill 18 (SB18) (Chapter 905, Statutes of 2004).

The California Register of Historic Resources

SHPO maintains the California Register of Historic Resources (CRHR). Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Native American Historic Cultural Sites

State law (Public Resources Code 5097-5097.993) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to a year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the California Register of Historic Resources.

California Native American Graves Protection and Repatriation Act

The California NAGPRA, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. California NAGPRA also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code

In the event human remains are encountered in any form outside of a cemetery, whoever makes this discovery is required to comply with State of California Public Resources Health and Safety Code Section 7050.5-7055. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site.

Historic Preservation Ordinance

In 1987, the City of Colton adopted Ordinance No. 0-11-87, known as the *Historic and Scenic Preservation Ordinance of the City of Colton.* This ordinance established rules and regulations governing the designation, preservation, and perpetuation of

historic and scenic properties. A nomination and designation program for historic resources was also established by this ordinance. In addition, the ordinance authorizes a Historic and Scenic Preservation Commission, and establishes the Commission's membership, organization, procedures, powers and duties.

In 1996, the City adopted Ordinance No. 0-11-96, known as the *Historic Preservation Ordinance of the City of Colton.* This ordinance further establishes rules and regulations governing the designation, preservation, and perpetuation of historic and scenic properties.

In 1999, Ordinance No. 0—2-99 amended the previous Historic Preservation Ordinance to allow for the creation and placement of historic districts on the list of nominated resources. The amendment also defined the City Manager as the *Historic Preservation Officer* authorized to appoint a staff liaison to the Historic Preservation Commission. The City has six designated historic districts, nine Mills Act Homes, and 53 designated Landmark properties.

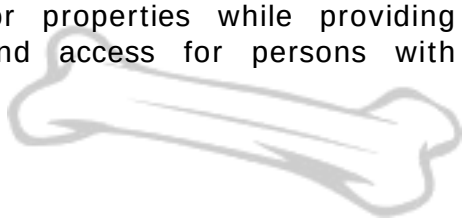
Historic Preservation Commission

The Historic Preservation Commission consists of seven members appointed by the City Council. Members are residents of the City who are interested and knowledgeable in areas related to historic preservation. Authorized by ordinance, the Commission makes recommendations, decisions, and determinations concerning the designation, preservation, protection, enhancement, and perpetuation of historic and cultural resources in the City.

Historic Building Code

Alternative state building regulations may be used for the rehabilitation, preservation, restoration, or relocation of nominated resources. Specifically, the State Historical Building Code, or HBC, (part 8 of Title 24 of the California Administrative Code) shall be used for any historic resource through the city's building permit procedure.

The purpose of the HBC is to provide regulations for the preservation, restoration, rehabilitation, relocation or reconstruction of buildings or properties designated as qualified historical buildings or properties. The HBC is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users. The HBC requires enforcing agencies to accept solutions that are reasonably equivalent to the regular code when dealing with qualified historical buildings or properties. The intent of the HBC is to facilitate the preservation and continuing use of qualified historical buildings or properties while providing reasonable safety for the building occupants and access for persons with disabilities.



Thresholds of Significance

The General Plan Update could result in significant impacts related to cultural or paleontological resources if it:

A. Causes a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines.
B. Causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.
C. Directly or indirectly destroys a unique paleontological resource or site or unique geologic feature.
D. Disturbs any human remains including those interred outside of formal cemetery.

Environmental Impacts

IMPACT 4.5.A

Impacts to historic resources will be less than significant with implementation of existing policies and regulations.

The General Plan Update will not result in any direct adverse impacts to any historic resource because it does not authorize demolition of any structures or approval of any development. Future development within the planning area subject to the goals and policies of the General Plan Update could impact historic resources where new development supplants older development. Adverse modification of historic resources may also occur if appropriate restoration methods are not implemented, thereby permanently altering the historic character of the resource. Impacts associated with the destruction or alteration of historic resources can affect a City's sense of place and lose important information relevant to City, the region, and/or state history.

The existing General Plan Cultural Resources Preservation Element includes goals, policies, and implementation measures designed to protect and maintain the City's historic resources. The General Plan Update does not include any amendments to the Cultural Resources Preservation Element. Future development and infrastructure improvements guided by the Land Use, Mobility, and Housing Element Updates will be subject to policies in the Cultural Resources Preservation Element (including provisions that address identifying, designating, and preserving historically significant resources and educating the public about those resources (Goals 2 and 3)), Historic Preservation Ordinance, and protections offered by local Historic Landmark and Historic District designations. Specifically, the following policies and implementation measures from the Cultural Resources Preservation Element are designed to protect historic resources from future development impacts and adverse modification:

Policy 2a. *Preserve historic resources in number and type to retain the distinctive character of all stages of Colton's history by establishing historic districts within the City.*

Policy 2f. *Ensure future development is compatible with existing structures and district characteristics.*

Implementation Measure 2.3. *Develop design and land-use guidelines sensitive to existing or desired character of identified historic resources.*

By preventing demolition of historic structures, ensuring that new development is compatible with historic resources, and ensuring that restoration of historic structures preserve the character of the resource, potential impacts to historic resources will be less than significant because the historic value of these resources will be preserved in perpetuity. These policies operate concurrently with the extensive regulatory framework of federal, state, and local laws protecting historic resources, as identified herein.

IMPACT 4.5.B

Impacts to archaeological resources will be less than significant with implementation of existing policies and regulations.

The General Plan Update will not result in a direct adverse environmental impact to archaeological resources because it does not authorize any earthmoving activities or other development. Future development subject to the goals and policies of the Land Use, Mobility, and Housing Elements could impact archaeological resources where excavation and other earthmoving activities are required. Failure to properly survey development sites and, if necessary, monitor earthmoving activities to ensure identification and recovery of archaeological resources could result in a significant impact due to the loss of information related to pre-historic and historic human activities.

The existing General Plan Cultural Resources Preservation Element includes goals, policies, and implementation measures designed to protect and maintain local archaeological resources. Future development and infrastructure improvements guided by the Land Use, Mobility, and Housing Element Updates will be subject to policies of the Cultural Resources Preservation Element that includes goals to identify, designate, and preserve archaeological resources (Goal 1). Specifically, the following policies and implementation measures from the Cultural Resources Preservation Element are designed to protect archaeological resources from future development impacts:

Policy 1a. *Conserve in their entirety the largest and most unique archaeological sites.*

Policy 1b. *Develop public policy to protect archaeological resources from the encroachment of development.*

Implementation Measure 1.3. *Retain the services of an archaeological specialist for review of development proposals for properties identified as archaeological resources. Concurrent with a discretionary permit application*

filed with the City, an archaeological study shall be submitted by the applicant. This report submittal is necessary for all properties identified as an archaeological resource in the City-wide inventory or as requested by staff during the application review process.

Implementation Measure 1.4. *Require adequate mitigation of impacts to archaeological resources.*

In addition to the extensive regulatory framework of federal, state, and local laws protecting archaeological resources, the policies and implementation measures of the Cultural Resources Preservation Element will protect archaeological resources by requiring surveys, documentation, and protection of resources. Mitigation will be required depending on the assessment provided in the cultural resources assessment for individual development projects. The preferred course of action is to avoid the resource and leave it in place, if possible. Other common mitigation includes provisions for recovery, identification, and curation should resources be discovered during site surveying or during earthmoving activities. Impacts to archaeological resources will be less than significant with implementation of existing policies and regulations.

IMPACT 4.5.C

Impacts to paleontological resources will be less than significant with mitigation incorporated.

The General Plan Update will not result in a direct adverse environmental impact to paleontological resources because it does not authorize any earthmoving activities or other development. Excavation and other earthmoving activities required for future development pursuant to General Plan policy within surface and subsurface exposures of Pleistocene era alluvium materials could disturb paleontological resources. Failure to survey development sites and if necessary, monitor earthmoving activities to ensure proper identification and recovery of paleontological resources could result in a significant impact to fossil resources due to the loss of information important to understanding pre-historic life and evolution.

The City currently does not have any policies related to the protection of paleontological resources during development-related earthmoving activities. Therefore, mitigation is required to avoid or minimize impacts to buried paleontological resources. Mitigation program 4.5-1 is incorporated and will be applicable to all future development and infrastructure proposals subject to review pursuant to CEQA. These measures will ensure that future development sites are surveyed and monitored and resources avoided, if possible, or identified, recovered, and catalogued to disseminate and preserve applicable paleontological information. These measures were recommended by SBCM and are identical to those required by the County of San Bernardino Development Code. All monitoring activities are to be implemented by qualified vertebrate professional paleontologists in accordance with the guidelines of the Society of Vertebrate Paleontology. Impacts to paleontological resources will be less than significant with mitigation incorporated.

IMPACT 4.5.D

Impacts to human remains will be less than significant with implementation of existing regulations.

The General Plan Update will not directly impact human remains because it does not authorize construction of any development or support land uses that could result in the conversion of a cemetery to a different use. However, the potential exists that as yet undiscovered human remains may be encountered during future development activities within the planning area. Destruction of pre-historic or historic remains can result in the loss of information important to the history of the state, the region, or the immediate locality. Destruction of recent human remains could result in destruction of evidence associated with a crime.

In the event human remains are encountered, the discovery is required to comply with State of California Public Resources Health and Safety Code Section 7050.5-7055. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are discovered during excavation of a site. As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant." If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been contacted, the remains investigated, and appropriate recommendations made for the treatment and disposition of the remains. Given required compliance with state regulations that detail the appropriate actions necessary in the event human remains are encountered, impacts associated with development supported by the proposed Land Use, Mobility, and Housing Elements will be less than significant.

Mitigation Measures

Mitigation 4.5-1

Future development proposals subject to environmental review pursuant to the California Environmental Quality Act (CEQA) are subject to the following provisions at the expense of the project proponent, as directed by the Development Services Director.

Paleontological Assessment. In areas containing middle to late Pleistocene era sediments (Qof) where it is unknown if paleontological resources exist, prior to grading an assessment shall be made by a qualified paleontological professional to establish the need for paleontologic monitoring. Should paleontological monitoring be required after recommendation by the professional paleontologist and approval by the Development Services Director, paleontological monitoring shall be implemented.

Paleontological Monitoring. A project that requires grading plans and is located in an area of known fossil occurrence or that has been demonstrated to have fossils present in a paleontological field survey or other appropriate assessment shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially fossilferous units described for the property in question are not present or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources. Should significant paleontological resources be discovered, paleontological recovery, identification, and curation shall be implemented.

Paleontological Recovery, Identification, and Curation. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum or a similar established, accredited museum repository with permanent retrievable paleontologic storage. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. This measure is not considered complete until curation into an established museum repository has been fully completed and documented.

Paleontological Findings. Qualified paleontologic personnel shall prepare a report of findings with an appendix itemized of specimens subsequent to implementation of paleontological recovery, identification, and curation. A preliminary report shall be submitted to and approved by the Development Services Director before granting of building permits, and a final report shall be submitted to and approved by the Development Services Director before granting of occupancy permits.

Level of Impact with Mitigation Incorporated

Impact 4.5.C will be less than significant with mitigation incorporated. All other impacts will be less than significant with implementation of existing policies and regulations and require no mitigation.

The geology and soils analysis is based, in part, on:

- United States Geological Survey 2003 Open-File Report 03-293 entitled Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle, California,
- San Bernardino County General Plan,
- Natural Resources Conservation Service Web Soil Survey, US Department of Agriculture, Natural Resources Conservation Service (NRCS),
- United States Geological Service,
- California Geological Survey, and
- Publicly available resources from other agencies, organizations, and educational institutions.

No comments related to geology and soils were submitted during circulation of the Notice of Preparation.

Existing Conditions

Topography

Most of Colton is generally flat, with a gentle one percent slope from northwest to southeast. Exhibit 4.6-1 (Topographic Map) shows the northwest's elevation to be approximately 1,100 feet above mean sea level (AMSL), while the southeast (before reaching the Box Springs Mountains) is approximately 1,000 feet AMSL. However, portions of the City are characterized by undulating hills and slopes associated with the La Loma Hills, Slover Mountain, and Box Springs Mountains. The highest point (2,428 feet AMSL) is Blue Mountain, a part of the Box Springs Mountains in the Reche Canyon area. This area is one of the steepest within the City, with some grades exceeding 40 percent. The La Loma Hills, to the southeast, are also characterized by steep slope areas (i.e., slopes in excess of 20 percent). Slover Mountain (located within the Sphere of Influence) is part of an active aggregate mining operation with terraced slopes ranging from generally flat to steep.

Geologic Units

The majority of the planning area is covered by sediment deposited as alluvial fans emanating from the San Gabriel Mountains (part of the Transverse Ranges). The La Loma Hills and Box Springs Mountains in the southern portion of the planning area are examples of the limited surface exposure Peninsular Ranges Provinces. The Peninsular Ranges are a north-south trending mountain range extending from Southern California into Mexico. The Peninsular Ranges basement rock assemblage underlies the vast majority of the planning area; specifically, all areas west of the San Jacinto Fault Zone. The Peninsular Ranges assemblage is made up of the Peninsular Ranges batholiths and a variety of metasedimentary rocks. A batholith is a large formation of igneous rock (rocks formed from magma). Mesozoic and older metamorphic rocks are found in the Jurupa Mountains and Slover Hill areas.

The Box Springs Mountains, La Loma Hills, and Slover Mountain represent instances of plutonic rock within the assemblage. Plutonic rocks are igneous rocks that form below the surface, unlike volcanic rocks that form above the surface. The remainder of the City generally consists of Holocene and late Pleistocene alluvial fan complexes extending from Lytle Creek. The general distribution of geologic units (including surficial deposits and assemblages) within the planning area is shown on the Exhibit 4.6-2 (Geologic Units). Information on specific geologic units can be found in the 2003 *Preliminary Geologic Map of the San Bernardino County 30' x 60' Quadrangle, California*.

Soils

The National Cooperative Soil Survey provides soil type descriptions, spatial distribution, physical, chemical and drainage properties, and related development limitations. Soils characteristics are based on observations of slope, length, drainage patterns, floral activity, and bedrock types. Soils profiles note color, texture, size and shape of aggregates, amount and type of rock fragments, plant root distribution, reaction, and other identifying features. The complete Soil Survey for the Colton Planning Area can be reviewed online on the NRCS Web Soil Survey website (websoilsurvey.nrcs.usda.gov) and mapped on Exhibit 4.6-3 (Soils).[1] [2]

The NRCS Soil Survey identifies a variety of soil characteristics that may effect development. The soil characteristics include development limitations for typical land uses such as single-family residences or dwellings, commercial structures, trenching, and roadways. Definitions of each of these land uses, as defined by the Soil Survey, are provided herein. The Soil Survey does not provide limiting factors for larger uses such as heavy industrial or public institutions; however, it can be assumed that limitations effecting small commercial structures would be applicable to larger structures as well.

Dwellings: For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of two feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about seven feet. Limitations on residential structures are based on the ability of the soil to support the building load without movement and properties that affect excavation and construction costs. Load supporting properties are affected by flooding, depth to saturation, and shrink-swell potential. Depth to bedrock and the other factors also impact excavation.

Small Commercial: A small commercial building is defined as a structure less than three stories high and without a basement. Foundations are assumed to consist of spread footings of reinforced concrete built on undisturbed soil of two feet or at a depth of maximum frost penetration, whichever is deeper. Limitations on small commercial structures are based on the ability of the soil to support the building load without movement and properties that affect excavation and construction costs. Load supporting properties are affected by flooding, depth to saturation, and

shrink-swell potential. Depth to bedrock and the other factors also impact excavation.

Trenching: Known as *shallow excavations*, this land use represents trenches and holes dug to a maximum depth of five to six feet for such purposes as graves, utility lines, and open ditches. Limitations on shallow excavations are based on the ease of digging and the resistance to sloughing. The depth of bedrock or cemented pan, and soil density influence the ease of digging, filling, and compacting. Slope influences the ease of machinery use.

Roads: Roads are defined by having a subgrade of cut or fill soil materials, a base of gravel, crushed rock, or soil material stabilized by lime or cement, and a surface of flexible material (i.e. asphalt), rigid material (i.e. concrete), or gravel with a binder. Limitations affecting roadways and streets are based on ease of excavation and grading and the traffic-supporting capacity of the soil. Ease of excavation and grading are impacted by depth to bedrock or cemented pan, depth to saturation, flooding, and slope. Traffic supporting capacity is affected by soil strength, shrink-swell potential, potential frost action, and depth to saturation.

Limitations that can affect the ease of construction or post-construction performance of a building within the planning area include corrosivity, slope, depth of bedrock or cemented pan, flooding, shrink-swell potential, caving potential, subsurface saturation, frost action, strength, and bulk density. Limitations that have not been discussed above are summarized below.

Bulk Density: Soils horizons with low bulk densities have low strength and could be subject to collapse if wetted to field capacity or above. Foundations constructed on soils with low bulk densities may require special designs.

Corrosion: Corrosion to uncoated steel and concrete is based on a number of soil properties including drainage class, soil texture, pH and other chemical components. Corrosion of steel results in dissolving and weakening of the structure, thereby impacting underground utilities. Concrete corrosion impacts foundations and other surface concrete applications.

Linear Extendibility: Linear extendibility, or shrink and swell, is the expression of the volume difference of natural soil between saturated and dry soils. Moderate to very high shrinking and swelling can damage buildings, roads, and other structures. A high degree of shrinkage can also damage plant roots.

Geologic Hazards

Earthquake Hazards

The outer layer of the Earth (lithosphere) acts as a rigid shell located on the asthenosphere, a hot, highly viscous, plastic-like layer. The lithosphere is fractured and divided into a number of sections called *plates* that are constantly moving over the asthenosphere. In areas where plates are moving apart, the asthenosphere rises and spreads, creating a new lithosphere. As the new lithosphere cools, it becomes rigid and eventually subducts under an adjacent plate, creating deep oceanic trenches. It is near these trenches, where plates are pushing together, that most continental mountain ranges form. Plate tectonics forms the basis for earthquakes and surface ruptures that impact Southern California.[3]

Faulting and Fault Hazards

Where two plates meet, the plates are deformed by stresses within the Earth. The ground bends and upon reaching a certain limit, beaks and snaps into a new position, known as faulting. The vibrations that occur from the faulting process are known as earthquakes. In California, the most prominent fault is the San Andreas, located at the boundary between the Pacific Plate (to the west) and the North American Plate (to the east). The San Andreas is the main fault in a series of faults spanning over 800 miles and extending at least 10 miles into the Earth.[4]

The San Jacinto Fault Zone is a major branch of the San Andreas Fault System and extends in a northwest to southeast direction through the City of Colton. The San Jacinto Fault Zone is the most active fault zone in Southern California and includes the Rialto-Colton Fault. The San Jacinto Fault Zone consists of a series of short en echelon (45 degree trending fault blocks) faults. Many of these faults show surface features such as scarps and offset drainages that are indicators of recent ground rupture. Significant earthquakes include a magnitude 6.7 in 1899 near San Jacinto that resulted in surface rupture along an estimated two miles of the fault and a magnitude 6.8 in 1918 also near San Jacinto.[5]

Ground surface rupture associated with the movement of an active or potentially active fault poses a serious risk to ground level and below-ground structures, pipelines, and building occupants. To help prevent damage or destruction of human occupied buildings due to fault rupture, the Alquist-Priolo Earthquake Fault Zoning Act generally prohibits the location of most structures for human occupancy across the traces of active faults.

The State Geologist is charged with mapping *active faults* and *potentially active faults*. An *active fault* is defined as one that has had surface displacement within the Holocene period (within the last 11,000 years). The San Jacinto Fault system is considered an *active fault*; therefore, the potential exists for surface rupture on and near this system. Exhibit 4.6-4 (Geologic Hazards) shows fault locations within the planning area. Additional information related to the Alquist-Priolo Earthquake Fault

Zoning Map is provided under the *Planning and Regulatory Framework* section below.[6] [7]

Strong Groundshaking

The entire planning area lies within a seismically active region and is subject to strong groundshaking from earthquakes generated along one or more of the several regional faults listed in Table 4.6-8 (Potential Seismic Sources).[8] Strong ground shaking is considered to be the most pervasive and potentially dangerous geologic hazard in the planning area due to its widespread impact and sometimes devastating destruction of structures and critical infrastructure. The estimated maximum magnitudes listed in Table 4.6-8 are values associated with the Richter Scale that measures the amount of energy released by an earthquake. Each increase in magnitude represents a ten fold increase in the total energy of the earthquake.

Table 4.6-8
Potential Seismic Sources

Fault	Estimated Maximum Magnitude	Location from Planning Area (Miles, Direction)
Crafton Hills	6.5	12.5 East
Cucamonga	6.9	11 Northwest
Mill Creek	7.3	14 Northeast
Rialto-Colton	6.5	0.0
San Andreas	7.5	8 North
San Jacinto	6.7	0.0

Source: San Bernardino County. General Plan Safety Element Background Report. 2005

Ground Failure and Deformation

Various types of ground failure can occur as a result of earthquake shaking; some of the ground failures can cause substantial damage to the built environment. Ground failure types include settlement, collapse, subsidence, expansion, liquefaction, and slope failure. The most destructive are liquefaction and slope failure. Areas prone to liquefaction and other ground deformation hazards are illustrated in Exhibit 4.6-4 (Geologic Hazards).

Liquefaction

Liquefaction may occur in areas where relatively loose, sandy soils mix with high groundwater levels (less than 50 feet) during long duration, high seismic groundshaking. Earthquakes can cause water pressure to increase in loose sediments, leading to the sediments losing strength and behaving like a liquid. A variety of ground deformation can occur as a result of liquefaction, leading to structural and infrastructure damage. Typical effects of liquefaction include:[9]

- Loss of Bearing Strength: The ground liquefies and loses its ability to support structures.

- Lateral Spreading: The ground slides down a gentle slope or toward stream banks siting on a buried liquefied layer.
- Sand Boils: Sand-laden water is ejected from a buried liquefied layer and report at the surface to form a sand volcano, generally coinciding with fracturing and settlement of the ground around the boil.
- Flow Failure: The ground moves down a steep slope, generally displacing large amounts of earth and disrupting substantial amounts of internal material.
- Ground Oscillation: Deformation of a surface soil layer riding on a buried liquefied layer.
- Flotation: Light, buried structures such as pipelines and underground storage tanks float to the surface due to the loss of soil density.
- Settlement: Settling of soils due to underlying densification after reconsolidation of liquid ground at the conclusion of groundshaking.

As indicated above, three general conditions need to be met for liquefaction to occur. Strong ground shaking of long duration could occur in the Colton area as a result of an earthquake on any of the several active faults in the region. Large portions of the City (particularly near the Santa Ana River and Lytle Creek) are underlain by young, loose, unconsolidated alluvium, as discussed in the *Geologic Units* section above. Groundwater levels rise significantly on the northeast sides of the San Jacinto and Rialto-Colton Faults due to the restrictive nature of these faults. General liquefaction potential based on these three factors is illustrated in Exhibit 4.6-4 (Geologic Hazards). Note that Exhibit 4.6-4 shows the liquefaction area abruptly ending in the middle of the planning area. This is because liquefaction data for the southwest portion of the City is not available.

Settlement

Seismic settlement occurs when seismic groundshaking causes one type of soil or rock to settle more than another type. Settlement is more likely to occur in areas of alluvium, like that underlying the majority of the planning area. Settling can damage structures and infrastructure by unevenly depressing soils underlying building foundations.[10]

Collapse

Collapsible soils consist of loose, dry, low-density materials that collapse and compact with the addition of water or excessive loading. Such soils are typical in areas of young alluvial fans, debris flow sediments, and aeolian deposits. Collapse occurs when subsurface soils are excessively saturated at levels deeper than those reached by an average rainfall and the clay bonds holding the soil grains together are eliminated. Collapse can result in cracked foundations, floors, and walls. Collapse could occur within the Colton area in any area dominated by young alluvial sediments and could be exacerbated by human activities such as excessive irrigation.[11]

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to subsurface movement of earth materials. More than 80 percent of identified

subsidence in the United States is caused through overdrafting of groundwater. Drainage of organic soils, underground mining, natural compaction, and thawing of permafrost can also cause subsidence. Similar to collapse and settlement, subsidence causes large areas of land to sink, thereby potentially damaging foundations, walls, and floors. No instances of subsidence have been recorded within the planning area.[12]

Expansion

Expansive soil and rock are characterized by the shrinking and swelling of clayey material as the materials dry or become wet. Shale is the most common parent rock[13] associated with expansive soils. This swelling and shrinking places stress on buildings and infrastructure. Problems associated with expansive soils include foundation damage, jammed doors and windows, ruptured pipelines, and heaving and cracking of sidewalks and roads. Soils subject to expansion are illustrated in Exhibit 4.6-4 (Geologic Hazards).

Slope Stability and Landslides

Landslides pose serious risk to human life and property, particularly when considering fast-moving and unexpected debris flows. The general potential for landslides within the planning area is illustrated in Exhibit 4.6-4 (Geologic Hazards).

The California Geological Survey classifies landslides into a two-part designation that defines both the type of material that failed and the type of movement. The failed materials are defined as either rock or soil. Rock is defined as hard or firm bedrock that was intact and in place prior to the slope movement. Soil is defined as unconsolidated or poorly cemented rock or aggregate particles. Soil is further differentiated by its texture as debris (coarse fragments) or earth (fine fragments). Complex slope movements can involve both rock and soil failure and a combination of movements whereas composite failures are representative of one material and one movement. Landslide movements are categorized as falls, topples, spreads, slides, or flows, as follows:[14]

- Fall: Masses of soil or rock that dislodge from steep slopes and free-fall, bounce, roll downslope.
- Topple: Movement by the forward pivoting of a mass around an axis below the displacement mass.
- Spreads: Movement by horizontal extension and shear or tensile fractures (lateral spreads caused by liquefaction are discussed above).
- Slides: Displacement of masses of materials along one or more discrete planes. Rotational sliding rotates backwards and rotates around an axis parallel to the ground surface. Transitional sliding moves parallel to the ground surface.
- Flows: Movement as a deforming, viscous mass without a discrete failure plane.

Topsoil and Erosion

Erosion is the removal of soil and other geologic fragments from the landscape as a result of wind, water, ice. Erosion occurs as a result of three processed:

detachment, entrainment, and transport. Detachment results in a particle losing cohesion with surrounding material via a medium that moves the particle, most commonly wind, water, or ice. Entrainment is the lifting of the particle and transport is the movement of the particle. The process of erosion will eventually end in the deposition of the eroded particle by some factor that reduces the velocity of the particle until it settles.[15]

Erosion can result in a variety of hazards and issues within the planning area. Wind-related erosion and blowsand can cause visibility problems and damage architectural coatings and building material. Erosion due to rain or other fluvial events can deposit sediments in downstream water bodies, potentially changing drainage patterns and effecting biological regimes. Freshly graded soils are most susceptible to erosion. Unpaved roadways and other areas that are not stabilized by vegetation or otherwise capped can also be eroded. There are approximately 3,311 acres of vacant land that at some point in the future may be graded or otherwise disturbed. Erosion can also result in the loss or dispersion of nutrient rich topsoil.

Regulatory Framework

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Special Studies Zones Act was signed into law in 1972 (renamed the Alquist-Priolo Earthquake Fault Zoning Act in 1994). The Act's primary purpose is to mitigate the fault rupture hazard on human life and property by limiting the potential for siting human occupancy structures across an active fault trace.

The Act requires the State Geologist (Chief of the California Geological Survey) to delineate *Earthquake Fault Zones* along faults that are "sufficiently active and well defined." These faults show evidence of Holocene surface displacement along one or more of their segments (sufficiently active) and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface (well defined). The boundary of an *Earthquake Fault Zone* is generally about 500 feet from major active faults, and 200 to 300 feet from well-defined minor faults. The Act dictates that cities and counties withhold development permits for sites within an Earthquake Fault Zone until geologic investigations demonstrate that the sites are not threatened by surface displacements from future faulting.

Alquist-Priolo maps are distributed to all affected cities and counties for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within these zones. Projects include all land divisions and most structures for human occupancy. State law exempts single-family wood-frame and steel-frame dwellings that are less than three stories and are not part of a development of four units or more. However, local agencies can be more restrictive. Applicable faults and boundaries of the State-delineated fault zones are shown on Figure 4.6.4 (Geologic Hazards Map).

Seismic Hazards Mapping Act

The Alquist-Priolo Earthquake Fault Zoning Act addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Recognizing this, in 1990, the State passed the Seismic Hazards Mapping Act (SHMA), which addresses non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction and seismically induced landslides. The California Geological Survey (CGS) is the principal state agency charged with implementing the Act. Pursuant to the SHMA, the CGS is directed to provide local governments with seismic hazard zone maps that identify areas susceptible to liquefaction, earthquake-induced landslides and other ground failures. The goal is to minimize loss of life and property by identifying and mitigating seismic hazards. The seismic hazard zones delineated by the CGS are referred to as "zones of required investigation." Site-specific geological hazard investigations are required by the SHMA when construction projects fall within these areas.

The CGS, pursuant to the 1990 SHMA, has been releasing seismic hazards maps since 1997, with emphasis on the large metropolitan areas of Los Angeles, Orange, and Ventura counties; funding for this program limits the geographic scope of the studies to these three counties in Southern California. As a result, there are no state-issued (and, therefore, official) seismic hazard zone maps for the City of Colton.

California Building Code

The California Building Standards Law states that every local agency enforcing building regulations must adopt the provisions of the California Building Code (CBC) within 180 days of its publication; however, each jurisdiction can require more stringent regulations issued as amendments to the CBC. The publication date of the CBC is established by the California Building Standards Commission and the code is known as Title 24 of the California Code of Regulations. In the past, the CBC was modeled on the Uniform Building Code (UBC); however, beginning with the 2007 version, the CBC is now modeled after the International Building Code (IBC). It should be emphasized that the building codes provide minimum requirements to prevent major structural failure and loss of life. In some cases these requirements may not be adequate, particularly in the areas of faulting and seismology, where the pool of knowledge is rapidly growing and evolving. Consequently, it is important that geotechnical consultants working with the City, as well as reviewers of their work, keep up to date on current research.

The City of Colton adopted the 2010 CBC through Ordinance 0-03-10 on December 21, 2010. The 2010 CBC bases its seismic design criteria on *maximum considered ground motion* through maps prepared by the USGS for the National Seismic Hazard Mapping Program (see Section 1613). Chapter 18 (Soils and Foundations) and Appendix J (Grading) of the 2010 CBC has also been adopted by the City to establish grading and foundation standards. Standards include requirements for excavation, fill, footings, retaining walls, and pier and pile foundations. Pursuant to the CBC, soils reports are required to be submitted prior to issuance of grading permits.

Real Estate Disclosure Act

Since June 1, 1998, the Natural Hazards Disclosure Act has required that sellers of real property and their agents provide prospective buyers with a *Natural Hazard Disclosure Statement* when the property being sold lies within one or more State-mapped hazard areas. If a property is located in a Seismic Hazard Zone as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers. The law specifies two ways that this disclosure can be made. One is to use the Natural Hazards Disclosure Statement as provided in Section 1102.6c of the California Civil Code. The other way is to use the Local Option Real Estate Disclosure Statement as provided in Section 1102.6a of the California Civil Code. The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement only if the Local Option Statement contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement.

Unreinforced Masonry Laws

Enacted in 1986, the Unreinforced Masonry Law (Section 8875 et seq. of the California Government Code) required all cities and counties in Seismic Zone 4 (zones near historically active faults) to identify potentially hazardous unreinforced masonry (URM) buildings in their jurisdictions, establish a URM loss reduction program, and report their progress to the State by 1990. The owners of such buildings were to be notified of the potential earthquake hazard these buildings pose. The City of Colton Municipal Code includes Chapter 15.14 (Seismic Strengthening for Unreinforced Masonry Buildings) to address URM bearing walls within the City. This Chapter requires strengthening of URM bearing walls that the reinforcing steel is less than 25 percent of the minimum required by the building code (100 pounds per linear foot).

San Bernardino County General Plan Safety Element

San Bernardino County's Safety Element, adopted as part of the General Plan in March 2007, provides general information on natural hazards in the Valley Region, including the Colton area. County land use policies and decisions based on natural hazards apply to the SOI. The County's Safety Element includes policies that support public education, expansion of disaster relief programs, and integration of data into planning and implementation programs to protect against natural and man-made hazards, including those from geologic and wind-related origins.

San Bernardino County Development Code

The purpose of the San Bernardino County Development Code is to implement the General Plan by classifying and regulating land uses within the unincorporated areas of the County. Specifically, it provides: (1) standards and guidelines for growth and development; (2) a basis for county-wide planning and construction of public facilities such as water supply and flood control; (3) a means to preserve natural and cultural resources, and (4) measures to promote public safety. The code addresses zoning, permitting, and investigation requirements for areas subject to potential geologic problems; geologic and geotechnical report requirements; and

standards for design and grading of projects. Portions of the code also identify and address areas susceptible to flooding, as well as dust and wind-borne soil erosion.

As established in the Development Code, the County has created Overlay Districts for areas having special physical characteristics that require additional standards and requirements. The County's Geologic Hazard Overlays include earthquake fault zones, liquefaction, and landslides and has been used in the discussion, mapping, and analysis of potential geologic hazards in this document. The County's Geologic Hazard Overlay identifies liquefaction, landslide, and faulting hazards within the planning area.

Colton General Plan Safety Element

The Colton General Plan Safety Element includes standards designed to prevent significant impacts to life and property potentially caused by geologic hazards. The principles, standards, and implementation measures currently adopted in the Safety Element will be applicable to the proposed Land Use, Housing, and Mobility Elements. The following standards are designed to reduce impacts related to geologic hazards:[16]

1. Require geologic studies on proposed developments for human occupancy within areas with identified hazards.
2. Structural design shall be compatible with the local geologic hazard.

Thresholds of Significance

A significant impact could occur if the General Plan Update would:

A. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42).
   2. Strong seismic ground shaking.
   3. Seismic-related ground failure, including liquefaction.
   4. Landslides

B. Result in substantial soil erosion or the loss of topsoil.
C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
D. Be located on expansive soil, as defined in the Uniform Building Code (2006), creating substantial risks to life or property.
E. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Environmental Impact

IMPACT 4.6.A.1

Hazardous impacts to people and structures resulting from the potential rupture of the San Jacinto Fault System will be less than significant with implementation of existing standards adopted in the General Plan Safety Element.

The General Plan Update will not directly subject people or structures to fault rupture hazards because it provides for but does not authorize any specific construction project, development plan, or other land altering activity. Portions of the San Jacinto Fault system's Alquist-Priolo Fault Zone are located on the eastern boundary of the planning area. Development built on or in the near vicinity of these faults could potentially be exposed to a fault rupture risk because this fault system is sufficiently active to produce earthquakes and potentially rupture. The proposed Land Use Element includes residential land use designations within the San Jacinto Fault Zone area. Additionally, the proposed Housing Element identifies vacant parcels within the fault zone as *opportunity sites* for future residential development.

Standard 1 of the existing General Plan Safety Element Geologic Hazards Section requires preparation of geologic studies in support of the objective of avoiding or preventing damage from geologic hazards by assessing the nature, location, and appropriate control measures to mitigate for the hazard. In the case of fault rupture, a geologic study would identify the exact position of the fault on a development site and then establish an appropriate setback to prevent structural damage should the fault rupture. This standard is implemented as part of the City's routine development project review process, pursuant to CEQA, and will avoid placement of buildings within areas potentially exposed to fault rupture hazards. Pursuant to this standard and the City's existing practices, potential impacts would be less than significant.

IMPACT 4.6.A.2

Impacts to life and property resulting from earthquakes will be less than significant with implementation of the City's existing standards and regulations.

The General Plan Update will not directly subject people or structures to earthquake hazards because it will allow for but does not actually create any construction project, development plan, or other land altering activity. Future development within the planning area will subject people and structures to potential earthquake hazards due to the seismically active nature of Southern California. The San Jacinto, San Andreas, Rialto-Colton, Mill Creek, Crafton Hills, and Cucamonga faults have the potential of generating earthquakes of magnitudes ranging from 6.5 to 7.5 on the Richter scale. Strong earthquakes can cause widespread property damage, injury, and loss of life. Secondary impacts include fires and disruption of utilities and service systems.

The City's building plan check and building code compliance procedures include requirements to design structures in accordance with the appropriate ground–shaking design parameters set forth in the CBC. These parameters are based on the seismic setting and potential intensity levels of the earthquake faults most likely to generate significant ground shaking in the planning area. The existing General Plan Safety Element supports this commitment to enforcement of CBC ground-shaking design parameters through Geologic Hazard Standard 2 that requires structural design to be consistent with identified geologic hazards. Continued enforcement of CBC design parameters related to ground shaking and implementation of the existing General Plan Safety Element will reduce potential impacts to less than significant levels.

IMPACT 4.6.A.3

Impacts to life and property resulting from seismically induced liquefaction or settlement will be less than significant with implementation of the City's existing standards and regulations.

The General Plan Update will not directly subject people or structures to seismically induced liquefaction or settlement hazards because it will allow for but does not actually create any construction project, development plan, or other land altering activity.

As discussed under existing conditions, two of the three required factors for liquefaction to occur are prevalent throughout the planning area (the potential for strong ground shaking and loose, unconsolidated sediments). Therefore, the primary concern for liquefaction occurrence revolves around groundwater levels. Liquefaction potential within the planning area is associated with the Santa Ana River and the Reche Canyon Area where groundwater levels are anticipated to be within 50 feet of the surface. The remainder of the planning area's groundwater level exceeds 50 feet from the surface; thus, the planning area generally has a low potential for liquefaction. The majority of the planning area is subject to impacts associated with settlement soils due to the widespread presence of young, unconsolidated alluvial soils.

Geologic Hazard Standard 1 of the existing General Plan Safety Element requires developers to prepared geotechnical studies to identify any liquefaction and other ground failure potential and require appropriate design parameters on a project-by-project basis. Furthermore, soils reports are required under the City-adopted Chapter 18 of the 2010 CBC. Typical design features to prevent impacts associated with liquefaction are ground improvement or foundational design. Ground improvement includes removal and recompaction of low-density soils and removal of excess groundwater. Similarly, over-excavation and soil recompaction is a common method to prevent soil compression impacts. Importing of soils may also be required if soils contain excessive amount of organic material or deleterious objects (such as boulders). Foundation design includes construction of piles to reinforce shallow foundations or construction of subsurface retaining structures.

Implementation of existing standards and regulations will reduce impacts associated with seismically induced liquefaction and settlement to less than significant levels.

IMPACT 4.6.A.4

Impacts to life and property within the La Loma Hills, Box Springs Mountains, and other portions of the planning area related to seismically induced landslides will be less than significant with implementation of existing standards and regulations.

The General Plan Update will not directly subject structures or people to landslide hazards because it will allow for but does not actually create any construction project, development plan, or other land altering activity. As illustrated in Exhibit 4.6-3, the La Loma Hills and the Box Springs Mountain areas are vulnerable to seismically induced slope failure. Other areas of the planning area susceptible to slope failure include Slover Mountain and portions of the Santa Ana River (due to sheer river banks); these are identified in Exhibit 4.6-3.

The City uses Chapter 18 and Appendix J of the 2010 CBC to regulate all grading design and criteria. This includes design criteria for development on slopes and at the toe of slopes The CBC requires soils reports to include slope stability studies that discuss grading procedures, soil design criteria for structures and embankments, and site geology. Stabilization of slopes for development can involve a number of features, including replacing weak portions of a slope with engineered fill, reinforcements such as soil cement, and sub-drainage systems to remove excess water from within the slope. These provisions are designed to minimize risk of slope failure should development be proposed on a hillside. Future development will also be subject to standard environmental review in accordance with CEQA, including preliminary geological studies to identify presence/extent of landslides, pursuant to Geologic Hazard Standard 1 of the existing General Plan Safety Element. Through implementation of adopted environmental and grading standards, impacts associated with landslides will be less than significant.

IMPACT 4.6.B

Impacts related to wind-blown soil erosion and loss of topsoil will be less than significant.

The General Plan Update will not directly result in substantial soil erosion or loss of topsoil because the General Plan Update allows for but does not authorize any construction or land alteration activities. Impacts associated with soil erosion primarily involve air quality (increased fugitive dust) and water quality degradation due to increased sedimentation. For a discussion of air quality related impacts related to erosion, please refer to Section 4.3 (Air Quality). For a discussion of sedimentation, see Section 4.9 (Hydrology and Water Quality). Erosion of topsoil results in the loss of nutrient-rich soils that support the establishment and continuance of vegetation.

Wind-driven erosion can occur where flat, barren surfaces are exposed to high-velocity winds. Existing vacant parcels are not likely to contribute to wind-blown erosion because native vegetation stabilizes soil, preventing it from leaving a site. Developed sites curtail wind-driven erosion by preventing wind from contacting soil, due to the presence of buildings, parking lots, other impervious surfaces, and landscaping, etc. Landscaping stabilizes soil in the same manner that native vegetation does, thereby minimizing wind blown erosion. Wind-blown erosion in the planning area is likely to decrease over the long-term as new development replaces exposed native soil. Impacts associated with wind-blown soil erosion and loss of topsoil will be less than significant.

IMPACT 4.6.C

Impacts related to ground failure will be less than significant with implementation of existing City policies and regulations.

The General Plan Update will not directly subject people or structures to ground failure related hazards because it allows for but does not authorize any construction project, development plan, or other land altering activity.

As discussed in Impact 4.6.A.3 above, the majority of the planning area is subject to impacts associated with settlement and compressible soils due to the widespread presence of young, unconsolidated alluvial soils. Settlement, collapse, and subsidence are all related to the generally loose and dry nature of the planning areas' soils. The lack of clay bonds that support soil strength in unconsolidated soil makes them susceptible to weakness under pressure.

Geologic Hazard Standard 1 of the existing General Plan Safety Element requires developers to conduct geotechnical studies to identify any liquefaction, collapse, subsidence, and other ground failure potential, and requires that appropriate design parameters be implemented on a project-by-project basis (in addition to soils reports required under the City adopted Chapter 18 and Appendix J of the 2010 CBC). Implementation of existing standards and regulations will reduce impacts associated with ground failure to less than significant levels.

The planning area is not likely to be subject to subsidence associated with development due to the lack of clay within the soil, although localized subsidence could occur depending on soil specifics such as variation in grain size. Future development within the planning area, however, will increase the need for groundwater extraction to serve the water consumption needs of the community. Unless this is accomplished in a controlled manner and/or offset through sufficient recharge activities, there could be a potential for ground subsidence due to fluid withdrawal that weakens soil cohesion and leads to collapse (hydroconsolidation).

The Colton Water District Urban Water Management (UWMP) includes programs for the long-term management of area groundwater basins. The primary means of ensuring long-term maintenance of groundwater levels are water conservation programs. Future groundwater recharge facilities may also be needed to ensure

maintenance of groundwater levels. The existing General Plan supports water conservation through use of natural and drought-tolerant vegetation. Implementation of the policies of the Water District and the City are designed to ensure groundwater resources are recharged both through natural and assisted means. Water conservation helps to maintain groundwater levels by reducing the need to extract from them. Implementation of these policies will reduce impacts associated with subsidence by maintaining adequate groundwater levels. Impacts will be less than significant.

IMPACT 4.6.D

Impacts related to expansive soils will be less than significant with implementation of existing City regulations.

The General Plan Update will not directly subject people or structures to hazards associated with expansive soils because it does not authorize any construction project, any development plan, or any other land alteration activities. The majority of the planning area is underlain by granular soils that contain little clay and therefore have a low potential for expansion; however, the Monserate Sandy Loam (2-9 percent) soil type near La Loma Hills are subject to expansion due to their high clay content (see Exhibit 4.6-3). Impacts associated with expansive soils are generally structurally related, including cracked walls and foundations.

Avoiding the development of new structures in areas subject to expansive soils is the best way to avoid any potential impacts. If this is unavoidable, building areas with expansive soils may be pre-saturated to a moisture content and depth specified by the project's soil engineer, thereby pre-swelling the soil prior to constructing the structural foundation or hardscape. This method is often used in conjunction with strengthened foundations that can resist small ground movements without cracking. Adequate surface drainage control is necessary to ensure that soils are not over-saturated in the future.

Soils testing to determine expansive characteristics are required for new development, pursuant to Chapter 18 and Appendix J of the CBC. Mitigation of expansive conditions is also required and must be fully defined in the routine grading permit process. The City will continue to administer these CBC regulations, and any updates thereto, for all new development in the planning area. This ongoing regulatory program will avoid significant impacts involving expansive soils.

IMPACT 4.6.E

No impacts related to soils and septic systems will occur.

The planning area is supported by a fully functioning sewer system. Septic systems are used at limited sites in the planning area. No impact will occur.

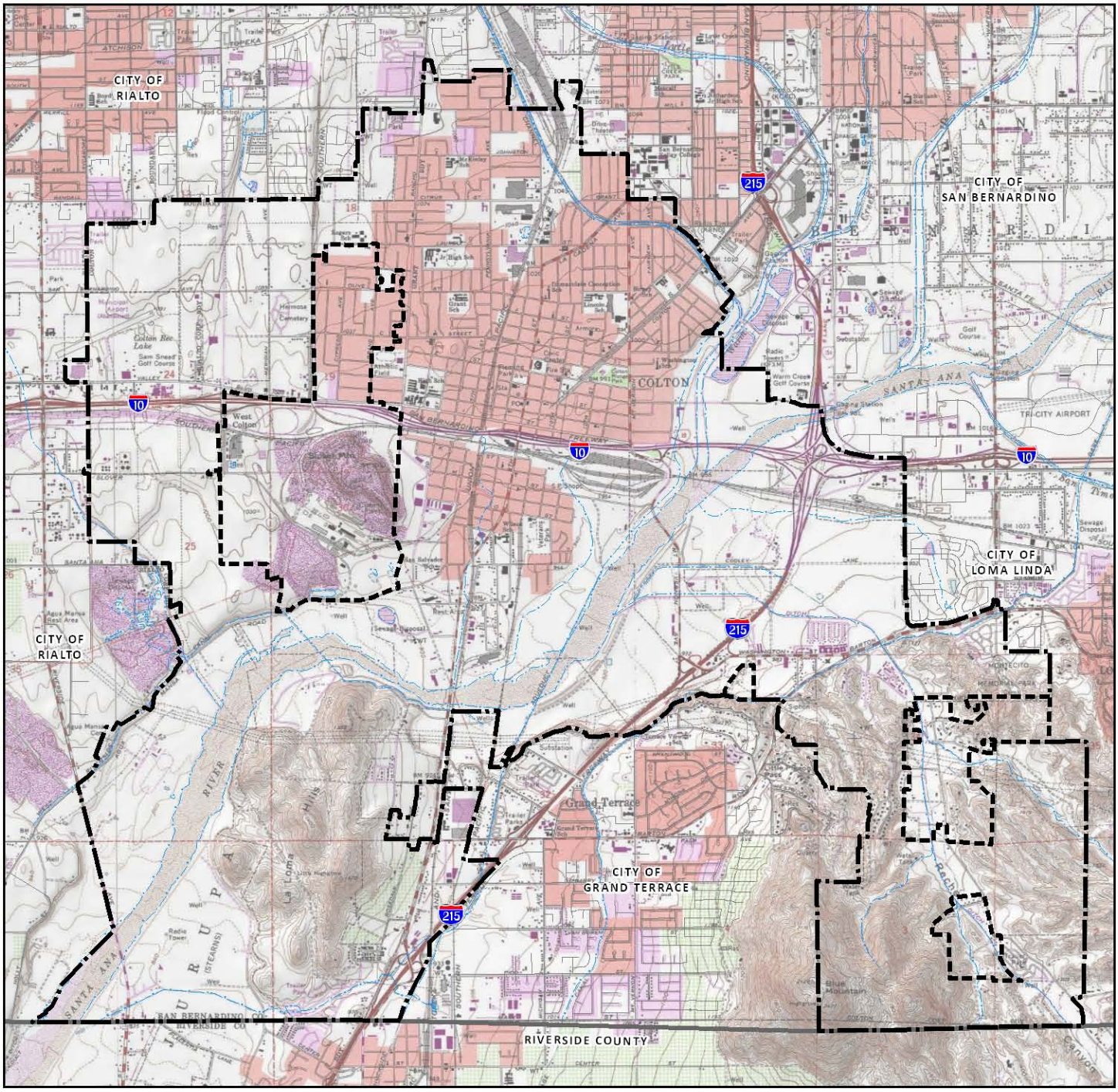
Mitigation Measures

No mitigation is required.

Level of Significance with Mitigation Incorporated

Not applicable.

This Page Intentionally Left Blank



Base Map Features

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Railroad
- Surface Water

USGS Map Legend

BUILDINGS AND RELATED FEATURES	
Building	
School; church	
Built-up Area	
Racetrack	
Airport	
Landing strip	
Well (other than water); windmill	
Tanks	
Covered reservoir	
Gaging station	
Landmark object (feature as labeled)	
Campground; picnic area	
Cemetery: small; large	Cem

Source: United States Geological Survey (USGS), San Bernardino Quadrangle. 15 Minute Series. 1954, revised in 1981.

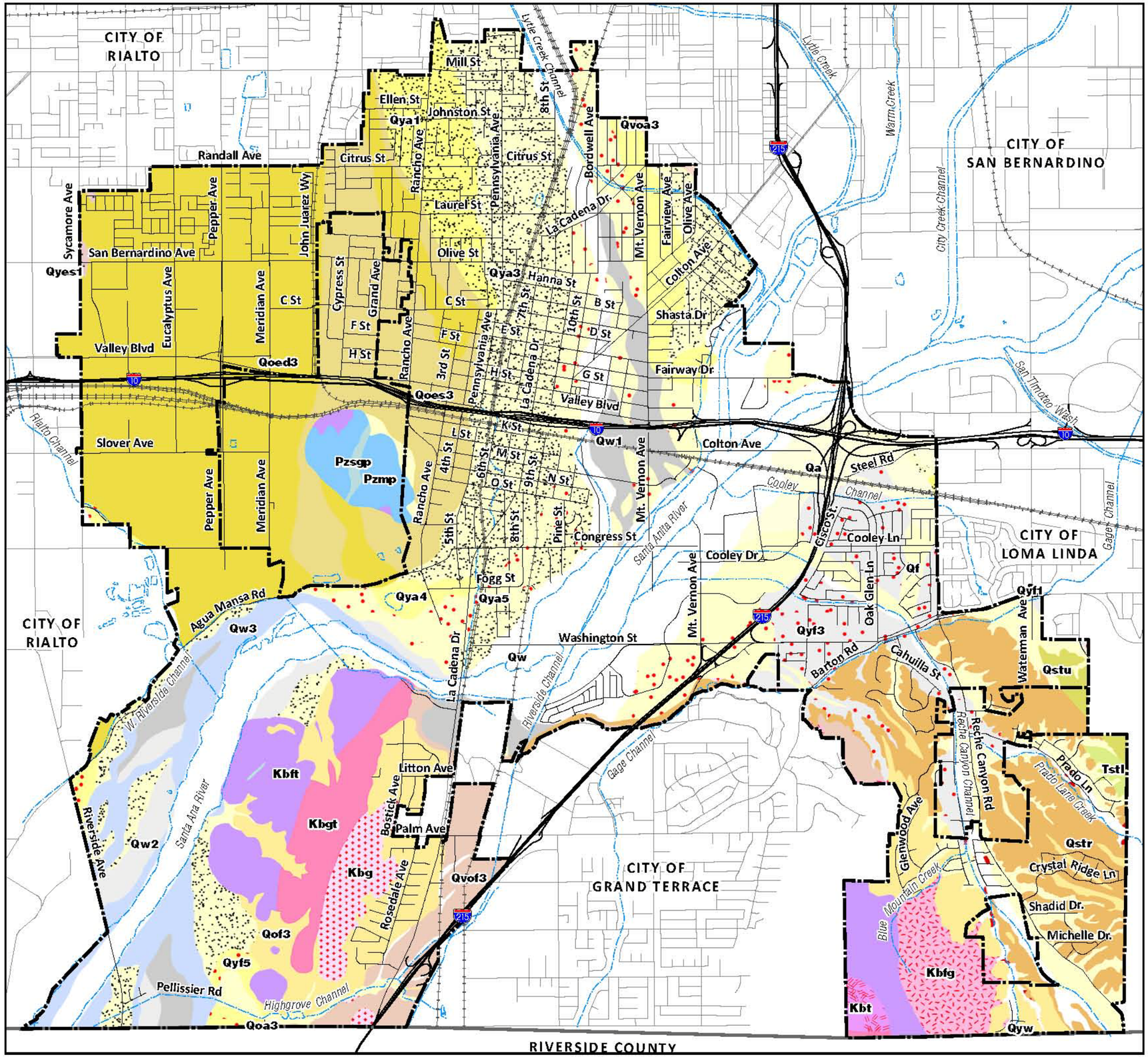
0 0.25 0.5 0.75 1 Mile

Exhibit 4.6-1

Topographic Map

This Page Intentionally Left Blank

Exhibit 4.6-2
Geologic Units



Geologic Units

- Kbfg - Box Springs plutonic complex, biotite granodiorite and tonalite
- Kbft - Box Springs plutonic complex, biotite-hornblende tonalite
- Kbg - Box Springs plutonic complex, porphyritic granodiorite
- Kbgt - Box Springs plutonic complex, heterogeneous granodiorite and tonalite
- Kbt - Box Springs plutonic complex, biotite tonalite
- Pzmp - Marble, Peninsular Ranges
- Pzsgp - Biotite schist and gneiss, Peninsular Ranges
- Qa - Very young axial-channel deposits
- Qf - Very young alluvial-fan deposits
- Qoa3 - Old axial-channel deposits, Unit 3
- Qoed3 - Old eolian deposits (dune sand), Unit 3
- Qoes3 - Old eolian deposits (sheet sand), Unit 3
- Qof3 - Old alluvial-fan deposits, Unit 3
- Qstr - San Timoteo Beds, Reche Canyon member
- Qstu - San Timoteo Beds, upper member
- Qvoa3 - Very old axial-channel deposits, Unit 3
- Qvof3 - Very old alluvial-fan deposits, Unit 3
- Qw - Very young wash deposits
- Qw1 - Very young wash deposits, Unit 1
- Qw2 - Very young wash deposits, Unit 2
- Qw3 - Very young wash deposits, Unit 3
- Qya1 - Young axial-channel deposits, Unit 1
- Qya3 - Young axial-channel deposits, Unit 3
- Qya4 - Young axial-channel deposits, Unit 4
- Qya5 - Young axial-channel deposits, Unit 5
- Qyes1 - Young eolian deposits (sheet sand), Unit 1
- Qyf1 - Young alluvial-fan deposits, Unit 1
- Qyf3 - Young alluvial-fan deposits, Unit 3
- Qyf5 - Young alluvial-fan deposits, Unit 5
- Qyw - Young wash deposits
- Tstl - San Timoteo Beds, lower sandstone member

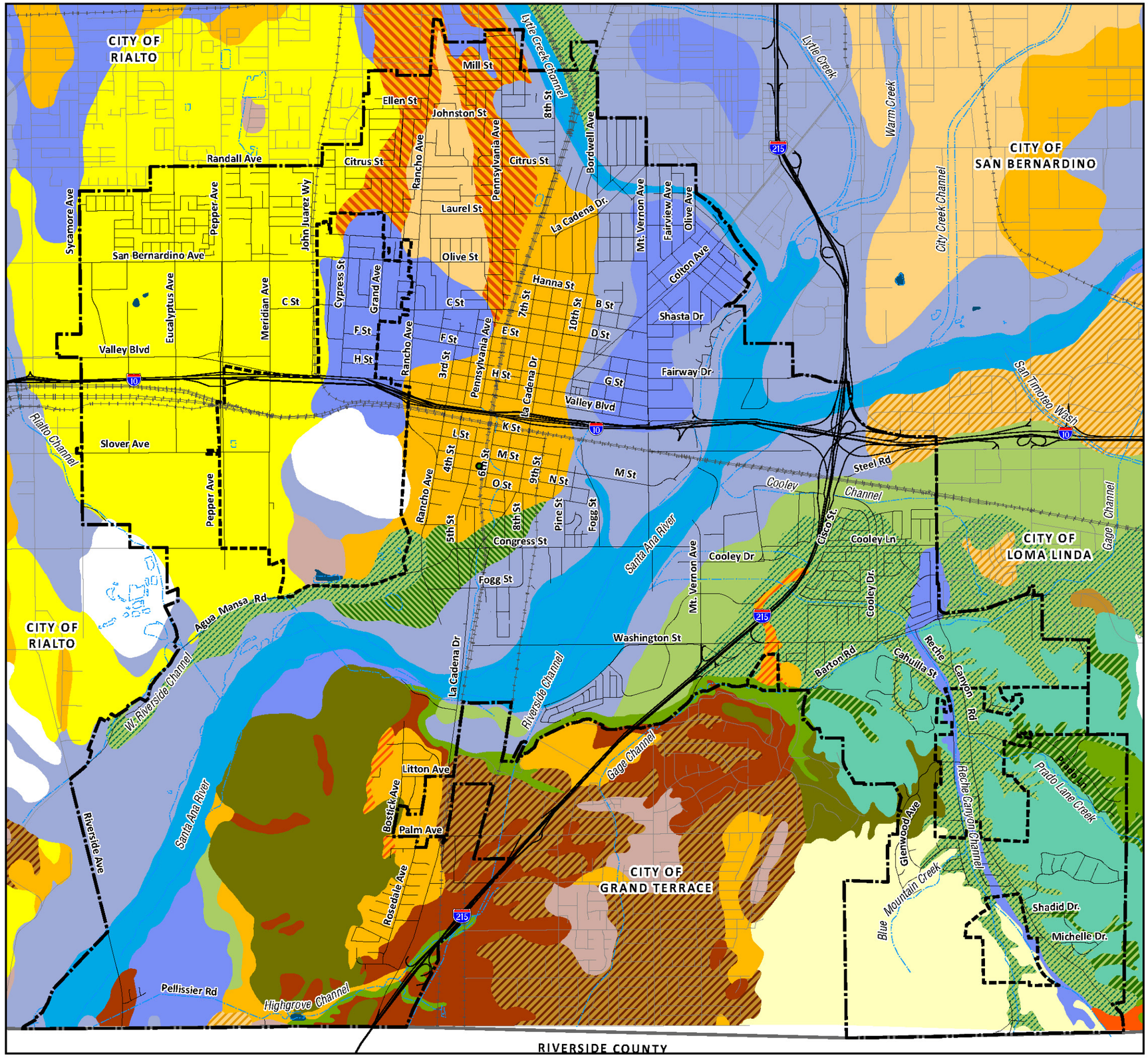
- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroads
- Surface Water

Use constraints:
This is not an official map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For official boundary information, the pertinent Agency or Municipality should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source: Douglas K. Morton and Fred K. Miller, 2006. Map of the San Bernardino and Santa Ana 30'x60 Quadrangles, California. U.S. Geologic Survey, Department of Earth Sciences.

This Page Intentionally Left Blank

Exhibit 4.6-3
Soils



Soil Types

- Cieneba-Rock Outcrop Complex
- Delhi Fine Sand
- Grangeville Fine Sandy Loam
- Grangeville Fine Sandy Loam, Saline-Alkali
- Greenfield Fine Sandy Loam, 9-15%
- Greenfield Sandy Loam, 2-9%
- Hanford Coarse Sandy Loam, 2-9%
- Hanford Coarse Sandy Loam, 9-15%
- Hanford Sandy Loam, 0-2%
- Metz Coarse Sandy Loam, 2-9%
- Monserate Sandy Loam, 2-9%
- Psamments and Fluvents, Frequently Flooded
- Ramona Sandy Loam, 2-9%
- San Emigdio Fine Sandy Loam, 0-2%
- San Emigdio Fine Sandy Loam, 2-9%
- San Emigdio Gravelly Sandy Loam, 2-9%
- San Emigdio Sandy Loam, 9-15%
- San Timoteo Loam, 30-50 %, Eroded
- Saugus Sandy Loam, 30-50%
- Tujunga Gravelly Loamy Sand, 0-9%
- Tujunga Loamy Sand, 0-5%
- Vista-Rock Outcrop Complex
- Water

Base Map

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Surface Water

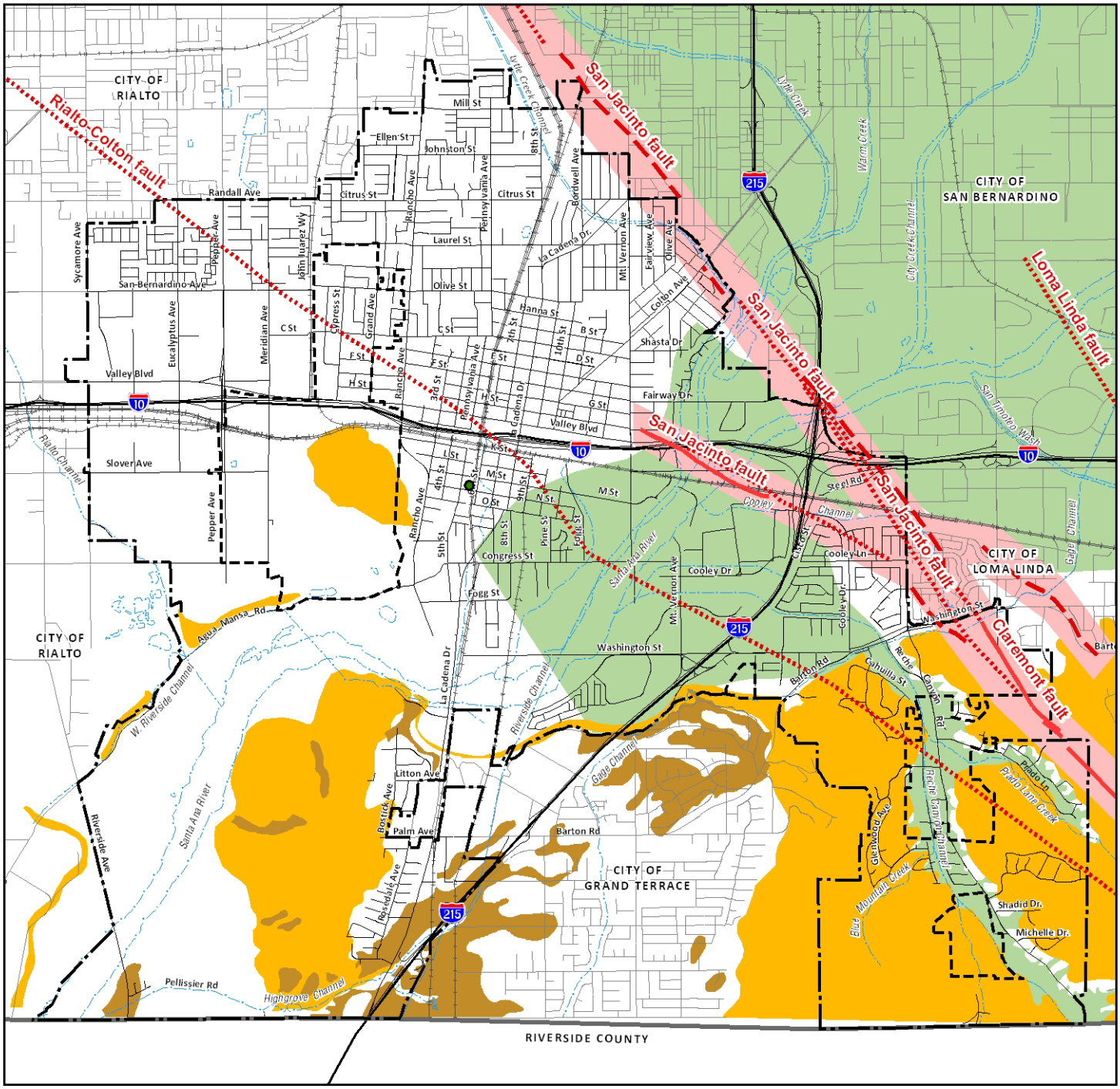
This data set is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey. The information was prepared by digitizing maps, by compiling information onto a planimetric correct base and digitizing, or by revising digitized maps using remotely sensed and other information.

This data set consists of georeferenced digital map data and computerized attribute data. The map data are in a soil survey area extent format and include a detailed, field verified inventory of soils and miscellaneous areas that normally occur in a repeatable pattern on the landscape and that can be cartographically shown at the scale mapped. A special soil features layer (point and line features) is optional. This layer displays the location of features too small to delineate at the mapping scale, but they are large enough and contrasting enough to significantly influence use and management. The soil map units are linked to attributes in the National Soil Information System relational database, which gives the proportionate extent of the component soils and their properties.

Source: U.S. Department of Agriculture, Natural Resources Conservation Services.
Soil Survey Geographic (SSURGO) database for San Bernardino County, Southwestern Part. 2008.

0 0.25 0.5 0.75 1 Miles

This Page Intentionally Left Blank



Potentially Active Faults

- Accurate Location
- Approximate Location
- Inferred Location

Alquist Priolo Zone

Zones of Required Investigation

Earthquake-Induced Landslides

Liquefaction Zones

Expansive Soils

MoC Monserate Sandy Loam, 2-9%

Use constraints:

This is not an official map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For official boundary information, the pertinent Agency or Municipality should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source:

Soils of San Bernardino County Southwestern Part, California, March 16, 2010. Natural Resources Conservation Service, U.S. Department of Agriculture.

Bryant, W.A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0; California Department of Conservation, California Geological Survey (CGS).

Alquist-Priolo Special Study Map, 1977, San Bernardino Quadrangle; California Division of Mines &. Geology (CDMG).

Zones of Required Investigation, 2007. San Bernardino County Land Use, General Plan Geologic Hazards Overlay Map.

0 0.25 0.5 0.75 1 Mile

Exhibit 4.6-4
Geologic Hazards

This Page Intentionally Left Blank

References

[1] Natural Resources Conservation Service. *Custom Soils Report for San Bernardino County Southwestern Part, California: Colton South.* February 24, 2010
[2] Natural Resources Conservation Agency. National Soil Survey Handbook, Title 430-VI. http://soils.usda.gov/technical/handbook/ [February 25, 2010]
[3] Louie, John Ph.D and Anderson, J. University of Nevada, Department of Geological Sciences and Engineering. *Plate Tectonics, the Cause of Earth Quakes.* May 11, 2001
[4] Shulz, Sandra S. and Robert E. Wallace. United States Geological Service. *The San Andreas Fault.* June 24, 1997
[5] Morton, Douglas M. and Fred K. Miller. United States Geological Survey. Open-File Report 03-293. *Preliminary Geologic Map of the San Bernardino 30' x 60' Quadrangle*, California. 2003
[6] Jennings, Charles W. and George J. Saucedo. California Geological Survey. *Simplified Fault Activity Map of California.* 2002
[7] Bryant , William A. and Earl W. Hart. California Geological Survey. Special Publication 42. *Fault-Rupture Hazard Zones in California.* 2007
[8] San Bernardino County. *General Plan. Safety Background Report*. June 15, 2005
[9] United States Geological Survey. *San Francisco Bay Region Geology and Geologic Hazards. About Liquefaction.* geomaps.wr.usgs.gov/sfgeo/liquefaction/aboutliq.html [March 1, 2010]
[10] San Bernardino County. *General Plan. Safety Background Report*. June 15, 2005
[11] Association of Environmental & Engineering Geologists. Geologic Hazards: Expansive and Collapsible Soils. www.aegweb.org/i4a/pages/index.cfm?pageid=4082 [March 1, 2010]
[12] United States Geological Survey. Fact Sheet 165-00. *Land Subsidence in the United States*. December 2000
[13] *Parent rock* is the rock type from which the soil eroded.
[14] California Geological Survey. Landslides. www.consrv.ca.gov/cgs/geologic_hazards/landslides/Pages/Index.aspx [February 26, 2010]
[15] Pidwirny, Michael. University of British Columbia, Okanagan. *Fundamentals of Physical Geography*. 2nd ed. Erosion and Deposition. 2006
[16] City of Colton. General Plan. Safety Element. 1987

Greenhouse Gas Emissions 4.7

This section discusses the existing greenhouse gas setting and analyzes potential effects that could result from implementation of the proposed General Plan Update. The following discussion is based on the *Colton General Plan Update Air Quality & Climate Change Assessment* prepared by Hogle-Ireland, Inc. (Appendix C).

Existing Conditions

Climate Change

Climate change is the distinct change in measures of climate for a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affects the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term *climate change* is preferred over the term *global warming* because *climate change* conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet approximately 60° F warmer than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

Greenhouse Gases

The greenhouse effect is caused by a variety of *greenhouse gases*. Greenhouse gases (GHGs) occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since the year 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity. The primary GHGs are discussed below.[1]

Carbon Dioxide. CO_2 is emitted and removed from the atmosphere naturally. Animal and plant respiration involves the release of carbon dioxide from animals and its absorption by plants in a continuous cycle. The ocean-atmosphere exchange results in the absorption and release of CO_2 at the sea surface. Carbon dioxide is also released from plants during wildfires. Volcanic eruptions release a small amount of CO_2 from the Earth's crust.

Human activities that affect carbon dioxide in the atmosphere include burning of fossil fuels, industrial processes, and product uses. Combustion of fossil fuels is the largest source of carbon dioxide emissions in the United States, accounting for approximately 85 percent of all equivalent emissions. Because of the fossil fuels used, the largest of these sources are electricity generation and transportation. When fossil fuels are burned, the carbon stored in them is released into the atmosphere entirely as CO_2. Emissions from on-site industrial activities also emit carbon dioxide such as cement, metal, and chemical production and use of petroleum produced in plastics, solvents, and lubricants.

Methane. Methane (CH_4) is emitted from human activities and natural sources. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, soils, and wildfires. Human activities that cause methane releases include fossil fuel production, animal digestive processes from farms, manure management, and waste management. It is estimated that 50 percent of global methane emissions are human generated. Wetlands are the

primary producers of methane in the world because the habitat is conducive to bacteria that produce methane during decomposition of organic material. Methane is produced from landfills as solid waste decomposes. Methane is a primary component of natural gas and is emitted during its production, processing, storage, transmission, distribution, and use. Decomposition of organic material in manure stocks or in liquid manure management systems also releases methane. Releases from animal digestive processes at agricultural operations are the primary source of human-related methane emissions.

Nitrous Oxide. Anthropogenic (human) sources of nitrous oxide include agricultural soil management, animal manure management, sewage treatment, combustion of fossil fuels, and production of certain acids. N_2O is produced naturally in soil and water, especially in wet, tropical forests. The primary human-related source of N_2O is agricultural soil management due to use of synthetic nitrogen fertilizers and other techniques to boost nitrogen in soils. Combustion of fossil fuels (mobile and stationary) is the second leading source of nitrous oxide, although parts of the world where catalytic converters are used (such as California) have significantly lower levels than those areas that do not.

High Global Warming Potential Gases. High global warming potential (GWP) gases (or fluorinated gases) are entirely manmade and are mainly used in industrial processes. HFCs, PFCs, and SF_6 are high GWP gases. These types of gases are used in aluminum production, semiconductor manufacturing, electric power transmission, magnesium production and processing, and in the production of hydrochlorofuorocarbon-22 (HCFC-22). High GWP gases are also used as substitutes for ozone-depleting gases like chlorofluorocarbons (CFCs) and halons. Use of high GWP gases as substitutes for ozone-depleting substances is the primary use of these gases in the United States.

Water Vapor. It should be noted that water vapor is also a significant GHG in the atmosphere; however, concentration of water vapor in the air is primarily dependent on air temperature and cannot be influenced by humans.

GHGs behave differently in the atmosphere and contribute to climate change in different ways. Some gases have more potential to reflect infrared heat back towards the earth while some persist in the atmosphere longer than others. To equalize the contribution of GHGs to climate change, the Intergovernmental Panel on Climate Change (IPCC) devised a weighted metric to compare all greenhouse gases to carbon dioxide.[2]

The weighting depends on the lifetime of the gas in the atmosphere and its radiative efficiency. As an example, over a time horizon of 100-years, emissions of nitrous oxide will contribute to climate change 298 times more than the same amount of emissions of carbon dioxide while emissions of HFC-23 would contribute 14,800 times more than the same amount of carbon dioxide. These differences define a gas's GWP. Table 4.7-1 (Global Warming Potential of Greenhouse Gases) identifies the lifetime and GWP of select GHGs. The lifetime of the GHG represents how many years the GHG will persist in the atmosphere. The GWP of the GHG

represents the GHG's relative potential to induce climate change as compared to carbon dioxide.

Carbon Sequestration

Carbon sequestration is the process by which plants absorb CO_2 from the atmosphere and store it in biomass like leaves and grasses. Agricultural lands, forests, and grasslands can all sequester carbon dioxide, or emit it. The key is to determine if the land use is emitting carbon dioxide faster than it is absorbing it. Young, fast-growing trees are particularly good at absorbing more than they release and are known as a *sink*. Agricultural resources often end up being sources of carbon release because of soil management practices. Deforestation contributes to carbon dioxide emissions by removing trees, or carbon sinks, that would otherwise absorb CO_2. Another form of sequestration is geologic sequestration. This is a manmade process that results in the collection and transport of CO_2 from industrial emitters (i.e. power plants) and injecting it into underground reservoirs.

Table 4.7-1
Global Warming Potential (GWP) of Greenhouse Gases (GHG)

GHG	Lifetime (yrs)	GWP
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride	3,200	22,800

Source: IPCC 2007

Climate Change and California

Specific, anticipated impacts to California have been identified in the 2009 California Climate Adaptation Strategy prepared by the California Natural Resources Agency (CNRA) through extensive modeling efforts.[3] General climate changes in California indicate that:

- California is likely to get hotter and drier as climate change occurs with a reduction in winter snow, particularly in the Sierra Nevadas
- Some reduction in precipitation is likely by the middle of the century
- Sea-levels will rise up to an estimated 55 inches
- Extreme events such as heat waves, wildfires, droughts, and floods will increase
- Ecological shifts of habitat and animals are already occurring and will continue to occur

It should be noted that changes are based on the results of several models prepared under different climatic scenarios; therefore, discrepancies occur between the projections. The potential impacts of global climate change in California are detailed below.

Public Health and Welfare

Concerns related to public health and climate change includes higher rates of mortality and morbidity, change in prevalence and spread of disease vectors, decreases in food quality and security, reduced water availability, and increased exposure to pesticides. These concerns are all generally related to increase in ambient outdoor air temperature, particularly in summer.

Higher rates of mortality and morbidity could arise from more frequent heat waves at greater intensities. Health impacts associated with extreme heat events include heat stroke, heat exhaustion, and exacerbation of medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Climate change would result in degradation of air quality promoting the formation of ground-level pollutants, particularly ozone. Degradation of air quality would increase the severity of health impacts from criteria and other air pollutants discussed in Section 4.3 (Air Quality). Temperature increases and increases in carbon dioxide are also expected to increase plant production of pollens, spores, and fungus. Pollens and spores could induce or aggravate allergic rhinitis, asthma, and obstructive pulmonary diseases.

Precipitation projections suggest that California will become drier over the next century due to reduced precipitation and increased evaporation from higher temperatures. These conditions could result in increased occurrences of drought. Surface water reductions will increase the need to pump groundwater, reducing supplies and increasing the potential for land subsidence.

Precipitation changes are also suspected to impact the Sierra snowpack (see *Water Management* herein). Earlier snow melts could coincide with the rainy season and could result in failure of the flood control devices in that region. Flooding can cause property damage and loss of life for those affected. Increased wildfires are also of concern as the State *dries* over time. Wildfires can also cause property damage, loss of life, and injuries to citizens and emergency response services.

Sea-level rises would also threaten human health and welfare. Flood risks will be increased in coastal areas due to strengthened storm surges and greater tidal damage that could result in injury and loss of property and life. Gradual rising of the sea will permanently inundate many coastal areas in the state.

Other concerns related to public health are changes in the range, incidence, and spread of infectious, water-borne, and food-borne diseases. Changes in humidity levels, distribution of surface water, and precipitation changes are all likely to shift or increase the preferred range of disease vectors (i.e. mosquitoes). This could expose more people and animals to potential for vector-borne disease.

Biodiversity and Habitat

Changes in temperature will change the livable ranges of plants and animals throughout the state and cause considerable stress on these species. Species will shift their range if appropriate habitat is available and accessible if they cannot adapt to their new climate. If they do not adapt or shift, they face local extirpation or extinction. As the climate changes, community compositions and interactions will be interrupted and changed. These have substantial implications on the ecosystems in the state. Extreme events will lead to tremendous stress and displacement on affected species. This could make it easier for invasive species to enter new areas, due to their ability to more easily adapt. Precipitation changes would alter stream flow patterns and affect fish populations during their life cycle. Sea level rises could impact fragile wetland and other coastal habitat.

Water Management

Although disagreement among scientists on long-term precipitation patterns in the State has occurred, it is generally accepted by scientists that rising temperatures will impact California's water supply due to changes in the Sierra Nevada snowpack. Currently, the State's water infrastructure is designed to both gather and convey water from melting snow and to serve as a flood control device. Snowpack melts gradually through spring warming into early summer, releasing an average of approximately 15 million acre-feet of water. The State's concern related to climate change is that due to rising temperatures, snowpack melt will begin earlier in the spring and will coincide with the rainy season. The combination of precipitation and snowmelt would overwhelm the current system, requiring tradeoffs between water storage and flood protection to be made. Reduction in reserves from the Sierra Nevada snowpack is troublesome for California and particularly for Southern California. Approximately 75-percent of California's available water supply originates in the northern third of the state while 80 percent of demand occurs in the southern two-thirds. There is also concern is that rising temperatures will result in decreasing volumes from the Colorado River basin. Colorado River water is important to Southern California because it supplies water directly to Metropolitan Water District of Southern California.

Agriculture

California is the most agriculturally productive state in the US resulting in more than 37 billion dollars in revenue in 2008. California is the nation's leading producer of nearly 80 crops and livestock commodities, supplying more than half of the nation's fruit and vegetables and over 90 percent of the nation's production of almonds, apricots, raisin grapes, olives, pistachios, and walnuts. Production of crops is not limited to the Central Valley but also occurs in Southern California. Strawberries and grapes are grown in San Bernardino and Riverside Counties. Orange County and San Diego County also contribute to strawberry production. Cherries are also grown in Los Angeles and Riverside County. Anticipated impacts to agricultural resources are mixed when compared to the potentially increased temperatures, reduced chill hours, and changes in precipitation associated with climate change. For example, wheat, cotton, maize, sunflower, and rice are

anticipated to show declining yields as temperatures rise. Conversely, grapes and almonds would benefit from warming temperatures. Anticipated increases in the number and severity in heat waves would have a negative impact on livestock where heat stress would make livestock more vulnerable to disease, infection and mortality. The projected drying trend and changes in precipitation are a threat to agricultural production in California. Reduced water reliability and changes in weather patterns would impact irrigated farmlands and reduce food security. Furthermore, a drying trend would increase wildfire risk. Overall, agriculture in California is anticipated to suffer due to climate change impacts.

Forestry

Increases in wildfires will substantially impact California's forest resources that are prime targets for wildfires. This can increase public safety risks, property damage, emergency response costs, watershed quality, and habitat fragmentation. Climate change is also predicted to affect the behavior or plant species including seed production, seedling establishment, growth, and vigor due to rising temperatures. Precipitation changes will affect forests due to longer dry periods and moisture deficits and drought conditions that limit seedling and sapling growth. Prolonged drought also weakens trees, making them more susceptible to disease and pest invasion.

Transportation and Energy Infrastructure

Higher temperatures will require increased cooling, raising energy production demand. Higher temperatures also decrease the efficiency of distributing electricity and could lead to more power outages during peak demand. Climate changes would impact the effectiveness of California's transportation infrastructure as extreme weather events damage, destroy, and impair roadways and railways throughout the state causing governmental costs to increase as well as impacts to human life as accidents increase. Other infrastructure costs and potential impacts to life would increase due to the need to upgrade levees and other flood control devices throughout the state. Infrastructure improvement costs related to climate change adaptation are estimated in the tens of billions of dollars.

Greenhouse Gas Emissions within Planning Area

Based on the existing land uses shown in Exhibit 3.0-4 (Existing Land Use Inventory), CalEEMod was utilized to provide a generalized report of existing emissions generated by all uses within the City and its sphere of influence. These emissions are shown in Table 4.7-2 (Existing Annual Greenhouse Gas Emissions).



Table 4.7-2 Existing Annual Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO2	CH4	N2O	TOTAL
Area	13,162	6	0.26	13,374
Energy	149,016	5	2.62	149,940
Mobile	656,175	36	0.00	656,930
Waste	73,641	4,353	0.00	165,035
Water	194,809	1,535	41	239,821
Total	**1,086,803**	**5,935**	**44**	**1,225,100**

Planning and Regulatory Framework

National Level

National Climate Protection Act

The federal government began studying the phenomenon of global warming as early as 1978 with the National Climate Protection Act, 92 Stat. 601, which required the President to establish a program to "assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications."

Global Climate Protection Act

The 1987 Global Climate Protection Act, Title XI of Pub. L. 100-204, directed the U.S. Environmental Protection Agency (EPA) to propose a "coordinated national policy on global climate change," and ordered the Secretary of State to work "through the channels of multilateral diplomacy" to coordinate efforts to address global warming. Further, in 1992, the United States ratified a nonbinding agreement among 154 nations to reduce atmospheric GHGs.

Massachusetts v. EPA

In Massachusetts v. EPA (April 2, 2007), the United States Supreme Court held that GHGs fall within the Clean Air Act's definition of an "air pollutant," and directed the EPA to consider whether GHGs are causing climate change. If so, the EPA must regulate GHG emissions from automobiles under the Clean Air Act.

Clean Air Act

On December 7, 2009, the Administrator of the Environmental Protection Agency (EPA) signed two (2) distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act. The rule declared that GHGs endanger human health and is the first step to regulation through the federal Clean Air Act. The EPA defines air pollution to include the six (6) key GHGs – CO_2, CH_4, N_2O, HFCs, PFCs and SF_6. The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines

contribute to greenhouse gas pollution which threatens public health and welfare. These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.[1]

Corporate Average Fuel Economy (CAFE)

Congress has increased the corporate average fuel economy (CAFE) of the U.S. automotive fleet. In December 2007, President Bush signed a bill raising the minimum average miles per gallon for cars, sport utility vehicles, and light trucks to 35 miles per gallon by 2020. This increase in CAFE standard will create a substantial reduction in GHG emissions from automobiles, which is the largest single emitting GHG sector in California.

State Level

Executive Order S-13-08

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger and established targets for the reduction of greenhouse gas emission at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80 percent beyond that by year 2050. The Order requires the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate with other State departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of CalEPA who reports on the progress of the reduction strategies. The latest CAT *Biennial Report to the Governor and Legislature* was completed in April 2010.[4] CAT also works in 11 subgroups to support development and implementation of the Scoping Plan (see *California Global Warming Solutions Act* herein).

California Global Warming Solutions Act

The California State Legislature adopted the California Global Warming Solutions Act in 2006 (AB32). AB32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and establishes a regulatory timeline to meet the reduction targets. The timeline is as follows:

January 1, 2009	Adopt Scoping Plan
January 1, 2010	Early action measures take effect
January 1, 2011	Adopt GHG reduction measures
January 1, 2012	Reduction measures take effect

[1] http://www.epa.gov/climatechange/endangerment.html

December 31, 2020 Deadline for 2020 reduction target

As part of AB32, CARB had to determine what 1990 GHG emissions levels were and projected a *business-as-usual* (BAU) estimate for 2020 to determine the amount of GHG emissions that will need to be reduced. BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies. 1990 emissions are estimated at 427 million metric tons of carbon dioxide equivalent (MMTCO2E) while 2020 emissions (without implementation of reduction measures, but including economic downturn, Pavley, and Renewables Portfolio of 12-20%) is estimated at 507 MMTCO2E; therefore, California Statewide GHG emissions must be reduced 80 MMTCO2E by 2020, a reduction of approximately 16 percent.

CARB is responsible for implementation of AB32. Nine discrete early action measures; 35 additional measures were adopted in October 2007 and are now enforceable. The discrete early actions include a low carbon fuel standard, landfill methane capture regulations, reductions in HFCs from mobile air conditioning systems, fluorinated gas emissions from semiconductor manufacturing, sulfur hexafluoride from some industrial processes, high GWP gases in consumer products, and emissions from diesel auxiliary engines on ships at California Ports, improved fuel efficiency in heavy-duty diesel vehicles, and new tire pressure regulations. The early action programs form part of California's comprehensive strategy for achieving the GHG reduction targets.

Sustainable Communities and Climate Protection Act

In January 2009, California Senate Bill (SB) 375 went into effect known as the Sustainable Communities and Climate Protection Act.[5] The objective of SB375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB375 tasks ARB to set greenhouse gas reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy (APS) may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In the SCAG region, sub-regions can also elect to prepare their own SCS or APS. In August 2010, CARB released the proposed GHG reduction targets for the MPOs to be adopted in September 2010. The proposed reduction targets for the SCAG region were eight percent by year 2020 and 13 percent by year 2035. The eight percent 2020 target was adopted in September 2010 and tentatively adopted the 13 percent year 2035 target until February 2011 to provide additional time for SCAG, CARB, and other stakeholders to account for additional resources (such as state transportation funds) needed to achieve the proposed targets. In February 2011, the SCAG President affirmed the year 2035 reduction target, and SCAG Staff

updated CARB on additional funding opportunities. The status of funding was requested to be revisited again in year 2014.

On April 4, 2012, SCAG's Regional Council adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future.* The RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375. The RTP/SCS contains a host of improvements to the region's multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to certain parts of the region, as well as the strategic expansion of the transportation system where there is room to grow in order to provide the region with greater mobility. The RTP/SCS demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the CARB. The SCS outlines a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The regional vision of the RTP/SCS maximizes current voluntary local efforts that support the goals of SB 375. The RTP/SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

Air Resources Board Scoping Plan

The CARB Scoping Plan is the comprehensive plan to reach the GHG reduction targets stipulated in AB32. The key elements of the plan are to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners in the Western Climate Initiative (includes seven states in the United States and four territories in Canada), establish transportation-related targets, and establish fees.[6] The Scoping Plan measures are identified in Table 4.7-3 (Scoping Plan Measures). Note that the current early discrete actions are incorporated into these measures. ARB estimates that implementation of these measures will reduce GHG emissions in the state by 136 MMTCO2E by 2020; therefore, implementation of the Scoping Plan will meet the 2020 reduction target of 80 MMTCO2E, which is a reduction of 27 percent compared to the projected business as usual 507 MMTCO2E. Key recommendations of the Scoping Plan to achieve the 2020 target include:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
4. Establish targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;

5. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long term commitment to AB 32 implementation.

In a report prepared on September 23, 2010, CARB indicates that 40 percent of the reduction measures identified in the Scoping Plan have been secured.[7] CARB held the hearing for the cap-and-trade program rulemaking on December 16, 2010. The cap-and-trade program began on January 1, 2012 after CARB completed a series of activities that dealt with the registration process, compliance cycle, and tracking system; however, covered entities will not have an emissions obligation until 2013.[8] ARB recently conducted its first quarterly auction on November 14, 2012 with its next auction scheduled for March 2013. ARB is also currently working on the low carbon fuel standard where public hearings and workshops are currently being conducted. In August 2011, the Scoping Plan was reapproved by CARB with the program's environmental documentation.

Table 4.7-3
Scoping Plan Measures

Measure	Description
T-1	Pavely I and II – Light Duty Vehicle Greenhouse Gas Standards
T-2	Low Carbon Fuel Standard
T-3	Regional Transportation-Related Greenhouse Gas Targets
T-4	Vehicle Efficiency Measures
T-5	Ship Electrification at Ports
T-6	Good Movement Efficiency Measures
T-7	Heavy-Duty Vehicle Aerodynamic Efficiency
T-8	Medium and Heavy-Duty Vehicle Hybridization
T-9	High Speed Rail
E-1	Energy Efficiency (Electricity Demand Reduction)
E-2	Increase Combined Heat and Power Use
E-3	Renewable Portfolio Standard
E-4	Million Solar Roofs
CR-1	Energy Efficiency (Natural Gas Demand Reduction)
CR-2	Solar Water Heating
GB-1	Green Buildings
W-1	Water Use Efficiency
W-2	Water Recycling
W-3	Water System Energy Efficiency
W-4	Reuse Urban Runoff
W-5	Increase Renewable Energy Production
W-6	Public Good Charge (Water)
I-1	Energy Efficiency for Large Industrial Sources
I-2	Oil and Gas Extraction GHG Reductions

Measure	Description
I-3	Oil and Gas Transmission Leak Reductions
I-4	Refinery Flare Recovery Process Improvements
I-5	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Landfill Methane Control
RW-2	Increase Landfill Methane Capture Efficiency
RW-3	Recycling and Zero Waste
F-1	Sustainable Forest Target
H-1	Motor Vehicle Air Conditioning
H-2	Non-Utilities and Non-Semiconductor SF_6 Limits
H-3	Semiconductor Manufacturing PFC Reductions
H-4	Consumer Products High GWP Limits
H-5	High GWP Mobile Source Reductions
H-6	High GWP Stationary Source Reductions
H-7	High GWP Mitigation Fees
A-1	Large Dairy Methane Capture

California Green Building Standards

New California Green Building Standards Code (CALGREEN) went into effect on January 1, 2011.[9] The purpose of the new addition to the California Building Code (CBC) is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using concepts to reduce negative impacts or produce positive impacts on the environment. The CALGREEN regulations cover planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality. Many of the new regulations have the effect of reducing greenhouse gas emissions from the operation of new buildings. Table 4.7-4 (CALGREEN Requirements) summarizes the previous requirements of the CBC and the new requirements of CALGREEN that went into effect in January 2011. Minor technical revisions and additional requirements have gone into effect July 2012.

Table 4.7-4
CALGREEN Requirements

Item		Requirements	
		Previous	CALGREEN
4.1	Stormwater Management	Stormwater management required on projects > than one acre	All projects subject to stormwater management.
	Surface Drainage	Surface water must flow away from building	Drainage patterns must be analyzed
4.2	Energy Efficiency	California Energy Code	Minimum energy efficiency to be established by California Energy Commissions
4.3	Indoor Water Use	HCD maximum flush rates; CEC water use standards for appliances and fixtures	Indoor water use must decrease by at least 20 percent (prescriptive or performance based)
	Multiple Showerheads	Not covered	Multiple showerheads can not exceed combined flow of the code
	Irrigation Controllers	Not covered	Irrigation controllers must be weather or soil moisture based controllers
4.4	Joint Protection	Plumbing and Mechanical Codes	All openings must be sealed with materials that rodents cannot penetrate
	Construction Waste	Local Ordinances	Establishes minimum 50 percent recycling and waste management plan
	Operation	Plumbing Code for gray water systems	Educational materials and manuals must be provided to building occupants and owners to ensure proper equipment operation
4.5	Fireplaces	Local Ordinances	Gas fireplaces must be direct-vent sealed-combustion type; Wood stoves and pellet stoves must meet USEPA Phase II emissions limits
	Mechanical Equipment	Not covered	All ventilation equipment must be sealed from contamination during construction
	VOCs	Local Ordinances	Establishes statewide limits on VOC emissions from adhesives, paints, sealants, and other coatings
	Capillary Break	No prescriptive method of compliance	Establishes minimum requirements for vapor barriers in slab on grade foundations
	Moisture Content	Current mill moisture levels for wall and floor beams is 15-20 percent	Moisture content must be verified prior to enclosure of wall or floor beams
	Whole House Fans	Not covered	Requires insulted louvers and closing mechanism when fan is off
	Bath Exhaust Fans	Not covered	Requires Energy Star compliance and humidistat control
	HVAC Design	Minimal requirements for heat loss, heat gain, and duct systems	Entire system must be designed in respects to the local climate
7	Installer Qualifications	HVAC installers need not be trained	HVAC installers must be trained or certified
	Inspectors	Training only required for structural materials	All inspectors must be trained

Source: HCD 2010

Regional Greenhouse Gas Inventory and Reduction Plan

Along with 20 other cities within San Bernardino County, the City of Colton is working on a Regional Greenhouse Gas Inventory and Reduction Plan. The

Draft EIR is scheduled to be released, along with Public Draft Plan, in January 2013.

Thresholds of Significance

The proposed project could result in potentially significant impacts related to greenhouse gas emissions and global climate change if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.

As a policy document, the proposed General Plan will not directly result in construction or operation of any development that contributes to climate change and associated impacts. However, implementation of the General Plan will guide future development that will generate greenhouse gases and will contribute to climate change. Future development projects will be required to determine if individually they exceed recognized or adopted thresholds that comply with adopted greenhouse gas reduction plans.

A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin (Basin) has not been established by the South Coast Air Quality Management District (SCAQMD). As an interim threshold based on guidance provided in the CAPCOA *CEQA and Climate Change* handbook, the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 metric tons carbon dioxide equivalent (MTCO2E) per year for industrial projects, 3,500 MTCO2E for residential projects, 1,400 MTCO2E for commercial projects, and 3,000 MTCO2E for mixed use projects.[10] This threshold is based on the review of 711 CEQA projects. These thresholds will be utilized for implementing development in the future in determining if emissions of greenhouse gases will be significant, until an officially adopted threshold is established and accepted by the City.

Environmental Impact

IMPACT 4.7.A

Construction emissions of greenhouse gases associated with build-out pursuant to land use policy will be less than significant.

Over the long term, GHG emissions may exceed regional thresholds established as projected population capacity for Colton falls below population growth assumptions in the regional plans. Impacts at the program level are significant and unavoidable.

Development that occurs as a result of the implementation of the proposed General Plan Update will include activities that emit greenhouse gas emissions over the short and long term. While one project could not be said to cause global climate change, individual projects contribute cumulatively to greenhouse gas emissions that result in climate change. Individual projects will have prepared a greenhouse gas emissions inventory, to determine if individual projects exceed applicable screening or impact thresholds and would thus potentially contribute substantially to climate change and associated impacts. A summary of short- and long-term emissions and the analysis for each are included below.

Short-Term Emissions

Future development projects will result in short-term greenhouse gas emissions from construction. Greenhouse gas emissions will be released by equipment used for demolition, grading, paving, and other building construction activities. GHG emissions will also result from worker and vendor trips to and from project sites and from demolition and soil hauling trips. Construction activities are short-term and cease to emit greenhouse gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, SCAQMD recommends in its draft threshold to amortize construction emissions over a 30-year operational lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project GHG inventory.

Typically, construction-related GHG emissions contribute unsubstantially (less than one percent) to a project's annual greenhouse gas emissions inventory and mitigation is not effective in reducing a project's overall contribution to climate change. Proposed General Plan Policy LU-5.6 requires analysis of GHG emissions and potential climate change impacts for future development projects. As previously discussed in Section 4.0 of this report, implementation of AB32 and SB375 through California Air Resources Board's (ARB) Scoping Plan and SCAG's RTP/SCS are designed to achieve the required reduction in greenhouse gas emissions. Analysis of the General Plan's non-interference and support of these plans is presented below. With the proposed General Plan policies to require

analysis of greenhouse gas emissions and cooperation and support of these plans, short-term climate change impacts due to future construction activities will not be significant.

Long-Term Emissions

Future development projects will result in continuous GHG emissions from mobile, area, and operational sources. Mobile sources, including vehicle trips to and from development projects, will result primarily in emissions of CO_2, with minor emissions of CH_4 and N_2O. The most significant GHG emission from natural gas usage will be methane. Electricity usage by future development and indirect usage of electricity for water and wastewater conveyance will result primarily in emissions of carbon dioxide. Disposal of solid waste will result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emission from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas inventory for typical development projects.

Table 4.7-5 (Remaining General Plan Capacity Net Greenhouse Gas Emissions) summarizes the anticipated net operational annual greenhouse gas emissions that would occur from the remaining buildout of the General Plan land use plan. Table 4.7-6 (General Plan Buildout Total Greenhouse Gas Emissions) summarizes the anticipated total operational annual GHG emissions combining the existing and remaining buildout emissions. This represents a worst-case complete build-out pursuant to the General Plan based on the proposed land use plan. Using a two percent annual growth rate as estimated in the latest SCAG growth forecast, new development in the planning area guided by the proposed General Plan Update would generate approximately 24,502 metric tons of carbon dioxide equivalent (MTC2OE) greenhouse gases after the first year of growth and will increase additively as growth occurs over the long term. This volume of GHG emissions will exceed the SCAQMD interim-threshold identified in Section 7.1 for all uses.

It should be noted that the interim thresholds are not intended to be applied to the program-level. However, they do provide a guidepost for comparing incremental increases in emissions guided by the proposed General Plan Update. As previously mentioned, as CARB's Scoping Plan and SCAG's RTP/SCS are the primary tools to achieve the required greenhouse gas reductions, to determine if the proposed General Plan Update could potentially contribute substantially to global climate change, consistency with the Scoping Plan and RTP/SCS and its growth projections is provided below in Section B.

The proposed General Plan Update would be inconsistent with the Scoping Plan and the RTP/SCS based on SCAG's growth projections. Although, the General Plan does incorporate policies that support cooperation with and support of these plans as well as requiring greenhouse gas emission analysis for individual projects. However, with the inconsistency with the RTP/SCS growth projections, the proposed General Plan Update would potentially result in significant impacts related to long-term GHG emissions.

Table 4.7-5
Remaining General Plan Capacity
Net Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO2	CH4	N2O	TOTAL*
Area	3,858	2	0.08	3,921
Energy	78,202	3	1.4	78,687
Mobile	345,458	19	0.00	345,856
Waste	79,017	4,670	0.00	177,083
Water	152,155	1,219	333	187,884
Total	**658,690**	**5,913**	**334**	**793,431**

Table 4.7-6
General Plan Buildout
Total Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO2	CH4	N2O	TOTAL*
Area	17,020	9	0.34	17,294
Energy	227,218	8	4.0	228,628
Mobile	1,001,634	55	0.00	1,002,787
Waste	152,659	9,022	0.00	342,118
Water	346,965	2,754	74	427,704
Total	**1,745,495.82**	**11,848**	**78**	**2,018,531**

IMPACT 4.7.B

The proposed General Plan Update has the potential to conflict with the 2012 SCAG RTP/SCS and CARB Scoping Plan—and thereby not attain GHG reductions targets—because land use policy does not support the same level of population growth projected. Impacts at the program level are significant and unavoidable.

California Air Resources Board Scoping Plan (AB32)

CARB's *Scoping Plan* identifies strategies to reduce California's greenhouse gas emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the General Plan or project-level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project. Finally, while some measures are not directly applicable, the project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. **California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions.** Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.[11] Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. While it is unlikely that a qualifying heavy industrial facility such as these would be located in the City, if one were, it would be subject to these state requirements, and the proposed General Plan Update would not interfere with their implementation.

2. **California Light-Duty Vehicle Greenhouse Gas Standards.** Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals. This is not applicable as this is a statewide measure establishing vehicle emissions standards.

3. **Energy Efficiency.** Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). The General Plan promotes energy efficient building design, as well as implementation of existing building and other codes regulating minimum energy, water, and waste efficiency consistent with 2011 CALGREEN requirements and would thus be consistent and not interfere with this program.

4. **Renewables Portfolio Standards.** Achieve 33 percent renewable energy mix statewide by 2020. This establishes the minimum statewide renewable energy mix and is not applicable at a City level or below for implementation. The proposed General Plan Update would not interfere with the implementation of this program.

5. **Low Carbon Fuel Standard.** Develop and adopt the Low Carbon Fuel Standard. This is not applicable to a City as this establishes reduced carbon intensity of transportation fuels.

6. **Regional Transportation-Related Greenhouse Gas Targets.** Develop regional greenhouse gas emissions reduction targets for passenger vehicles. As is detailed following, the proposed General Plan Update would potentially conflict with and would not support the implementation of SCAG's RTP/SCS to achieve the required GHG reduction goals by 2020 and 2035 based on an inconsistency with growth projections. The

proposed General Plan Update includes policies to reduce vehicle miles traveled by encouraging mixed-use, infill, an improved jobs-housing balance, and alternative modes of transportation.

7. **Vehicle Efficiency Measures.** Implement light-duty vehicle efficiency measures. This is not applicable to a City as this identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.

8. **Goods Movement.** Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While the proposed General Plan Update may result in facilities such as distribution warehouses that are associated with goods movement, these measures are yet to be implemented and will be voluntary. The proposed General Plan Update would not interfere with their eventual implementation.

9. **Million Solar Roofs Program.** Install 3,000 megawatts of solar-electric capacity under California's existing solar programs. Sets goal for use of solar systems throughout the state. The proposed General Plan Update would not interfere with but instead would directly support installation of alternative energy sources through its policies and programs.

10. **Medium- and Heavy-Duty Vehicles.** Adopt medium-duty (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.[12] Future, yet to be determined improvements, includes hybridization of MD and HD trucks. The proposed General Plan Update may result in development of industrial uses that utilize large MD and HD truck fleets. These potential future developments would be required to have their fleet equipment be consistent with the current applicable efficiency measures at the time of operation. The proposed General Plan Update would not interfere with implementation of this program.

11. **Industrial Emissions.** Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries. These measures are applicable to large industrial facilities (> 500,000 MTCO2E/YR) and other intensive uses such as refineries. While it is unlikely that a qualifying heavy industrial facility such as these would be located in the City, if one were, it would be subject to these state

requirements; the proposed General Plan update would not interfere with their implementation.

12. **High Speed Rail.** Support implementation of a high speed rail system. This is not applicable as no high speed rail facilities are planned within Colton.

13. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The General Plan promotes energy efficient building design as well as implementation of existing building and other codes regulating minimum energy, water, and waste efficiency consistent with 2011 CALGREEN requirements and would thus be consistent and not interfere with this program.

14. **High Global Warming Potential Gases.** Adopt measures to reduce high global warming potential gases. The proposed General Plan Update would not directly result in generation of high global warming potential gases, and would not interfere with implementation of any future changes in air conditioning, fire protection suppressant, and other emission requirements.

15. **Recycling and Waste.** Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling to move toward zero-waste. The proposed General Plan Update is consistent since implementing development will be required to recycle a minimum of 50 percent from construction activities and warehouse operations per state requirements.

16. **Sustainable Forests.** Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR. This is not applicable as the City does not contain any areas defined as forest.

17. **Water.** Continue efficiency programs and use cleaner energy sources to move and treat water. The proposed General Plan Update is consistent since implementing development will include use of low-flow fixtures and water efficient landscaping per state requirements.

18. **Agriculture.** In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. The proposed General Plan Update does not contain any agricultural land use designations, and any policies related to agriculture land uses would not be applicable.

As summarized above, the proposed General Plan Update will potentially conflict with Regional Transportation-Related GHG targets, but would not conflict with any of the other provisions of the Scoping Plan. The proposed General Plan Update in

fact supports four of the action categories through energy efficiency, green building, recycling/waste, and water conservation through these proposed and current policies:

Land Use Element

Policy LU-4.2: Facilitate the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar programs in both private and public projects.

Policy LU-4.3: Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements.

Policy LU-5.1: Require the incorporation of energy conservation features into the design of all new construction and site development, as required by State law and local regulations.

Policy LU-5.2: Provide incentives, as funding opportunities become available, for the installation of energy conservation features in existing multi-family residential and commercial developments, including technical assistance and possible low interest loans.

Policy LU-5.3: Educate the public using a variety of outreach channels regarding the need for energy conservation, techniques which can be employed, and systems which are available.

Policy LU-5.4: Support the ongoing efforts of the California Air Resources Board to implement AB32 and SB375, and fully follow any new AB32 and SB375-related regulations.

Policy LU-5.5: Develop and implement greenhouse gas emissions reduction measures, including discrete, early-action greenhouse gas reducing measures that are technologically feasible and cost effective.



Policy LU-5.6: Require detailed air quality and climate change analyses for all applications that have the potential to adversely affect air quality, and incorporate the analyses into applicable CEQA documents. Projects with the potential to generate significant levels of air pollutants and greenhouse gases, such as manufacturing facilities and site development operations, shall be required to incorporate mitigation into their design and operation, and to utilize the most advanced technological methods feasible.

Policy LU-5.7: Work with the South Coast Air Quality Management District and the Southern California Association of Governments to implement the *Air Quality Management Plan* (AQMP) and *Regional Transportation Plan/Sustainable Communities Strategy,* with the objective of meeting federal and state air quality standards for all pollutants. To ensure that new measures can be practically enforced in the region, participate in future amendments and updates of the AQMP.

Policy LU-8.4: Pursue opportunities to locate higher-density residential development near activity centers such as parks and recreation facilities, commercial areas, employment centers, and transit.

Policy LU-10.4: Establish land use patterns and provide pedestrian amenities within the mixed-use districts that minimize the need for vehicle travel among the uses within a district.

Mobility Element

Policy M-1.3: Require all new nonresidential, mixed-use, and large-scale residential development projects, through the development review process, to include public transit, bicycle, and pedestrian facilities.

Policy M-1.5: Minimize vehicle emissions by encouraging land use patterns and multi-modal transportation improvements that reduce the need for automobile trips by making biking, walking, and use of public transit for short trips more convenient and available.

Policy M-2.1: Work with Omnitrans to increase the use of public transit, establish or modify routes, and improve connectivity to regional services that respond to the needs of the Colton community.

Policy M-2.5: Work with Metrolink and the Southern California Regional Rail Authority to establish a Metrolink station in Colton along existing Metrolink rail lines.

Policy M-2.6: Develop and maintain a citywide comprehensive bicycle network of off-street bike paths, on-street bike lanes, and bike streets to provide connections between neighborhoods, schools, parks, civic center/facilities, recreational facilities, and major commercial centers.

Policy M-3.8: Require new developments of more than 100 employees (per building or per tenant/company) to develop Transportation Demand Management programs to minimize automobile trips and to encourage use of transit, ridesharing, bicycling, and walking.

Policy M-7.3: Consult with Caltrans, SCAG, the South Coast Air Quality Management District, SANBAG, Omnitrans, San Bernardino County, Riverside County, and the cities of Rialto, San Bernardino, Loma Linda, Grand Terrace, and Riverside to coordinate regional transportation facilities, and to pursue Federal, State, and regional funds for local and regional traffic improvements.

Housing Element

Policy H-7.1 Promote higher density residential development and mixed-use in Downtown Colton and along and major transit corridors.

Air Quality Element (Current Policies)

Policy 1.5: Advocate and support innovative strategies to improve air quality.

Program 1.5.1: Support new approaches to improving air quality through:

- Supporting legislation;
- Cooperating with regional bodies;
- Establishing pilot programs; and
- Funding and/or participating in private/public partnerships.

Policy 2.1.1: Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips which would otherwise be made.

Policy 2.1.2: Use incentives, regulations and Transportation Demand Management in cooperation with other jurisdictions in the South Coast Air Basin to reduce the vehicle miles traveled for auto trips which still need to be made.



Policy 2.3.1: Cooperate in efforts to expand bus, rail and other forms of transit in the portion of the South Coast Air Basin within San Bernardino.

Policy 2.3.2: Promote expansion of all forms of transit in the urbanized portions of San Bernardino, Orange, Los Angeles, and Riverside Counties.

Policy 2.6.1: Promote state and federal legislation which would improve vehicle/transportation technology and which would establish differential pricing mechanisms to assess the true cost of emissions.

Policy 6.1: Reduce energy consumption through conservation improvements and requirements.

Program 6.1.1: Implement plans and programs to phase in energy conservation improvements through the annual budget process.

Program 6.1.2: Adopt incentives and regulations to enact energy conservation requirements for private development.

Program 6.3.1: Implement provisions of AB 939 and adopt incentives, regulations and procedures to specify local recycling requirements.

Regional Transportation Plan/Sustainable Communities Strategy (SB375)

The 2012 Regional Transportation Plan/Sustainable Communities Strategy and the goals, policies, and programs included within it are projected to obtain and exceed applicable GHG reduction targets of eight percent by 2020 and 13 percent by 2035. Projected reductions by the RTP/SCS are nine percent by 2020 and 16 percent by 2035. Ultimately, the RTP/SCS is keyed to implement the requirements of AB32 at the regional level. For a program-level analysis, if the proposed General Plan Update is consistent with the assumptions of the RTP/SCS, then long-term development within the planning area will meet regional reduction targets. Furthermore, the long-term development would meet the broader statewide reduction goals of 1990 levels by 2020 and 80 percent beyond that by 2050. The proposed General Plan Update would, therefore, not contribute substantially to climate change impacts if it is consistent with the regional and statewide climate change planning efforts.

As assumed in the RTP/SCS, based on current City boundaries, Colton is forecast to grow to a total population of 71,700, with 29,600 jobs, by 2035. The ultimate build-out of the proposed General Plan land use plan can accommodate a total population of 67,182 and total employment of 29,874 within the current incorporated boundaries. Therefore, the proposed General Plan Update is not consistent with the population growth forecasts of the RTP/SCS because it does not provide the capacity for residential development to accommodate the projected population growth. This inability to accommodate the projected population growth

would indirectly generate growth elsewhere in the region and thus could potentially alter transportation plans and models of the RTP/SCS determined to achieve the noted GHG reduction targets.

Over the long term, with each Regional Housing Needs Assessment (RHNA) planning period, the City will be required to update its Housing Element and Land Use plan as necessary to accommodate the growth within each planning period up to 2035. Thus, the General Plan would be anticipated to accommodate the growth through future modifications to the General Plan by accommodating the City's growth for each individual planning period. However, the General Plan as currently proposed is inconsistent with long-term population growth projections which the RTP/SCS is based on to achieve the required greenhouse gas reduction targets.

Despite inconsistencies with growth projections of the RTP/SCS, the proposed General Plan Update will directly support the implementation of the RTP/SCS in achieving mandated GHG reduction targets through its policies noted below oriented towards improvements in the region's multimodal transportation system and coordinating land use patterns around high quality transit corridors as previously described in Section 4.8. These policies are intended to reduce reliance on automobile use and improve the jobs housing balance in more suburban communities to reduce vehicle miles traveled (VMT), thus reducing greenhouse gas emissions. Although the proposed General Plan Update generally supports implementation of the RTP/SCS, since the plan is not strictly consistent with the RTP/SCS, the potential remains that the RTP/SCS may not be properly implemented within the City and result in directing growth elsewhere in the region, thus resulting in the potential for the General Plan Update to substantially contribute to global climate change.

Mitigation Measures

No mitigation beyond continued implementation of the General Plan policies cited in this section is proposed, as the key way to attain consistency with the 2007 and 2012 AQMPs with regard to GHG emissions would be to adjust land use policies to allow for more residential growth in Colton during the planning horizon extending to 2035. This consideration is addressed in Section 5.0 - Alternatives.

Pursuant to proposed General Plan policies, CEQA, and SCAQMD regulations, individual development projects will be required to perform project-specific air quality analyses to determine potential impacts and mitigation measures to ensure individual projects would not result in short- or long-term climate change impacts.

Level of Impact with Mitigation Incorporated

A number of new technologies and fuels will need to be developed, readily available, and widely applied that avoid materials and processes that generate GHGs via building energy consumption and vehicular transportation as proposed by CARB's Scoping Plan. Until that occurs, total GHGs due to growth in the planning

area would be significant. In addition and as indicated previously, due to the General Plan's inconsistency with SCAG's population growth projections for Colton, the potential still remains for an interference with the implementation of SCAG's 2012 RTP/SCS and CARB's Scoping Plan to achieve the required greenhouse gas reductions. Thus, long-term impacts with respect to climate change remain potentially significant and unavoidable.

References

[1] United States Environmental Protection Agency. Greenhouse Gas Emissions. www.epa.gov/climatechange/emissions/index.html [November 14, 2012]
[2] Intergovernmental Panel on Climate Change. Changes in Atmospheric Constituents and in Radiative Forcing (Working Group I). Forth Assessment Report. 2007
[3] California Natural Resources Agency. 2009 California Climate Adaptation Strategy.
[4] California Climate Action Team. Biennial Report. April 2010
[5] Southern California Association of Governments. Senate Bill 3.75 Fact Sheet. www.scag.ca.gov/sb375/factsheets.htm [November 14, 2012]
[6] California Air Resources Board. Climate Change Scoping Plan. December 2008
[7] California Air Resources Board. AB 32 Climate Change, Scoping Plan Progress Report. September 2010
[8] California Air Resources Board. Cap-and-Trade. http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm [November 14, 2012]
[9] California Building Standards Commission. California Code of Regulations Title 24. California Green Building Standards Code. 2010
[10] South Coast Air Quality Management District. CEQA Significance Thresholds Working Group. Meeting # 15, Main Presentation. September 28, 2010
[11] California Air Resources Board. California GHG Emissions – Forecast (2002-2020). October 2010
[12] California Air Resources Board. Scoping Plan Measures Implementation Timeline. October 2010

Hazards and Hazardous Materials 4.8

This section addresses the transportation and handling of hazardous materials and wastes within the planning area and the potential risk of upset. This section also addresses airport and wildfire hazards and emergency response planning. For purposes of searching various agency databases for hazardous materials and waste sites and facilities, both the Colton and the ZIP code 92324 have been used. No comments regarding hazards or hazardous materials were received during circulation of the Notice of Preparation.

Existing Conditions

Defining Hazardous Materials and Wastes

Hazardous materials and wastes are found everywhere. Hazardous materials range from simple household paint to highly toxic industrial chemicals. Hazardous wastes range from used motor oil to post-production manufacturing wastes. The primary difference between hazardous materials and hazardous wastes is that hazardous materials are produced for specific uses whereas hazardous wastes are the byproducts of various processes.

Hazardous materials are classified based on the form of hazard(s) they pose, namely flammable, combustible, poisonous, and/or radioactive. Hazardous wastes are classified by the United States Environmental Protection Agency (EPA) through a listing process. *Listed wastes* are those wastes that the EPA has formally found to be hazardous. *Characteristic wastes* are those that have not formally been listed but exhibit hazardous features. *Universal wastes* are common hazardous wastes that are not industry specific but can be found in many types of land uses. *Mixed waste*s are those that are both hazardous and radioactive. Hazardous wastes are also classified by the type of hazard(s) they pose, similar to hazardous materials. Hazardous wastes may be ignitable, corrosive, reactive, toxic, or radioactive.

Transport of Hazardous Materials and Wastes

The City's current Truck Route Master Plan as adopted in the General Plan Circulation Element identifies higher capacity roadways that can accommodate truck traffic and separate it from residential areas (see Exhibit 4.8-1, Existing Truck Route Master Plan). Currently, residential development is located along all designated truck routes within the planning area; however, residential development is most prevalent along Mill Street, Colton Avenue, the northern length of Mount Vernon Avenue, and the southern leg of La Cadena Drive.[1] While the current Circulation Element designates truck routes, in practice the City Council may modify these routes by ordinance.

Wildland Urban Interface

The southern portion of the planning area (generally defined by the Pellisier Ranch Specific Plan boundaries) has been designated as a *Very High Fire Hazard Severity Zone* through the California Department of Forestry and Fire Protection (CALFIRE) Fire and Resource Assessment Program. Fire hazard zoning is developed through

modeling efforts based on vegetation, topography, weather, crown fire potential, and ember production and movement. Note that *crown fire* denotes fire that advances independently from the surface fire. Fire hazard zoning does not account for risk, which is the measure of potential for damage. Fire hazard mapping is used in building codes for areas located within the Wildland Urban Interface (WUI) and requirements for defensible space clearing. Exhibit 4.8-2 (Wildlfire Hazards) indicates those zones established by CALFIRE.[2]

Public and Private Airports

San Bernardino International Airport is located approximately four miles northeast of the planning area. Rialto Municipal Airport is located approximately six miles to the northwest, and Flabob Airport is located approximately seven miles to the southwest. No portion of the planning area is within the influence area of these airports.

Regulatory Framework

Hazardous Materials and Wastes

CERCLA and Superfund Sites

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), adopted in 1980, was developed to remove contamination of water, air, and land resources from past chemical disposal practices. This Act, also known as the *Superfund Act*, contains a list of sites referred to as Superfund sites. CERCLA collects taxes from the chemical and petroleum industries that are placed in trust funds to clean abandoned or uncontrolled hazardous waste sites. Response actions authorized by CERCLA include short term response that require immediate attention and long term response to sites that hazardous substance release is not immediately life threatening. The United States Environmental Protection Agency (EPA) Superfund Information System currently includes four hazardous or potentially hazardous sites being assessed pursuant to CERCLA (see Table 4.8-1, Superfund Sites, below). The location of Superfund sites and other listed sites are illustrated in Exhibit 4.8-3 (Hazardous Facilities and Sites)[3] [4]



Table 4.8-1
Superfund Sites

Name	Address	Status	Date
Crane Company	330 W Citrus St	Site Reassessment Start Needed	10/02/07
Griffin Wheel Dump	1280 Jefferson St	Site Reassessment Start Needed	10/02/07
KCB Oil	2671 Security Ave	No Further Remedial Action Planned	08/31/09
Colton SLF	850 Tropica Rancho	State-Lead Cleanup	04/12/06

Source: EPA 2010

CERCLIS and the National Priorities List

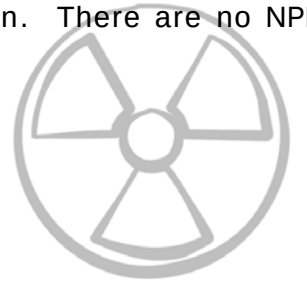
The EPA also maintains the CERCLIS Comprehensive Environmental Response Compensation and Liability Information System list. This list contains sites that are either proposed to be or on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The NPL is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. The HRS uses a structured analysis approach to scoring sites. This approach assigns numerical values to factors that relate to risk based on conditions at the site. The factors are grouped into three categories:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (e.g. toxicity and waste quantity); and
- people or sensitive environments (targets) affected by the release.

Four pathways can be scored under the HRS:

- ground water migration (drinking water);
- surface water migration (drinking water, human food chain, sensitive environments);
- soil exposure (resident population, nearby population, sensitive environments); and
- air migration (population, sensitive environments).

After scores are calculated for one or more pathways, they are combined using a root-mean-square equation to determine the overall site score. Listing on the NPL makes a site eligible for funding of long-term site remediation. There are no NPL sites within the planning area.[5]



RCRA and Hazardous Waste Generators

The Resources Conservation and Recovery Act (RCRA) is a federal law that regulates the generation, management, and transportation of waste material. Hazardous waste management, specifically, includes the following:

- *Treatment:* Any process that changes the physical or chemical composition of the waste to make it less harmful to the environment.
- *Storage:* The holding of hazardous waste for a temporary period of time.
- *Disposal:* The permanent final location of the hazardous waste into or on the land.

RCRA approaches hazardous wastes from a cradle-to-grave approach, meaning that all hazardous wastes are tracked and strictly regulated from generation to disposal. Hazardous waste generators are required to report use or transport of hazardous wastes to the EPA. Hazardous waste generators range from small producers such as dry cleaners and automobile repair facilities to larger producers such as hospitals and manufacturing operations. Specifically, the EPA categorizes Small Quantity Generators (SQG) as those facilities that produce between 100 and 1,000 kilograms (kg) of hazardous waste per month. Facilities producing less than 100 kg of hazardous waste per month are not subject to RCRA. Large Quantity Generators (LQG) produce 1,000 kg or more hazardous waste per month. LQG and SQG facilities are subject to the storage and transportation requirements of RCRA. As of January 27, 2010, 62 active hazardous waste handlers are located in the planning area including three LQG and four hazardous waste transportation facilities. Table 4.8-2 (RCRA Facilities) lists active SQG, LQG, and transporter facilities within the planning area.[6]

Table 4.8-2
RCRA Facilities

Name	Address	Type
4 West 4x4	643 E Valley Blvd	SQG
AZ Bus Sales	1900 Riverside Ave	SQG
American Thermal Guard	388 N 6th ST	SQG
Ashley Furniture	1601 Drivers World Pkwy	SQG
B and G Auto Sales	1630 W Valley Blvd	SQG
Black Diamond Machine & Repair	234 E O St	SQG
Bob Hubbard Horse Trans	12082 Riverside Ave	SQG
Brithinee Electric	620 S Rancho	SQG
Budget Truck Rental	263 E Valley Blvd	SQG
CHJ Materials Laboratory	1355 EW Cooley Dr	SQG
CP Pier MFG	275 Rancho Ave	SQG
California Portland Cement	695 S Rancho Ave	LQG
Carson Ind LLC	1495 N 8th St	SQG
Chevron Station 93537	1241 E Washington St	LQG
Circle K 627	990 Valley Blvd	SQG
City of Colton	344 N 10th St	SQG
Colton City Electric Dept	150 S 10th St	SQG
Colton Refuse Disposal Site	850 Tropica Rancho Rd	SQG

Table 4.8-2
RCRA Facilities

Name	Address	Type
Colton Radiator & Air Conditioning	455 E Valley Blvd	SQG
Colton Truck Terminal Garage	863 E Valley Blvd	SQG
County Club Fleet Body & Paint	1203 S Rancho Ave	SQG
Courtyard Cleaners Baron	1220 E Washington # 2	SQG
Dale Jones Photography	915 W C St	SQG
Del Mar Analytical	1014 E Cooley Dr, Ste A	SQG
Deseret Industries	725 S La Cadena Dr	SQG
Dewey Pest Control	154 Mt Vernon Dr	SQG
Dieterich Intl Trucks	2200 E Steel Rd	SQG
Dunn Edwards Corp	22780 Washington St	SQG
Expo 601	1080 S Mt Vernon	SQG
Gatx Financial Co – Rail Div	20878 Solver Ave	LQG
Golden L Oil Co	850 W C St	Trans
Grace WR & Co	1988 W Valley Blvd	Trans
Hogar Publishing	510 Birch Ct	SQG
Indian Knoll Machine Shop	266 N Valley Blvd	SQG
Inland Empire Toyota	1700 Valley Blvd	SQG
Magic Touch Cleaners	2080 Rancho	SQG
McCleaners	1000 E Washington St	SQG
Miller Honey Co	125 E Laurel	SQG
Mission Printing	795 Via Lata	SQG
Moss Brothers Ford	411 Laurel Ave	SQG
500 S Rancho, Ste F	585 Birch Ct, Unit A	SQG/Trans
Pacific Bell	433 N La Cadena Dr	SQG
Pacific Rail Sale Parcel	785 E M St	SQG
Pacific Tractor and Equip	12151 Riverside	SQG
Chevron Phillips Chemical Co	1280 Jefferson Ln	SQG
Quality Automotive	1321 N Mt Vernon Ave	SQG
Rite Aid 56936	2025 E Washington St	SQG
Royal Cleaners	1616 E Washington St	SQG
Scott Building Materials	2042 Key St	SQG
Shell Service Station	1600 W Valley	SQG
Stater Bros	21700 Barton Rd	SQG
Sud Chemise Performance Packaging	926 S 8th St	SQG
Take-A-Part Auto Wrecking	501 Tropica Rancho	SQG
TCI Burning Service of So Cal	241 W Laurel St	Trans
US Express Ent	2200 S Riverside Ave	SQG
Universal Mack Sales	220 N Rex Ford	SQG
Weyerhaeuser Co	311 W Citrus Ave	SQG
William G Jehue Middle School	1500 N Eucalyptus	SQG
Winston 198	2099 Washington	SQG
World Prophetic Ministry	1099 N Pepper Ave	SQG

Source: EPA 2010

EPCRA and the Toxic Release Inventory

The federal Emergency Planning and Community Right-To-Know Act (EPCRA) was enacted to inform communities and residents of chemical hazards in their area. Businesses are required to report the locations and quantities of chemicals stored on-site to both state and local agencies. This Act requires the Environmental Protection Agency to maintain and publish a list of toxic chemical releases and other waste management activities reported by certain industry groups and federal facilities. This list, known as the Toxic Release Inventory (TRI), gives the community more power to hold companies accountable for their chemical management.

Section 3131 of the EPCRA requires manufacturers to report releases of more than 600 designated toxic chemicals into the air, soil, or water. Off-site transfers of waste for treatment or disposal are also required to be reported.

On-site disposal or release of chemicals include emissions to the air, discharges to bodies of water, disposal at the facility to land, and disposal in underground injection wells. Off-site disposal or release of chemicals is a discharge of a toxic chemical to the environment that occurs as a result of a facility transferring a waste containing a TRI chemical off-site for disposal or other release. Certain other types of transfers are also categorized as off-site disposal or other release because the outcome of transferring the chemical off-site is the same as disposing of it or releasing it on-site.

Facilities required to report, per EPCRA, include industrial uses that manufacture, process, or use significant amounts of chemicals. Reporting must include the types and amounts of chemicals that are released each year into the air, water, and land or transferred off-site. Listing as a TRI facility doesn't necessarily mean that releases are harmful to humans or the environment. As of January 28, 2010, eight TRI facilities were located in the planning area. Summary data have been included in Table 4.8-3 (TRI Facilities).[7]



Table 4.8-3
TRI Facilities

Name	Address	Last Release Date
Ashland Chemical Co	291 W Adams St	06/16/99
California Portland Cement	695 S Rancho Ave	06/20/09
Carson IND LLC	1495 N 8th St	05/27/05
Chevron Phillips Chemical	1280 Jefferson Ln	06/25/03
Conagra Foods	2020 E Steel Rd	06/30/09
McNeilus Truck and Manufacturing	401 N Pepper Ave	06/29/09
Pressteel Co	345 W H St	07/31/88
Elementis Pigments	330 W Citrus St, Ste 100	06/23/08

Source: EPA 2010

Cortese List

The provisions in California Government Code Section 65962.5 are commonly referred to as the *Cortese List*. The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the CEQA. As this statute was enacted over 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and in some cases the information to be included in the Cortese List does not exist. Those agencies and tracking activities that still exist are detailed below.

Hazardous Waste and Substances Sites and Facilities

The California Department of Toxic Substances (DTSC) is charged with reporting of hazardous waste facilities, hazardous waste sites, and hazardous waste disposal on public lands. A hazardous waste facility processes and disposes of hazardous wastes. A hazardous waste site is a contaminated site requiring monitoring and cleanup. According to DTSC, there are no hazardous waste and substance sites within the planning area.[8]

Site Cleanup Programs

SWRCB is also required to report site contamination. The primary difference between DTSC and SWRCB site reporting is that DTSC reports pursuant to the Health and Safety Code while SWRCB reports pursuant to the Water Code. Further distinction is made because DTSC reports specifically on hazardous waste sites while SWRCB reports on hazardous materials and other contaminants that may affect soil and/or water resources. Two active site cleanup programs occur within the City; these are listed in Table 4.8-4 (SWRCB Site Cleanup Programs).[9]

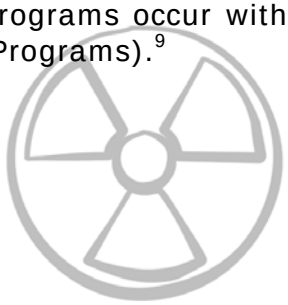


Table 4.8-4
SWRCB Site Cleanup Programs

Name	Address	Affected Media	Contaminants
Aristech	291 W Adams St	Groundwater	Solvents
Santa Fe Pacific Pipeline	2720 Slover	None Specified	None Specified

Source: SWRCB 2010

Leaking Underground Storage Tanks

SWRCB is required to report on all leaking underground storage tanks (LUSTs). The most common type of LUSTs are leaking underground fuel tanks (LUFTs). There are currently three active LUST assessments in progress within the City, as summarized in Table 4.8-5 (Leaking Underground Storage Tanks).[10]

Table 4.8-5
Leaking Underground Storage Tanks

Name	Address	Affected Media	Contaminants
Arco 1569	792 W Valley Blvd	Aquifer	Gasoline
Beacon Truck Stop*	2300 Steel Road	Aquifer Groundwater Soil	Diesel Gasoline
Shell Station	2718 Iowa Ave	Aquifer	Fuel Oxygenates Gasoline TAME TBA

Source: SWRCB 2010
* AKA Terminal Stations (T0607100134)

Solid Waste Disposal Sites

The SWRCB is charged with reporting on solid waste disposal facilities that are resulting in the migration of hazardous substances from the site. According to the SWRCB GeoTracker database, Colton Sanitary Landfill has actively been monitored since 1965; however, no site history or contaminant information is available.[11]

Active Water Board Orders

The Santa Ana RWQCB is required to compile a list of *active* Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) that concern the discharge of wastes that are hazardous materials. The Colton Landfill currently has an "active" CAO last issued by the RWQCB in April 6, 1998.[12]



California Code of Regulations (Title 22)

Title 22 contains all applicable state and federal laws governing hazardous wastes in the State. Title 22 is more stringent and broader in its coverage of wastes than Federal law. Title 26 deals with toxic-related regulations.

The generation, transport, and disposal of asbestos and asbestos-containing materials are regulated under Title 22 of the California Code of Regulations. (Toxic Fact) Asbestos is a fibrous mineral that was commonly used in household products and building materials prior to the 1980s. When asbestos fibers become airborne and are inhaled, they pose a serious health risk. Exposure to asbestos can lead to varying forms of lung cancer. The primary non-industrial source of asbestos exposure is the demolition or remodeling of buildings that were constructed with asbestos containing materials. Other materials of concern when demolition or remodeling occurs includes lead based paints and mercury containing products.

Hazardous Materials Transportation Act

United States Code part 49, Section 5101 et al. sets the basic statutory requirements for federal hazardous materials transportation law. The law provides the federal government with the authority to designate hazardous materials. Designation may occur for explosive, radioactive, infectious, flammable, combustible, toxic, oxidizing, and corrosive materials as well as compressed gases. The law covers various aspects of hazardous materials transportation, as follows:

- Hazardous materials classification
- Hazard communication
- Packaging requirements
- Operational rules
- Training and security
- Registration

Hazardous Materials Disclosure Program

State and federal law require all businesses handling more than a specified amount of hazardous or extremely hazardous materials to submit a Hazardous Materials Business Plan to the local Certified Unified Program Agency (CUPA). The CUPA for the City of Colton is the San Bernardino County Fire Department, Hazardous Materials Division (SBCFD-HMD).

The SBCFD-HMD requires a business plan to be prepared, submitted, and implemented by any business handling hazardous materials or a mixture containing a hazardous material. These businesses include, but are not limited to:

- All hazardous waste generators, regardless of quantity generated
- Any business that uses, generates, processes, produces, treats, stores, emits, or discharges a hazardous material in quantities at or exceeding:
  - 55 gallons or more of a liquid;
  - 500 pounds or more of a solid; or
  - 200 cubic feet (compressed) of gas at any one time in the course of a year.

- Any business that handles, stores, or uses Category (I) or (II) pesticides, as defined by the Federal Insecticide, Fungicide and Rodenticide Act, regardless of amount
- Any business that handles Department of Transportation Hazard Class 1 explosives

In addition, businesses are required to submit an amendment to their business plan within 30 days of any of the following events:

- A 100 percent or more increase in the quantity of a previously disclosed hazardous material
- Any handling of a previously undisclosed hazardous material subject to inventory requirements:
  - Change of business address;
  - Change of ownership; or
  - Change of business name.

These required business plans are used by responding agencies in the event of a release to allow for a quick and accurate evaluation of each situation. Businesses handling hazardous materials are required to verbally report any release or threatened release if there is a reasonable belief that the release poses a significant present or potential hazard to human health and safety, property, or the environment. In addition, if a release involves a hazardous substance listed in Title 40 of the Code of Federal Regulation in an amount equal to or exceeding the reportable quantity, a notice must be filed with the California Office of Emergency Services within 15 days.

The SBCFD-HMD is responsible for conducting compliance inspections of regulated facilities in San Bernardino County.

Hazardous Waste Control Law

This State statute sets regulations for the handling, transport, and disposal of hazardous waste. California law exceeds federal RCRA regulations by requiring source reduction planning and includes more extensive coverage of activities and wastes.

San Bernardino County Hazardous Materials Response Team

Hazardous materials personnel (in conjunction with City and County firefighters) respond to hazardous materials incidents, assist the County District Attorney in the investigation of environmental crimes, and respond to illegal hazardous waste disposal complaints. Releases of hazardous materials and/or waste occur in San Bernardino County on a daily basis. Most are small and do not pose a public health risk while others are more extensive and can threaten public health, groundwater resources, or cause fires and/or explosions. The over 100 hazardous materials responders receive specialized training in chemistry, hazard analysis, risk assessment, personal protection and safety, and the use of monitoring equipment. The County is devised into three geographic regions for the purpose of deploying

HazMat trained fire service personnel, vehicle, and equipment in close proximity to an incident.

Hazards and Emergency Planning

National Incident Management System (NIMS)

In 2003, the Homeland Security Presidential Directive-5 was issued. It directs the Secretary of Homeland Security to develop and administer National Incident Management System (NIMS). While most emergency situations are handled locally, when there is a major incident, help may be needed from other jurisdictions, the state, and the federal government. The NIMS provides a consistent nationwide template to establish federal, state, tribal and local governments, private sector, and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size or complexity, including acts of catastrophic terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management. The Colton Fire Department ensures consistency with NIMS.

Standardized Emergency Management System

The vast majority of emergencies are mitigated by local agencies with no need for additional assistance. However, when a major incident occurs the first few moments are critical in terms of reducing loss of life and property. First responders must be sufficiently trained to understand the nature and the gravity of the event to minimize the confusion that inevitably follows catastrophic situations. The first responder must then put into motion relevant mitigation plans to further reduce the potential for loss of lives and property damage and to communicate with the public. According to the state's Standardized Emergency Management System (SEMS), local agencies have primary authority regarding rescue and treatment of casualties and making decisions regarding protective actions for the community. This on-scene authority rests with the local emergency services organization and the incident commander.

The SEMS law intent is to improve the coordination of State and local emergency response in California. It requires all California jurisdictions to participate in the establishment of a standardized statewide emergency management system.

Depending on the type of incident, several different agencies and disciplines may be called in to assist with emergency response. Agencies and disciplines that can be expected to be part of an emergency response team include medical, health, fire and rescue, police, public works, and coroner. The challenge is to accomplish the work at hand in the most effective manner while maintaining open lines of communication between the different responding agencies to share and disseminate information, to coordinate efforts.

Emergency response in every California jurisdiction is handled in accordance with SEMS, with individual City agencies and personnel taking on their responsibilities as defined by the City's Emergency Plan. This document describes the different levels

of emergencies, the local emergency management organization, and the specific responsibilities of each participating agency, government office, and City staff. The Colton Fire Department manages the Emergency Operation Center (EOC) during disasters and coordinates other agencies in the implementation of SIMS.

The framework of the SEMS system is the following:

- Incident Command System – a standard response system for all hazards that is based on a concept originally developed in the 1970s for response to wildland fires;
- Multi-Agency Coordination System – coordinated effort between various agencies and disciplines, allowing for effective decision-making, sharing of resources, and prioritizing of incidents;
- Master Mutual Aid Agreement and related systems – agreement between cities, counties and the State to provide services, personnel and facilities when local resources are inadequate to handle an emergency;
- Operational Area Concept – coordination of resources and information at the county level, including political subdivisions within the county; and
- Operational Area Satellite Information System – a satellite-based communications system with a high-frequency radio backup that permits the transfer of information between agencies using the system.

The SEMS law requires the following:

- Jurisdictions must attend training sessions for the emergency management system;
- All agencies must use the system to be eligible for funding for response costs under disaster assistance programs; and
- All agencies must complete after-action reports within 120 days of each declared disaster.

San Bernardino County General Plan Safety Element

The County's General Plan Safety Element includes adopted goals and policies designed to minimize risk from hazardous materials and waste releases and loss and injury from fires. These include Policy S2.3 that requires environmental review for contaminated development sites and Policy S3.3 that minimizes fire hazards posed by expanding development in the WUI through the application of regulations found in the County's Fire Safety Overlay Ordinance.[13]

Colton General Plan Safety Element

The City's General Plan Safety Element includes principles and standards designed to minimize loss due to fires. Standard 1 limits development in high fire hazard areas. Standard 2 defines major arterials and freeways as evacuation routes during emergency situations.[14]

Colton Fire Code

The City has adopted the 2007 California Building Code, including Section 701A et al. that defines specifications for exterior materials and construction methods for

structures located in WUI. These regulations pertain to any new building located within a Local Agency Very High Fire Hazard Severity Zone or within a State Responsible Moderate, High, or Very High Fire Hazard Severity Zone. This Section's purpose is to protect life and property by increasing a building's ability to resist the intrusion of flames or burning embers projected by a vegetation fire. The section's provisions address roofing, exterior walls, decking, and ancillary buildings.

Thresholds of Significance

The General Plan Update could result in significant impacts associated with hazardous materials and/or wastes if:

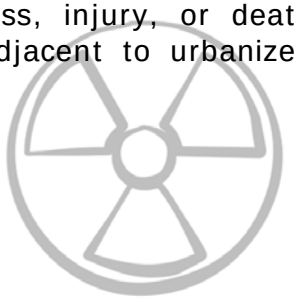
A. A significant hazard to the public or the environment is created through the routine transport, use, or disposal of hazardous materials.
B. A significant hazard to the public or the environment is created through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
C. Hazardous emissions are emitted or hazardous or acutely hazardous materials, substances, or wastes are handled within one-quarter mile of an existing or proposed school.
D. A significant hazard to the public or the environment is created through development of a site that is included on a list of hazardous waste sites compiled pursuant to Government Code Section 65962.5.

The General Plan Update could result in significant impacts associated with air traffic hazards if:

E. People residing or working in the planning area are subject to safety hazards due to the planning area or portions thereof being located within an airport land use plan or within two miles of a public airport or public use airport.
F. People residing or working in the planning area are subject to safety hazards due to the planning area or portions thereof being located within the vicinity of a private airstrip.

The General Plan Update could result in significant impacts associated with emergency response programs or wildfires if:

G. The program impairs implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan.
H. Exposes people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.



Environmental Impacts

IMPACT 4.8.A 4.8.B 4.8.C

The proposed General Plan Update will result in less than significant impacts from the use, transport, and disposal of hazardous materials and wastes.

Although the General Plan Update will not directly result in the use, transport, or disposal of hazardous materials or wastes, hazardous materials and wastes will be routinely transported, used, and disposed of within the planning area, particularly originating from or being delivered to the many industrial businesses in the City. The transport, use, and disposal will range from hazardous materials used for manufacturing processes to common household hazardous wastes (HHW) such as paint and used motor oil. The use, transportation, and disposal of hazardous materials and wastes has varying degrees of risk of upset dependent on the type and quantity of the material or waste. Simple spills of HHWs can result in minor environmental contamination to soil, air, or water. Releases of toxic chemicals from industrial facilities pollute the air and may have immediate and adverse health effects on workers or residents in the vicinity. Releases can occur accidentally or deliberately. A common means of accidental release occurs when a vehicle transporting hazardous wastes or materials is involved in a collision and the wastes are released onto the roadway and surrounding environment.

Large-scale accidents involving the transportation of hazardous materials or wastes can result in extensive clean-up efforts at significant cost. Primary routes within the planning area, where transport of hazardous materials or wastes will typically occur, include Interstates 10 and 215. Also, in south Colton and locations north of Interstate 10 adjacent to active rail lines, residential uses are located next to industrial businesses (as well as the rail lines). Given the proximity of residential and industrial uses next to each other, residents in these areas will experience a higher risk of exposure to potential upset associated with materials transport.

Designated truck routes and other roadways are used to transport materials and wastes from within the City to the freeways. Existing truck routes are identified on Exhibit 4.8-1 (Existing Truck Route Master Plan). Additionally, hazardous materials may be transported via rail on any of the railways transecting the planning area. The proposed Mobility Element Update does not designate specific truck routes but establishes criteria for the City Council to use when designating truck routes by resolution or ordinance. Policy M-5.6 establishes these truck routing performance standards:

- Truck routes must avoid intrusions into residential neighborhoods to limit noise, vibration, and air quality impacts.
- Truck routes will not be provided on Local Streets and on streets with mostly residential frontage.

- Truck routes must be located on roadways that provide direct and convenient access between Major Arterials and freeways (I-10 and I-215) and industrial and commercial businesses.
- Truck routes must be located on roadways with the design and construction capacity to accommodate truck traffic.

Adherence to these performance standards will ensure that transport of hazardous materials is routed away from residential neighborhoods to the maximum extent possible, thus minimizing potential exposure of residents should a roadway transport accident occur.

With regard to rail transport, through the update of the Land Use Policy Map the City has looked to minimize the number of residences to be located in the future adjacent to rail lines. Also, implementation of the Mobility Element will result in the eventual removal of specific spur lines through long-established neighborhoods. Over the long term, these initiatives will reduce number of residents exposed to potential rail accidents involving hazardous materials relative to current conditions.

Siting of future schools is not subject to the City's land use authority; therefore, the proposed General Plan Update would have no effect on the location of future school sites. Future development in proximity to an existing or already planned school site would be subject to City review concerning potential environmental effects, in accordance with the City's routine CEQA compliance procedures. Through the existing planning process, impacts involving manufacture, use, transport, storage, or disposal of hazardous substances and wastes near a school site will be considered. If potentially significant effects are identified, measures to avoid or reduce impacts to less than significant levels would also need to be identified, and the City would be required to make specific findings to document that consideration.

Hazardous materials and wastes are extensively regulated and monitored by state and federal law, as discussed above. The use of hazardous materials is regulated and monitored under EPCRA, RCRA, and the Hazardous Materials Disclosure Program. Transportation of hazardous materials and/or wastes is regulated under RCRA, the Hazardous Materials Transportation Act, Hazardous Wastes Control Law, and California Code of Regulations Title 22. Disposal of hazardous wastes regulated under RCRA, Hazardous Wastes Control Law, and California Code of Regulations (CCR) Title 22. Sections 2729 through 2732 of the (CCR) provide requirements for the reporting, inventory, and release response plans for hazardous materials. These requirements establish procedures and minimum standards for hazardous material plans, inventory reporting and submittal requirements, emergency planning/response, and training. In addition, all regulated substance handlers are required to register with local fire or emergency response departments per the California Accidental Release Prevention Program. Locally, this is overseen by the San Bernardino County Fire Department Hazardous Materials Division. The SBCFD-HMD reviews and approves of an Emergency/Contingency Plan for regulated facilities. The plan outlines precautions and procedures necessary to protect facilities from accidental release of hazardous materials, and provides emergency

remediation to minimize effects should an accidental spill occur. Annual updates and review of the plan are required to ensure compliance and adequacy. The Hazardous Materials Disclosure Program requires notification of potential or known release. The SBCFD-HMD responds to emergency releases under the Hazardous Materials Disclosure Program. Furthermore, releases of hazardous materials or wastes are required to be reported to the California Office of Emergency Services (OES). These existing regulations are adequate safeguards for preventing, responding to and cleaning up accidental releases of hazardous materials and wastes, and further regulation by the City is considered unnecessary. The proposed General Plan Update would not conflict with any of these regulations; therefore, this project would not result in a significant impact involving these hazards.

IMPACT 4.8.D

Impacts to development and persons due to building siting on contaminated properties will be less than significant with mitigation incorporated.

Since the General Plan Update allows for but does not authorize any specific development project or any other land use altering proposal, it would not result in any direct impacts involving a development project on a site known to be contaminated and reported as such under California Government Code 65962.5. The proposed Housing Element identifies opportunity areas for future housing development on both vacant and underutilized properties. The Housing Element Update identifies a developed site (PA20) in the West Valley Specific Plan area that includes religious and industrial office uses. Depending on current or past uses at the industrial building, site contamination may have occurred. The Housing Element also identifies at least three underutilized industrial sites (Sites A, B, and D) that could be redeveloped as mixed-use projects to include high density residential. These properties are currently in operation as light industrial uses. Contamination may occur at these sites depending on past and/or current uses. Sensitive and other land uses could also be proposed on known or currently unknown sites contaminated by hazardous materials. Development on contaminated sites not only poses a threat to persons on the site but also prevents the contamination from being cleaned, allowing it to continue to transport through the soil and eventually to groundwater resources.

To ensure that site contamination is identified during the development review processes, Mitigation Measure 4.8.D-1 has been incorporated. Mitigation Measure 4.8.D-1 requires that site assessments be conducted prior to project approvals to identify any contamination; the measure also sets performance standards for clean-up prior to approval of development or redevelopment projects. This will ensure that as properties within the City are developed and recycled, site contamination is removed and impacts to persons and other resources will be reduced to less than significant levels.

IMPACT 4.8.E 4.8.F

No impacts related to operation of public or private airports could occur.

No private or public airports or airstrips are located within or near the planning area. The planning area is not within the boundaries of an airport influence map or plan. No impact could occur.

IMPACT 4.8.G

The proposed General Plan Update will not interfere with the implementation of the City's emergency response and evacuation procedures.

Impairment of emergency or evacuation procedures can result in increased property damage and/or personal injury by slowing emergency services response times or preventing the public from being able to escape emergency situations. The General Plan Update does not include any proposed changes in the physical organization of the planning area that could interfere with the City's emergency response or evacuation procedures pursuant to NIMS, SEMS, or the City's emergency response plan. Disaster response procedures are designed to be flexible in nature in order to adapt to the volatile and unpredictable nature of disasters and hazards. This flexibility allows for emergency response services and City staff to respond to varying emergencies regardless of location, size, or number of persons affected. No impact will occur.

IMPACT 4.8.H

Impacts due to wildland fires will be less than significant.

The General Plan Update will not directly expose people or property to the threat of wildland fires; however, development allowed for by the General Plan located within La Loma Hills and the Box Springs Mountains may expose persons and structures to wildland fires at the interface between the natural and built environments, constituting a potentially significant impact over the long term. New development could occur in a wildland fire hazard area through approval and implementation of projects in the Pellisier Ranch and Reche Canyon areas. Both areas are classified as Very High Fire Hazard Zones. Impacts associated with wildland fires include property damage and personal injury.

The City has adopted Section 701A of the California Building Code to minimize the potential for property destruction due to wildland fires by requiring materials and construction methods that are fire resistant. The General Plan will not interfere with the implementation of these regulations. Therefore, with the continued enforcement of existing regulations, impacts due to wildland fires will be less than significant.

Mitigation Measures

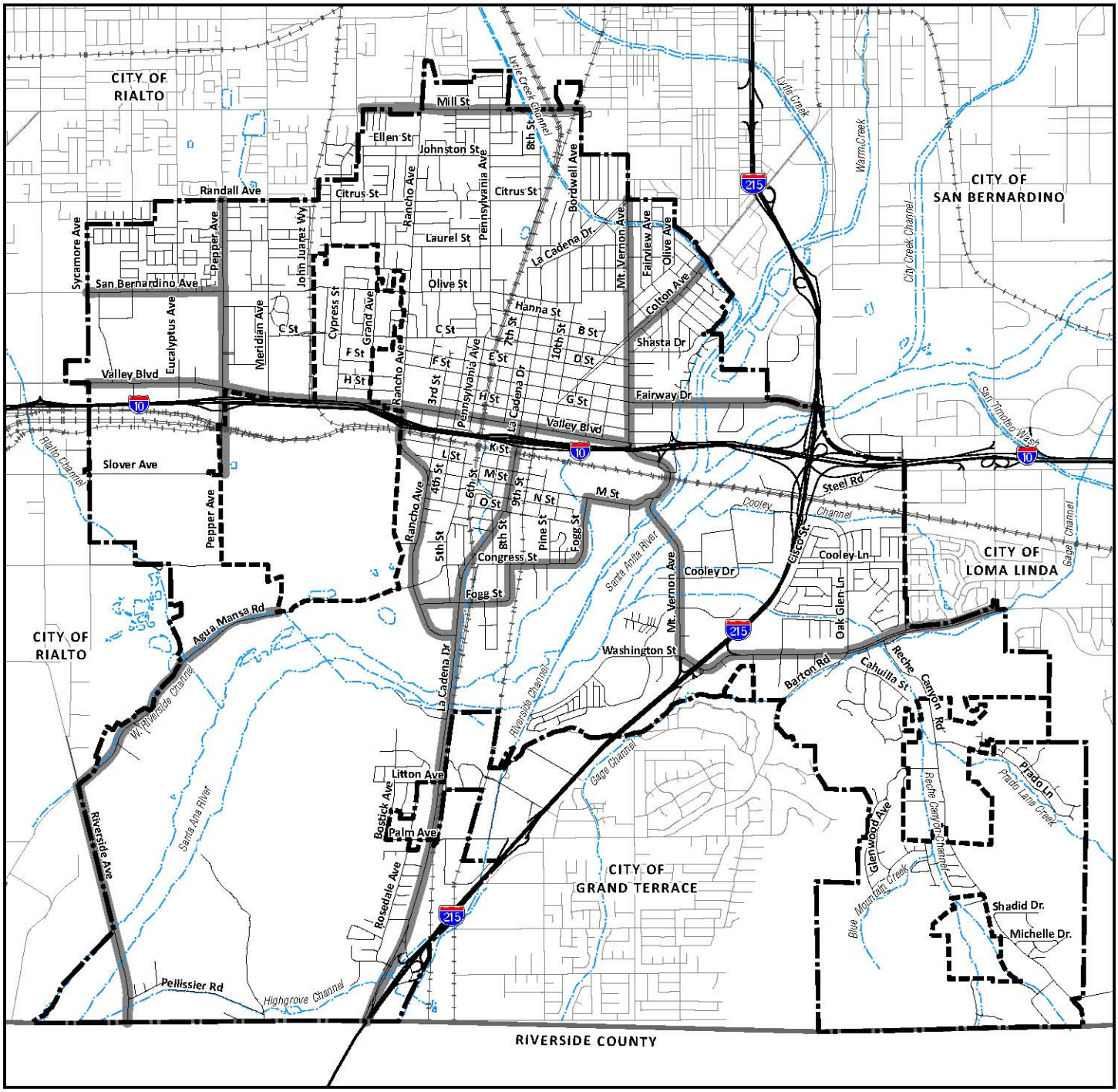
MITIGATION 4.8.D-1

Applications for new development projects requiring City discretionary approval shall include the results of a Phase I Environmental Site Assessment (ESA), prepared in accordance with the latest ASTM protocol for such assessments. If the Phase I ESA indicates some evidence of site contamination exists that could require cleanup to avoid danger to people or damage to the environment, a Phase II level review shall be completed to fully characterize the nature and extent of such contamination, and the scope of required clean up procedures. The results of the Phase II assessment shall be considered as part of the CEQA compliance process prior to any action on the project.

Level of Significance with Mitigation Incorporated

Impact 4.8.D will be less than significant with mitigation incorporated. All other impacts in this section do not require incorporation of mitigation.





Truck Routes

City Boundary
Sphere of Influence
County Boundary
Freeway
Railroad
Surface Water

Source: City of Colton, 1993.

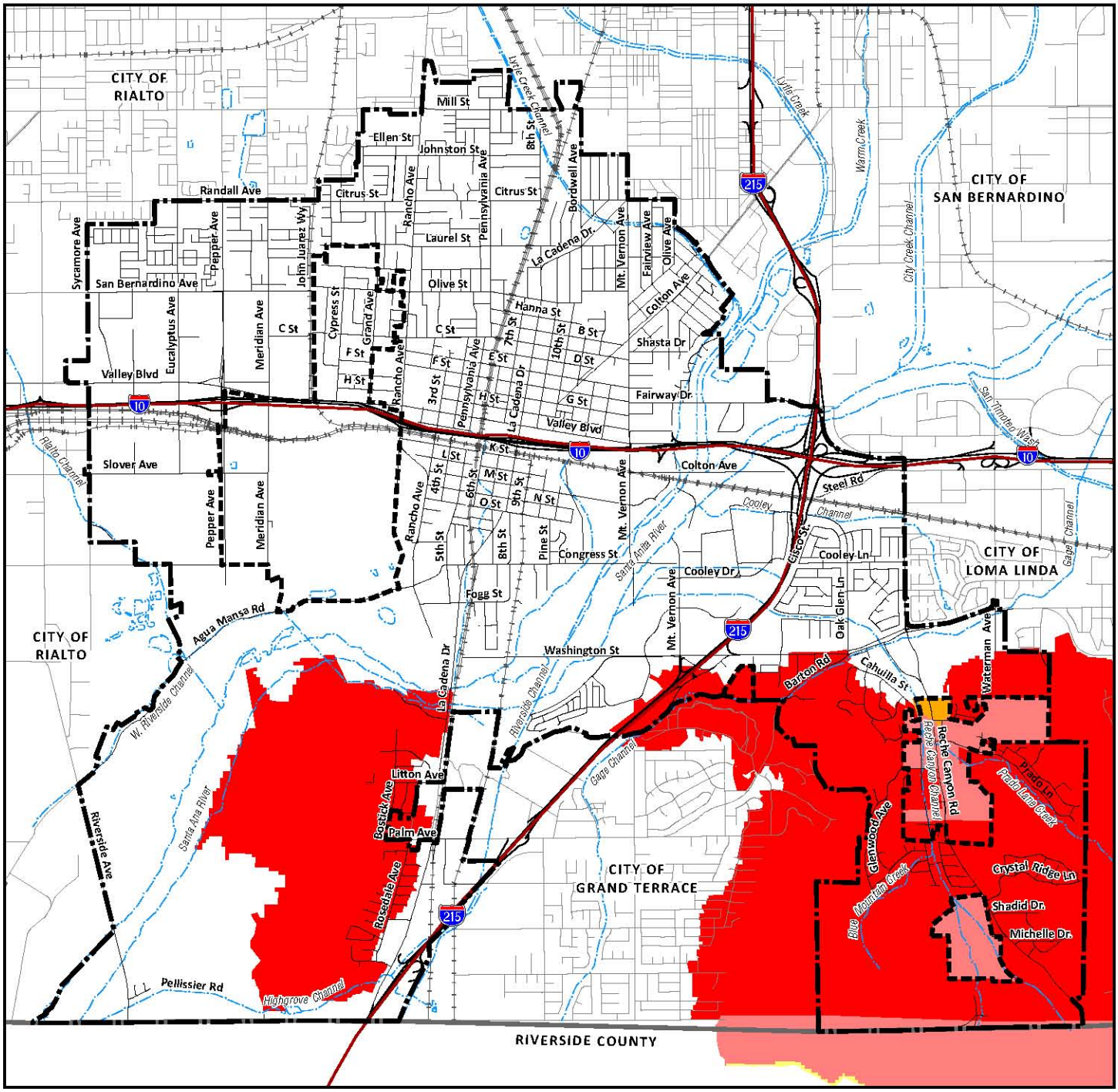
0 0.25 0.5 0.75 1 Mile

Exhibit 4.8-1

Existing Truck Route Master Plan

This Page Intentionally Left Blank





FIRE HAZARD SEVERITY ZONES

State Responsibility Area (SRA)

- Moderate
- High
- Very High

Local Responsibility Area (LRA)

- Very High

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroad
- Surface Water

Source: Fire Hazards Severity Zones in State Responsibility Areas (SRA), Adopted by CAL FIRE on November 7, 2007.
Very High Fire Hazards Severity Zones in Local Responsibility Areas (LRA), Recommended by CAL FIRE on November 13, 2008.

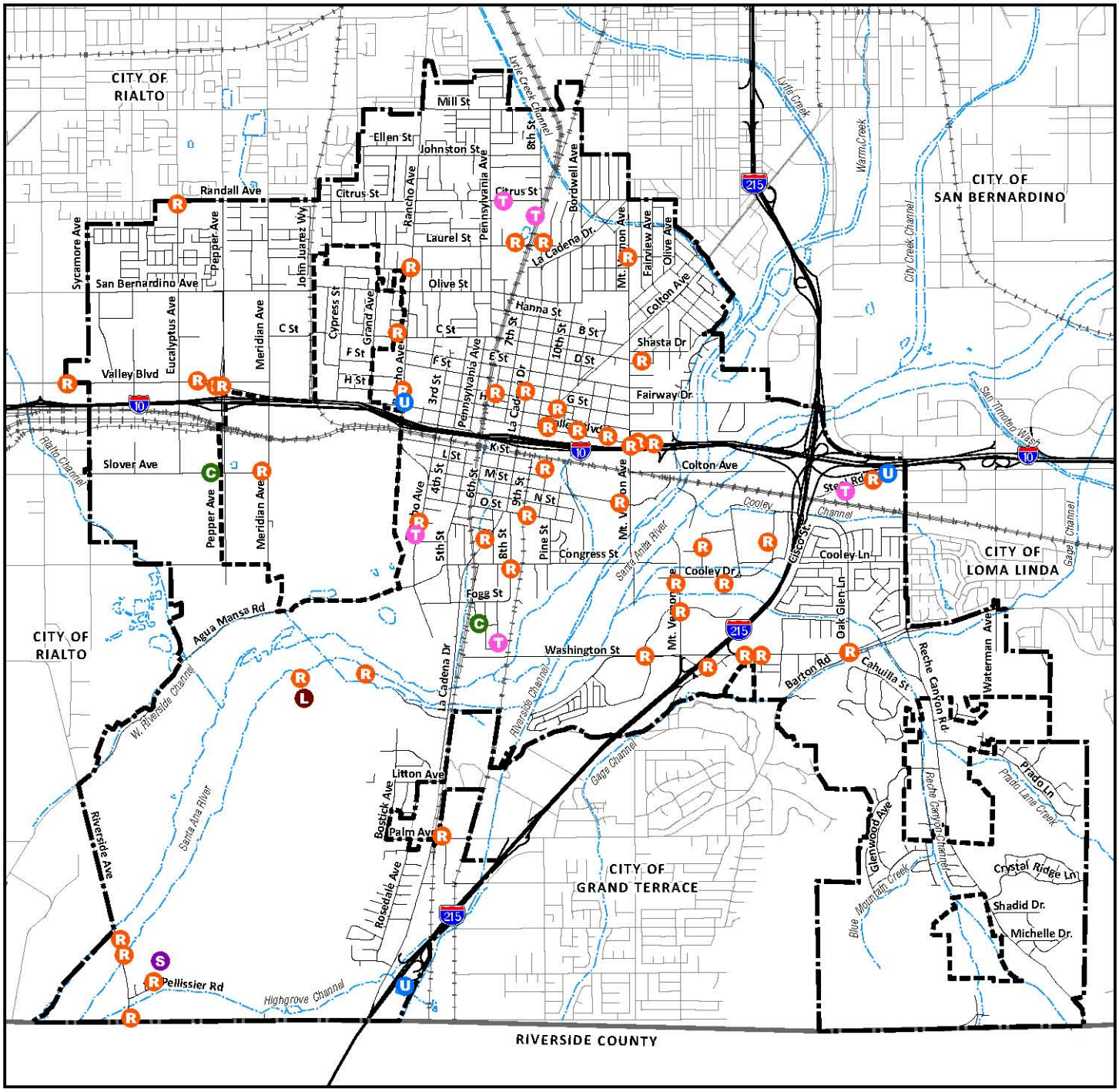
0 0.25 0.5 0.75 1 Mile

Exhibit 4.8-2

Wildfire Hazards

This Page Intentionally Left Blank





Hazardous Facilities and Sites

- U — Leaking Underground Storage Tanks
- R — RCRA Facilities
- C — SWRCB Site Cleanup Programs
- S — Superfund Sites
- T — TRI Facilities
- L — Colton Landfill

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroad
- Surface Water

Source: U.S. Environmental Protection Agency (EPA), 2010.
California State Water Resources Control Board (SWRCB), 2010.
California Environmental Protection Agency (CEPA), 2010.

0 0.25 0.5 0.75 1 Mile

Exhibit 4.8-3

Hazardous Facilities and Sites

This Page Intentionally Left Blank



References

[1] City of Colton. *General Plan. Circulation Element.* January 1993
[2] California Department of Forestry and Fire Protection. *Very High Fire Hazard Severity Zones in LRA. SW San Bernardino County.* November 2008
[3] United States Environmental Protection Agency. Superfund Site Information: Colton. http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm [January 27, 2010]
[4] United States Environmental Protection Agency. EnviroMapper: 92324. http://www.epa.gov/emefdata/em4ef.home [January 27, 2010]
[5] United States Environmental Protection Agency. EnviroFacts, CERCLIS Query Form: 92324. http://www.epa.gov/enviro/html/cerclis/cerclis_query.html [January 27, 2010]
[6] United States Environmental Protection Agency. EnviroFacts, RCRA Query Form: 92324. http://www.epa.gov/enviro/html/rcris/rcris_query_java.html [January 27, 2010]
[7] United States Environmental Protection Agency. EnviroFacts, TRI Query Form: 92324. http://www.epa.gov/enviro/html/tris/tris_query.html [January 28, 2010]
[8] California Department of Toxic Substances Control. EnviroStor. http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm [January 28, 2010]
[9] State Water Resources Control Board. GeoTracker, Advanced Search: Colton, 92324. https://geotracker.waterboards.ca.gov/search.asp [January 28, 2010]
[10] State Water Resources Control Board. GeoTracker, Advanced Search: Colton, 92324. https://geotracker.waterboards.ca.gov/search.asp [January 28, 2010]
[11] State Water Resources Control Board. GeoTracker, Advanced Search: Colton, 92324. https://geotracker.waterboards.ca.gov/search.asp [January 28, 2010]
[12] California Environmental Protection Agency. Cortese List, List of 'active' CDO and CAO. http://www.calepa.ca.gov/SiteCleanup/CorteseList/CDOCAOList.xls [January 28, 2010]
[13] San Bernardino County. General Plan. Safety Element. March 2007
[14] City of Colton. General Plan. Safety Element. 1993



Hydrology and Water Quality 4.9

This section analyzes impacts of the proposed Land Use, Mobility, and Housing Element Updates associated with water quality, wastewater discharge requirements, groundwater supplies and recharge, erosion, flooding, and hydrologic hazards. The City of Grand Terrace submitted a comment related to hydrology and water quality during circulation of the Notice of Preparation. This comment is addressed herein.

Environmental Setting

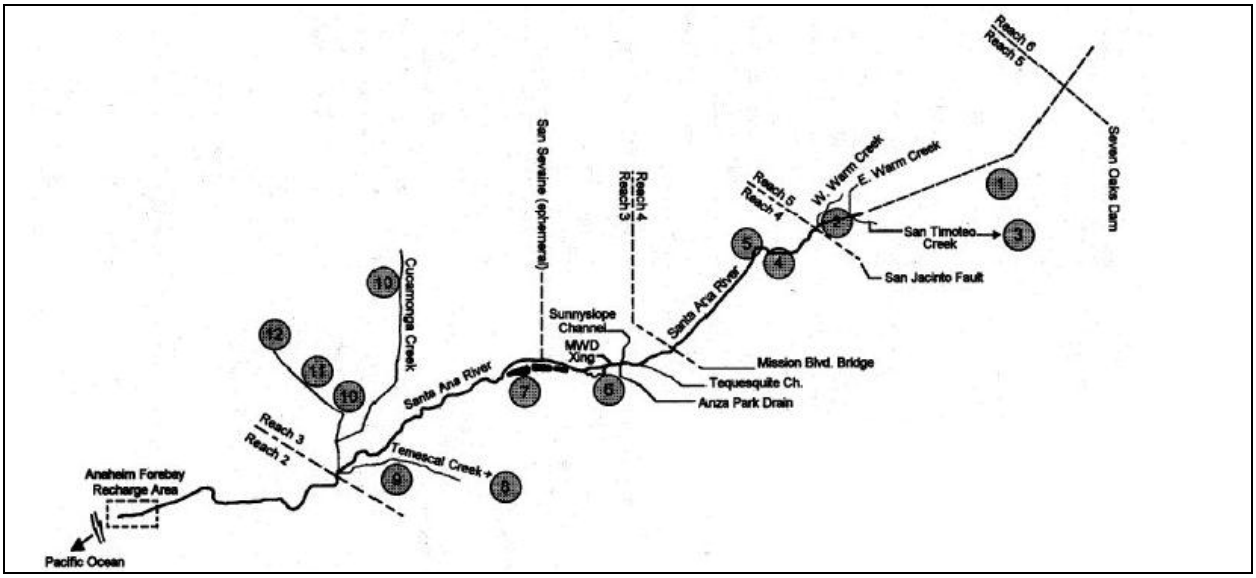
Existing Conditions

Watershed Characteristics

The planning area is located entirely within the Santa Ana River Basin watershed (also known as a hydrologic basin). A watershed is a region of land that water flows down until reaching a specific body of water. The Santa Ana River serves as the defining waterbody in the watershed and ultimately outlets into the Pacific Ocean in Orange County, California. The Santa Ana Region (Region 8 is the jurisdictional boundary of the watershed) is approximately 2,800 square miles in size, representing the smallest of California's nine regional management districts, known as Regional Water Quality Control Boards (RWQCB). The Region includes portions of Orange, Riverside, and San Bernardino Counties. The Region is separated from Region 6 to the north by the San Gabriel and San Bernardino Mountains. The Los Angeles County line and the Pacific Ocean form the Region's western border. The southern border is formed through a number of watersheds, including the San Juan region and the San Jacinto River drainage area. The boundary to the east is generally defined by Mt. San Gorgonio and its local watershed. The climate of the Santa Ana Region is characterized as Mediterranean with dry summers and mild, wet winters. Average rainfall is approximately 15 inches per year, occurring generally between November and March.[1]

The Santa Ana River is divided into six reaches that define the waterbody's hydrologic and water quality segments. The Santa Ana River begins in the San Bernardino Mountains near Mt. San Gorgonio Mountain upstream of Seven Oaks Dam. This is known as Reach 6. Flows are fed by snowmelt and storm events. From Seven Oaks Dam to the San Jacinto Fault near the I-10 and I-215 interchange constitutes Reach 5. Reach 4 flows to the Mission Boulevard Bridge in Riverside. A portion of this reach forms the southeastern boundary of the planning area. Reach 3 flows to Prado Dam near Corona. The southern portion of this reach is an important breeding and nursery area for native fish. Reach 2 flows to 17th Street in Santa Ana and generally is defined as the terminating point for surface flows of the River. Flows in this reach are used extensively for recharge of the Orange County Groundwater Basin, therefore severely limiting downstream flows. Reach 1 is characterized as a normally dry flood control channel that extends to the Pacific Ocean. Overall, the Santa Ana River is characterized by intermittent flows. Exhibit 4.9-1 (Santa Ana River and Tributaries) identifies the reaches of the River.

Exhibit 4.9-1
Santa Ana River and Tributaries



The Santa Ana Region is divided into sub-watersheds known as Hydrologic Units (HU), Hydrologic Areas (HA), and Hydrologic Subareas (HSA). The planning area lies within the Riverside HSA, the Colton HSA, the Reche HSA, and the Bunker Hill HSA. The Santa Ana River is the primary hydrologic feature for these subareas. Reche Canyon serves as the primary drainage path for the Reche HSA.[2]

Surface Waters

Santa Ana River

Reach 4 of the Santa Ana River transects the southern portion of the planning area. As discussed above, the Santa Ana River is the defining waterbody in the watershed. Flows in Reach 4 are perennial, with much of the section being operated as a flood control facility. The City of Colton of Water Department does not divert surface water flows from the Santa Ana River for municipal uses. Surface waters within the planning area are illustrated in Exhibit 4.9-2 (Groundwater Basins and Surface Waters).

Lytle Creek

The channelized east branch of Lytle Creek transects the northern portion of the City before merging with Warm Creek and discharging into the Santa Ana River. This portion of Lytle Creek is operated as a flood control facility, with intermittent discharges associated with seasonal rain and urban runoff.[3]

Warm Creek

A portion of Warm Creek is located in the eastern portion of the City near the I-10 and the Santa Ana River intersection. This portion is a bypass channel (West Warm Creek) diverts from the natural (East) Warm Creek to an inflow channel that fills the Warm Creek artificial recharge basin. The San Jacinto Fault forces groundwater

to the surface near the confluence of Warm Creek and the Santa Ana River, resulting in regular perennial flows.[4]

Groundwater

The planning area is located within the Upper Santa Valley Groundwater Basin, which is divided into numerous subbasins based on geologic formations (such as faults or impervious rocks) that prevent or limit groundwater movement. The planning area is underlain by the Bunker Hill, Rialto-Colton, San Timoteo, and Riverside-Arlington groundwater subbasins, as indicated in Exhibit 4.9-1. Descriptions of each subbasin are provided below. Groundwater supply management occurs through a system of water agencies. Groundwater quality is managed by the RWQCB; groundwater supply is managed by multiple water agencies such as the City's Water Department. RWQCB divides groundwater subbasins into groundwater management zones (GMZ). Each GMZ's division is based on geologic formations, flow system, and distinct water quality.

Bunker Hill Subbasin (Basin No. 8-2.06)

The Bunker Hill groundwater subbasin underlies a small portion of the eastern planning area. The subbasin is bounded by the Banning Fault to the south, the Redlands Fault to the east, the San Andreas Fault to the north, the Glen Helen Fault to the northwest, and the San Jacinto Fault to the southwest. Lytle Creek, Mill Creek, and the Santa Ana River provide approximately 60 percent of the subbasin's total recharge.

The San Bernardino Flood Control District (SBCFCD) maintains Devil Creek, Twin Creek, Waterman Creek, and Sand Creek that may be used for recharge. Additionally, State Water Project (SWP) imported water has been used to replenish the subbasin.

The basin is managed by the San Bernardino Valley Water Conservation District (SBVWCD). Public water agencies that use the subbasin's resources include the City of Colton, East Valley Water District, City of Loma Linda, City of Redlands, City of Riverside, City of San Bernardino, and West San Bernardino County Water District.[5]

The Bunker Hill Subbasin is a part of the area known as the San Bernardino Basin Area (SBBA). The SBBA traditionally refers to two groundwater subbasins—Bunker Hill and Lytle Creek. The Western-San Bernardino Watermaster provides a careful accounting of the SBBA on an annual basis. If pumping in the area exceeds the safe yield of the basin, then water must be imported to offset the amount exceeding the safe yield. If pumping in the area is below the safe yield, then the basin accrues "credits" in a like amount.[6]

The Bunker Hill Subbasin includes a number of contamination plumes, i.e., a concentration of contaminants in a portion of a groundwater basin, subbasin, or aquifer. These impairments are summarized in Table 4.9-1 (Bunker Hill Basin Contamination Plumes). Additionally, the RWQCB Water Quality Management Plan indicates that the Bunker Hill-A GMZ is in excess of the water quality objective for

total dissolved solids (TDS) and nitrate-nitrogen. More information regarding the TDS and Nitrogen Program is provided below (see Santa Ana RWQCB WQMP).

The Bunker Hill subbasin's recharge, historically, has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The Santa Ana River, Mill Creek, and Lytle Creek contribute more than 60 percent of total recharge. Cajon Creek, San Timoteo Creek, other creeks provide a lesser amount. Sources include precipitation and delivered water to streambeds and spreading grounds, such as the Warm Creek artificial-recharge basins.

Table 4.9-1
Bunker Hill Basin Contamination Plumes

Name	Location	Size	Contaminants
Redlands	Judson St. @ Mountain Ave. Redlands	150,000 AF	T/PCE, DBCP
Norton Air Force Base	San Bernardino	100,000 AF	T/PCE
Newark/Muscoy	San Bernardino	--	T/PCE
Santa Fe	--	--	Petroleums
-- Data Not Available			

Source: California Dept. of Water Resources 2003

Riverside-Arlington Subbasin (Basin No. 8-2.03)

The Riverside-Arlington subbasin underlies the western portion of the planning area. This subbasin is bound by the Box Spring Mountains to the southeast, the Arlington Mountains to the south, La Sierra Heights and Mount Rubidoux to the northwest, the Jurupa Mountains to the north, the Rialto-Colton Fault to the northeast.

Primary recharge is from the Santa Ana River, underflow past the Rialto-Colton Fault, and underflow from the Chino subbasin. A portion of the subbasin is managed by the City of Riverside. The portion of the subbasin is designated as the Riverside-B GMZ. This GMZ is characterized by high TDS and nitrogen levels.[7] The City of Colton does not pump groundwater from this subbasin.

The Riverside-Arlington subbasin is replenished by infiltration from Santa Ana River flow, underflow past the Rialto-Colton Fault, intermittent flow from the Chino subbasin, return irrigation flow, and deep percolation of precipitation.

Rialto-Colton Subbasin (Basin No. 8-2.04)

The Rialto-Colton subbasin underlies a portion of the upper Santa Ana Valley in southwestern San Bernardino County and northwestern Riverside County. This subbasin is bordered by the San Gabriel Mountains to the north, the San Jacinto Fault to the east, the Box Springs Mountains to the south, and the Rialto-Colton Fault to the west.

The subbasin is divided into the Lytle, Rialto, and Colton GMZs, with the Lytle Creek and Rialto GMZs underlying portions of the City's planning area. The Lytle and Rialto GMZs are experiencing high nitrogen levels. Primary recharge areas include Lytle Creek in the northwest, Reche Canyon in the southeast, and the Santa Ana River in the south. The subbasin was adjudicated in 1961; however, the court decree is only in effect during times of drought. Management of the subbasin in the south has been adjudicated between the cities of San Bernardino, Rialto, and Riverside by the Western San Bernardino Watermaster.[8]

Lytle Creek serves as the principle recharge area for the northwestern part of the subbasin, while Reche Canyon provides recharge for the southeastern part and the Santa Ana River recharges the south-central portion. Percolation, underflow, and irrigation and septic returns provide recharge, to a lesser extent.

San Timoteo Subbasin (Basin No. 8-2.08)

The San Timoteo subbasin is located under a small portion of the southeast planning area in the Reche Canyon area. This subbasin is bound to the north and northeast by the Banning Fault and impermeable rocks of the San Bernardino Mountains, Crafton Hills, and Yucaipa Hills, on the south by the San Jacinto Fault, on the west by the San Jacinto Mountains, and on the east by a topographic drainage divide with the Colorado River Hydrologic Region. The City does not pump groundwater from this basin.[9]

Groundwater is replenished by subsurface inflow and percolation of precipitation, runoff, and imported water. Runoff and imported water are delivered to streambeds and spreading grounds for percolation.

Hydrologic Hazards

Flooding

Flooding can lead to property damage and personal injury. The Santa Ana River represents the primary threat of flooding within the planning area, with lesser risk associated with Lytle Creek, Reche Canyon, and Prado Lane Creek. Under the direction of the Federal Emergency Management Agency (FEMA) through the National Flood Insurance Program (NFIP), flood-prone areas have been mapped throughout the country.

The most common flood hazard zone in the NFIP is Zone A, indicating that the area is subject to 100-year flooding. This means that under the strongest storm anticipated within a 100-year span, the area will flood. This can also be interpreted as being subject to a one percent annual chance of flooding. Another common flood zone is Zone X, indicating that the area is either subject to moderate flooding (X shaded) or is an area of minimal flood hazard (X unshaded). Zone D indicates that flood potential for the area has not been determined but is possible. Zone AE is designated to those areas subject to 100-year floods and also have had base flood elevations (BFE) established. BFE indicates the anticipated height of floodwaters during the 100-year storm event. This becomes important when

developing in the floodplain fringe because FEMA regulations limit development within the floodplain fringe that would raise BFEs by more than one foot.

Flooding potential in the planning area is minimal. Flood control facilities have been constructed to contain 100-year flood events within drainage channels such as the Lytle Creek Channel and the Reche Canyon Channel. With regard to the Santa Ana River, FEMA mapping within the past five years have been updated to reflect upstream dam improvements. The FIRMs show that portions of the City near the Santa Ana River are subject to 100-year floods. In particular, industrial development in the southwestern and central portions of the planning area has been designated by FEMA as subject to 100-year flood hazards. Additionally, residences near the Warm Creek recharge basin are subject to 100-year flood hazards. Some residential and commercial structures exist today in these flood hazard areas, but there are no critical facilities such as hospitals, schools, power plants, etc. Flood hazard areas are mapped in Exhibit 4.9-3 (Hydrologic Hazards).

Dam and Levee Failure

Dam and levee failure constitutes a serious risk to property and life due to the potential for sudden, massive, and destructive flooding. A portion of the City is located within the Seven Oaks Dam inundation area (see Exhibit 4.9-3 (Hydrologic Hazards Map).[10] [11] The Seven Oaks Dam is located on the Santa Ana River, approximately 13 miles upstream. The area located within the Seven Oaks Dam inundation area is generally located at the northwest corner of the junction, south of the Warm Creek recharge basin. Seven Oaks Dam—San Bernardino County's rockfill dam—retains the Seven Oaks Reservoir. Seven Oaks Reservoir has a maximum capacity of 145,600 AF covering a maximum of 177 AC and a drainage area of 780 square miles.

Seven Oaks Dam is designed to operate in conjunction with Prado Dam (approximately 40 miles southwest) to provide flood protection to San Bernardino, Riverside, and Orange Counties.[12] At the beginning of the flood season, runoff is stored with small releases made to maintain downstream water supply flows. During a flood, Seven Oaks Dam stores floodwaters until the Prado Dam reservoir is no longer rising, then the floodwater is gradually released. The Santa Ana River flows unhindered through Seven Oaks Dam during the non-flood season.

Several levees protecting portions of the City from flood hazards are located within and in proximity of the planning area, according to the California Levee Database. All levees within the planning area are operated and maintained by San Bernardino County and not operated or maintained by the United States Army Corps of Engineers (ACOE). Levee inundation modeling information is summarized from FIRMs and the San Bernardino County Flood Insurance Study. The levees, described below and summarized in Table 4.9-2 (Levee Summary), are illustrated in Exhibit 4.9-3 (Hydrologic Hazards Map).[13]

Santa Ana River

Three interconnected levees (ID Nos. 5771, 12281, 12290) located on the Santa Ana River's east bank in the City's southern portion, south of the La Loma Hills,

provide protection for the area near Riverside Avenue and Pellisier Road. These three levees operate as a single system. According to the latest FIRM for this area, failure of the levee system could inundate some light industrial development; however, much of the inundation area is currently vacant. Inundation was modeled using a discharge of 180,000 cubic feet per second (CFS) over a drainage area of 93 square miles.[14] [15]The earthen levees are lined with riprap and designed to contain the one-percent annual flood. The combined system is approximately 3,793 feet in length.

Lytle Creek

A system of two asphalt levees (ID Nos. 12254, 12255) are located in the City's northeast portion at the confluence of Lytle Creek and Warm Creek, near the westbound I-10's Sperry Drive exit. This levee system's length is approximately 817 LF. The Lytle Creek flood plain in this area could potentially inundate residential development located on Award Drive to the west of the levee; however, the actual levee failure inundation area has not been mapped by FEMA.[16]

Table 4.9-2
Levee Summary

ID	Length (LF)	Flood Source	Design
4964	731	Warm Creek	Earthen
4969	392	Warm Creek	Earthen
5771	2,066	Santa Ana River	Earthen/Riprap
12254	608	Cajon/Lytle Creek	Concrete
12255	269	Cajon/Lytle Creek	Concrete
12281	1,045	Santa Ana River	Earthen/Riprap
12290	682	Santa Ana River	Earthen/Riprap
13544	442	Reche Canyon Channel	Earthen

Source: California Levee Database 2010

Effective November 2010, FEMA issued Letter of Map Change (LOMC) for the East Branch Lytle Creek Channel, between 4th Street in the City of San Bernardino and the I-10 Freeway in Colton (LOMC No. 09-09-2788P-060273 and No. 09-09-2788P-060281). The revised FIRM maps reflect the Letter of Map Revision. [17]

Levees are actually certified by the local agency and accredited by FEMA, after certification documentation is found in order. As part of the FIRM program, FEMA maps those areas subject to flooding in the event of a levee failure. This effort is part of FEMA's map modernization process to better identify flood risks, including those associated with levees. While levees throughout the country are being reaccredited, inundation areas on the landward side of a levee will continue to be shown as Zone X with the note that the protecting levee is provisionally accredited.[18]

Warm Creek

Levee 4964 forms the eastern edge of the Warm Creek recharge basin. The earthen levee system spans approximately 731 LF from Fairway Drive to the Auto

Plaza Drive exit off southbound I-215. Failure of this levee during a substantial storm event would generally submerge vacant land; however, floodwaters could impact a mini-storage facility and commercial uses located near the East Fairway Drive and South Auto Plaza Drive intersection. Levee 4969 is located near the intersection of South Vernon Court and East Mission Street near the Mount Vernon off-ramp south of I-10. The inundation area due to failure of this 392 LF levee has not been mapped by FEMA.

Reche Canyon Channel

The Reche Canyon levee (ID No. 13544), approximately 442 LF long, is located at the confluence of Reche Canyon Channel and the Santa Ana River beginning at a culvert located under Mount Vernon Drive between Santo Antonio Drive and Cooley Drive. Failure of this levee could impact a variety of uses located within business park suites on Mount Vernon Avenue. The uses include My First Academy Preschool, San Bernardino County Special Education School, and Echoes of Love Ministry.[19]

Seiche and Tsunami

Seiche is the process by which water sloshes outside its containing boundaries, generally due to an earthquake. Seiche can result in localized flooding that can result in property damage or personal injury. This could occur within an open reservoir, lake, or other large waterbody. The planning area does not contain any open reservoirs, lakes, or other large bodies of water; therefore, substantial impacts from seiche could not occur.

A tsunami is a large wave that generates in the ocean, generally from an earthquake, and builds intense strength and height before impacting a coast. Tsunami can result in significant property damage and loss of life due to the intense, destructive nature of the wave and the often-sudden occurrence with little chance for warning. The project area is not subject to impacts from a tsunami because it is located over 40 miles inland of the Pacific Ocean.

Mud and Debris Flows

A mudflow (or debris flow) is a rapidly moving slurry of water, mud, rock, vegetation and debris. Larger debris flows are capable of moving trees, large boulders, and even cars. This type of failure is especially dangerous, as it can move at speeds in excess of 10 miles per hour, is capable of crushing buildings, and can strike with very little warning. As with soil slips, the development of debris flows is strongly tied to exceptional storm periods of prolonged rainfall. Ground failure occurs during an intense rainfall event, following saturation of the soil by previous rains. Even relatively small amounts of debris can cause damage from inundation and/or impact.

The majority of the planning area is flat and therefore, not susceptible to debris flows. However, some southern portions of the City have steep sloping hills. Slover Mountain is located adjacent to I-10 between the Pepper Avenue and Rancho Avenue exits. Slover Mountain is a cement and aggregate extraction area associated with operation of the California Portland Cement Company; it has little

risk for debris flows because the mountain's terraced slopes are actively maintained. The La Loma Hills are located south of the Colton Landfill between Riverside Avenue and La Cadena Drive. These hills are, generally, undeveloped and characterized by numerous rock outcroppings formed by plutonic rock formations, interspersed with grasses. Residential development on the La Loma Hills' eastern foot could be susceptible to debris flow hazards during heavy rainfall, particularly following any wildfire event in the hills. The Box Springs Mountains, located in the Reche Canyon area, are extensively developed with residential development. This area represents the highest risk for debris flow damage in the planning area.[20]

Watersheds that have been recently burned typically yield greater amounts of soil and debris than those that have not burned. Erosion rates during the first year after a wildfire are estimated to be 15 to 35 times greater than normal and peak discharge rates range from two to 35 times higher. These rates drop abruptly in the second year, and return to normal after about five years. In addition, debris flows in burned areas are unusual in that they can occur in response to small storms and do not require a long period of antecedent rainfall. This kind of flow is common in small gullies and ravines during the first rains after a burn, and can become catastrophic when a severe burn is followed by an intense storm season.

The planning area's southern portion is within the historic Reche Canyon floodplain and could be impacted by debris flows due to Box Springs Mountains' slope. The United States Geological Survey (USGS), as part of its National Landslide Hazards Program, is currently developing tools and methodologies to identify and quantify slope stability hazards posed by burned watersheds. Such tools will help communities with emergency planning and post-fire rehabilitation. The USGS also prepares and distributes information regarding slope stability hazards not related to recently burned areas.

Regulatory Framework

The following section provides information regarding important regulatory programs currently in effect. This section does not purport to list all regulations relevant to hydrology and water quality issues; however, it does outline major programs applicable to the planning area.

Federal and State Regulations

Clean Water Act

The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. The CWA does not deal directly with ground water or with water quantity issues. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges (known as "point sources") into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff, the principal nonpoint source. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Evolution of CWA programs over the last decade has included a shift from a

program-by-program, source-by-source, and pollutant-by-pollutant approach to more holistic watershed-based strategies. Under the watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones.

Major CWA programs include water quality standards, anti-degradation policy, waterbody monitoring and assessment, total maximum daily loads (TMDLs), the National Pollutant Discharge Elimination System (NPDES) permit program for point sources, Section 319 program for nonpoint sources, Section 404 program regulating filling of wetlands and other waters, Section 401 state water quality certification, and the state revolving loan fund (SRF).

Water pollutants under the CWA are categorized as conventional, toxic, and non-conventional. The five conventional pollutants, as defined by the CWA, are as follows:

Biochemical Oxygen Demand (BOD): is the amount of oxygen utilized by decomposition of organic material over a specific time period (for the purposes of water quality a measure is taken over five days and is known as BOD5). Although natural organic sources occur in waterbodies, the amount of oxidizing aerobic bacteria can increase significantly due to discharges of wastewater and urban runoff such as lawn fertilizer. Increased oxygen use in waterbodies can result in the death of native aquatic species because the aerobic bacteria decreases natural oxygen levels in the waterbody. This can also lead to infiltration and less oxygen dependent organism and species.

Total Suspended Solids (TSS): TSS represents the amount of solids within a waterbody that are suspended or not settled. TSS can represent the amount of turbidity in a water body and is measured by filtering solids from a water sample and measuring its weight. High TSS levels in a waterbody can lead to numerous problems. High TSS can block sunlight from reaching the bottom of a waterbody and therefore result in the inability for bottom dwelling plants to photosynthesize. This can not only lead to floral death but faunal death as well due to the decreased levels of oxygen resulting from reduced plant life. Increased TSS levels can lead to increased water temperature because suspended particles absorb heat from sunlight and therefore can also lead to decreased oxygen levels because warmer water holds less dissolved oxygen.

pH: pH is the measurement of the hydrogen ion concentration in a waterbody. A pH measurement of seven is neutral while less than seven becomes increasingly acidic and greater than seven becomes increasingly base on a scale of zero to fourteen. The balance of pH in a waterbody is important in order to maintain natural biological functions and to prevent pollution. Generally, waterbodies maintain pH levels by neutralizing increases and decreases through natural occurring dissolved chemicals in the water. This is known as the waterbodies buffering capacity, or ability to withstand changes in pH. Increasing and decreasing pH levels affects the ability for solids to dissolve in the waterbody known as its solubility. Changes in pH change the way a waterbody absorbs nutrients and minerals and therefore affects the ability for aquatic life to synthesize them.

Changes in pH can also increase pollutant loads. For example, heavy metals increase in toxicity at lower pH levels because they become more soluble in the waterbody. pH readings approaching approximately two or twelve are considered hazardous.

Fecal coliform: Fecal coliform is a harmless bacterium that lives inside the digestive systems of humans and other warm-blooded animals that aids in the digestion process. The presence of this bacterium in a waterbody is an indicator that the waterbody has been contaminated by human or other animal waste (fecal matter). These wastes have the potential to carry harmful bacteria and viruses that can lead to disease and potentially death.

Oil and grease: Oil and grease has high surface tension and are not soluble in water so it forms a film on the surface of a waterbody, also known as 'sheen'.

The CWA also establishes a list of toxic pollutants known as primary pollutants. Currently, this list includes 126 hazardous chemicals and toxics. Finally, various non-conventional pollutants are established such as chlorine and ammonia. Important toxic and non-conventional pollutants and other water quality indicators are discussed here.

1,2-Dibromo-3-Chloropropane (DBCP): DBCP is a colorless chemical that was commonly used as a pesticide until the late 1970s and early 1980s. Use as a pesticide was the most common source of this contaminant until use as a pesticide was banned by the US in 1979. Small amounts of the chemical are still produced for industrial processes. The chemical can also be used as a fire retardant. Men exposed to DBCP may experience decreased sperm counts and after prolonged exposure may become unable to father children. The chemical can also cause headaches, nausea, lightheadedness, and fatigue and is also considered to be carcinogenic.

Nitrate-Nitrogen (Nitrates): nitrogen-oxygen chemical units that combine with various organic and inorganic compounds that when ingested convert to nitrates. Excessive ingestion of nitrates can lead to serious illness, including death, especially in infants. This is a result of the bonding capabilities of nitrates to impair oxygen-carrying capabilities in the blood. Long term exposure can also result in diuresis (increased urine production by the kidney) and hemorrhaging of the spleen. Primary contamination occurs from potassium nitrate and ammonium nitrate in fertilizer but may also be caused by organic nitrates in human sewage and livestock manure.

Pathogens: Pathogen is a general term for disease-causing bacteria, viruses, and protozoan that are transmitted to people when they consume untreated or inadequately treated water. Health effects vary depending on the pathogen but can vary from simple stomachache to severe, life threatening diseases. Pathogens may be ubiquitous to a water body or may be introduced through exposure of a waterbody to human or animal wastes.

Total Dissolved Solids (TDS): Is a measurement that indicates the total dissolved organic and inorganic materials in a water source. This is not a primary water quality standard because it does not result in primary health effects. High TDS result in unpleasant odor, taste, and brackish water and therefore is considered a secondary water quality standard because it is based on aesthetic circumstances.

Trichloroethylene/Perchloroethylene (TCE/PCE): TCE or PCE is a chlorinated solvent (volatile organic carbon or VOC) used for metal degreasing and as an ingredient in adhesives, paint removers, correction fluid, and spot removers. Primary sources for TCE/PCE contamination are direct discharges from industrial operations utilizing the compound and from leaching from Superfund and disposal sites. The chemical is commonly used in dry cleaning operations. The chemical is considered to be carcinogenic and acts as a central nervous system depressant that may cause nausea, confusion, dizziness, and unconsciousness after prolonged exposure. Chronic exposure to TCE/PCE may result in toxic effects to the liver and kidneys.

Nonpoint sources (NPS) of pollution emanate from diffuse sources, such as snowmelt running over an undeveloped countryside, or street runoff coming from numerous paved areas, rooftops, yards and other urbanized surfaces. Section 319 of the 1987 amendments to the Clean Water Act (33 USC 466 et seq.) established the framework for reducing water pollution from nonpoint source activities. Section 319 requires each state to prepare a Nonpoint Source Management Plan and to conduct an assessment of the impact nonpoint sources have on the state's waterbodies. In response to these requirements, SRWQCB adopted the Nonpoint Source Management Plan (NPSMP) in 1988 and the Water Quality Assessment in 1990. The NPSMP establishes a statewide policy for managing nonpoint source inputs to California's waters. The NPSMP received was upgraded in January 2000 when the 15 year Nonpoint Source Program Strategy and Implementation Plan was adopted.[21]

Implementation of the NPSMP has been delegated to the nine RWCQBs with the SWRCB acting as the monitoring and enforcement agency. This ultimately leads to the City's requirements to control NPS sources. The primary means by which the City implements the NPSMP is through the requirements of its MS-4 permit and by requiring preparation of SWQMPs by project proponents for new development and significant redevelopment projects. The City is also required to comply with WDRs for its wastewater treatment plant as issued by the Santa Ana RWQCB. Compliance with these requirements are the primary means by which the City complies with the NPSMP program and are consistent with the SWRCB's *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program*.[22]

National Pollutant Discharge Elimination System (NPDES)

The NPDES program requires permitting for activities that discharge pollutants into waters of the United States. This includes discharges from municipal, industrial, and construction sources. These are considered point-sources from a regulatory standpoint. Generally, these permits are issued and monitored under the oversight of the State Water Resources Control Board (SWRCB) and administered by each

regional water quality control board. A brief discussion of these permit types are presented below.

Municipal: Municipal separate storm sewer systems (MS4) are issued permits based on the size of the municipality. Municipalities with populations between 100,000 and 250,000 are considered "medium" and municipalities with populations over 250,000 are considered "large." All others are considered "small." MS4 permit requirements include reduction of pollutant discharges to the 'maximum extent practicable' and protection of water quality. Requirements also include identification of major outfalls and pollutant loads and control of discharges from new development and redevelopment. To address these objectives, municipalities are required to prepare stormwater management plans. Although urban runoff is considered a nonpoint source of pollution, municipal storm drain outlets are readily defined and can be individually monitored; thereby defining them as point sources for the purposes of administering NPDES permits, even though the origin of the source is diffuse. Although the NPDES program does not regulate nonpoint sources of pollution, the Santa Ana RWQCB has other programs in place to address nonpoint sources. Furthermore, many of the programs implemented under the City's MS4 permit address nonpoint sources.[23]

The City of Colton is subject to the NPDES permitting process under its MS4 codified as Title 14 (Storm Drains and Floodplain Management) of the Municipal Code. The City is also a permittee under the Santa Ana RWQCB Order No. R8-2010-0036 (NPDES No. CAS618036) that issues the regional NPDES permit to the County of San Bernardino. These permits are discussed in detail below under the "local" regulations discussion. In particular, municipal permits regulate discharges from the City's urban runoff, its wastewater treatment facility, and its water reclamation facility.[24]

Industrial: The State Water Resources Control Board issues the Industrial General Permit (Order No. 97-03-DWQ) that regulates discharges from 10 broad categories of industrial activities. The permit requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and monitoring program to implement water quality objectives through use of the best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). Table 4.9-3 (Industrial General Permits) identifies active permits within the planning area.[25] [26]

Table 4.9-3
Industrial General Permits

Facility	Location	Size (AC)
Rancho Ready Mix Inc	861 W 4th St	2.0
Dixieline Lumber Co Colton	12212 Holly St	15.7
Inland Logistics LLC 2	2356 Fleetwood Dr	4.1
Hydro Conduit Corp - Colton	1205 Rancho	22.0
Atlas Pac Corp	2803 Industrial Dr	3.0
BP ARCO Colton Terminal	2395 S Riverside Ave	4.1
San Bernardino Cnty Waste Colt	850 Tropicana Ranch Rd	94.0
Conoco Phillips Co. - Colton Terminal	271 E. Slover Ave.	4.0
CA Portland Cement Co	695 S Rancho Ave	715.0
Continental Materials Corp.	225 W. Acacia St.	16.0
McNeilus Truck & Mfg Inc	401 N Pepper Ave	10.0
Tom Son Tank Lines Inc	151 Fogg St	0.2
Pac Rail Industries	785 E M St	4.0
Dietrich Industries, Inc.	2001 E. Cooley Drive	3.0
Augustine Metals, Inc.	2021 W. Placentia Ln.	5,093.0
Shell Oil Prod US Colton Terminal	2307 S Riverside Ave	2.1
Loran Inc	1705 E Colton Ave	3.0
Taormina Industries Inc Inland	2059 N Steel Rd	6.0
Archer Daniels Midland Co Bulk	455 N 6th St	3.0
Trans	451 N 3rd St	2.0
Conagra Foods Inc	2020 E Steel Rd	12.0
Holliday Rock Colton Plant 4	249 E Santa Ana Ave	40.0
Century Energy Facility	661 S Cooley Dr	1.0
Drews Energy Facility	559 S Pepper Ave	0.4
Van Dyk Tank Lines Inc	1800 S Riverside Ave	5.0
Rancho Ready Mix, Inc.	1150 S. Rancho Avenue	2.0
Reclaimed Aggregates Inc	2110 W Agua Mansa Rd	23.0
McCain Foods USA Inc	1620 N 8th St	5.0
Superior Tank Lines	601 S Hunts Lane	1.5
Millers Honey Co	125 E Laurel St	2.0
AMKO Recycling	340 W Valley Blvd	2.02
Colton Iron & Metal	790 E M St	3.6
Cutting Edge Supply Co	234 East O St	7.1
Pico Rivera Pallet	240 E Congress St	8.0
C&R Pier Mfg	275 S Rancho Ave	1.84
Canco Recycling	1224 N Mt Vernon Ave	0.6
Squires Lumber Co	370 N 9th St	6.5
Als Garden Art	311 W Citrus St	17.1
HREM Inc	1465 Miller Dr	2.0
Telco Best Brands Corp	2111 W Valley BLVD	14.61
Eastern Maintenance Facility	1945 Bordwell Ave	21.7

Source: SWRCB 2010

Construction: Construction activities that disturb one acre or more (whether a single project or part of a larger development) are required to obtain coverage under the state's General Permit for Dischargers of Storm Water Associated with Construction Activity. Starting on July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit, whereas currently dischargers may elect to obtain coverage under the General Permit or under Individual Permits. The activities covered under the Construction General Permit include clearing, grading, and other disturbances. The permit requires preparation of a SWPPP and implementation of Best Management Practices (BMPs) with a monitoring program.[27] [28]

Wastewater Discharge Requirements: Wastewater Discharge Requirements (WDRs) are issued to facilities discharging wastewater directly into receiving surface waters. Such facilities are required to be permitted whether individually or under a general permit. In the City of Colton, two facilities have been issued individual WDRs and three facilities are enrollees under the "General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant Threat to Water Quality" (Order Nos. R8-2003-0061, R8-2009-0003). These facilities are summarized in Table 4.9-4 (Wastewater Discharge Requirement Facilities). Additional facilities that have been issued WDRs through other programs are discussed in the Implementing Programs section below.[29]

Table 4.9-4
Wastewater Discharge Requirement Facilities

Facility	Address	Order No.	Effective
Colton Wastewater Reclamation Facility	1201 Rancho Ave	R8-2005-0075	10/06/2005
Colton Wastewater Treatment Facility	1990 Agua Mansa Rd	R8-2006-0052	12/01/2006
Arrowhead Regional Medical Center	400 Pepper Ave	R8-2003-0061	10/30/2003
Colton Terminal Tank Farm	2359 S Riverside Dr	R8-2009-20003	01/10/2008
Colton Public Utilities (Water Division)	Varies	R8-2003-0061	03/15/2007

Source: SWRCB 2010

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne) the SWRCB has authority over state water rights and water quality policy. Porter-Cologne also established nine RWQCBs to oversee water quality on a day-to-day basis at the local/regional level. RWQCBs engage in a number of water quality functions in their respective regions. One of the most important is preparing and periodically updating the water quality control plans. Each Plan establishes:

- beneficial uses of water designated for each water body to be protected;

- water quality standards, known as water quality objectives, for both surface water and groundwater; and
- actions necessary to maintain these standards in order to control non-point and point sources of pollution to the State's waters.

Permits issued to control pollution (i.e., waste-discharge requirements) must implement Basin Plan requirements (i.e., water quality standards), taking into consideration beneficial uses to be protected. Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within any region must file a report of waste discharge with the appropriate regional board. No discharge may take place until:

- the Regional Board issues waste discharge requirements or a waiver of the waste discharge requirements, and
- 120 days have passed since complying with reporting requirements.

Under the auspices of the EPA, the SWRCB and nine Regional Boards also have the responsibility of administering the NPDES permits discussed above.[30]

Santa Ana RWQCB Basin Plan

Water quality and waste discharge standards are adopted and enforced by the Santa Ana RWCQB through its Water Quality Control Plan (Resolution No. 94-01), also known as the "Basin Plan." The Basin Plan was most recently updated in February 2008, with nonsubstantive editorial corrections made to Chapter 4 in June 2011. The Plan provides policies, objectives, and guidelines for the maintenance and improvement of water quality in surface and groundwater bodies. The Plan identifies existing and potential beneficial uses of the Basin's waterbodies, including recreation, drinking water, and habitat. Water quality objectives set a wide range of requirements for water bodies that include aesthetic values, and maximum chemical and mineral loads. The NPDES program's administration is the primary method for addressing point source pollution issues within the Basin. Nonpoint source pollution is addressed through the RWQCB's participation in the State administered Nonpoint Source Pollution Control Program.[31]

Beneficial Uses: The Water Quality Objectives of the Basin Plan utilizes a coding system to define beneficial uses for waterbodies. In the planning area, the waterbodies have been assigned beneficial uses as indicated in Table 4.9-5 (Beneficial Uses). These include inland surface streams and groundwater management zones. The most common beneficial uses for surface waters for groundwater recharge, recreational uses, and wildlife habitat. All groundwater zones serve as potential agricultural, industrial, and municipal service supplies.

Table 4.9-5
Beneficial Uses

Water Body	Beneficial Uses											
	AGR	COLD	IND	GWR	MUN	POW	PROC	REC1	REC2	SPWN	WARM	WILD
Surface Waters												
Lytle Creek	X	X	X	X	X	X	X	X	X			X
Santa Ana River (Reach 4)				X				X	X		X	X
Santa Ana River (Reach 5)	X			X	X	X		X	X		X	X
Groundwater Management Zone												
Bunker Hill A	X		X		X		X					
Bunker Hill B	X		X		X		X					
Colton	X		X		X		X					
Chino 3	X		X		X		X					
Lytle	X		X		X		X					
Rialto	X		X		X		X					
Riverside A	X		X		X		X					
Riverside B	X		X		X		X					
Riverside F	X		X		X		X					
San Timoteo	X		X		X		X					

Source: Santa Ana RWQCB 2008

Water Quality Objectives: The Porter-Cologne Water Quality Act states in Section 13241 that:

> "Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses as the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:
>
> - Past, present, and probable future beneficial uses of water.
> - Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
> - Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.
> - Economic considerations.
> - The need for developing housing within the region.
> - The need to develop and use recycled water."

The Basin Plan sets general objectives based on type of waterbody and also sets specific objectives based on existing or potential beneficial uses. Objectives are adopted as both a narrative objective and a numerical objective.

An important feature of the Basin Plan is the maintenance of "maximum benefit" for a waterbody. This objective states that if the existing water quality of a waterbody is better than the standards adopted, the standard for that waterbody cannot be lowered below its existing levels. This prevents those waterbodies that have exceptional water quality from being degraded.

Implementing Programs: The Santa Ana RWQCB has instituted various implementing programs to meet the objectives of the Basin Plan. A brief discussion of some of the important programs administered by RWQCB is presented below.[32]

- *401 Certification:* This program implements Section 401 of the Federal Clean Water Act requiring a permit for any act that will discharge a water contaminant into surface waterbodies, including streams, rivers, lakes, ponds, and wetlands. Discharges include construction or operation of any facility within a surface waterbody (such as a bridge, roadway, building pads, etc.).

- *Nonpoint Source (NPS) Pollution:* NPS pollution comes from many diffuse sources including agriculture (pesticides, herbicides), urban runoff (construction sites, roads, industry, and residential areas), marinas and boating, hydromodification, and mining. Essentially, natural stormwater occurrences flow from the upper reaches of a watershed and travel to lowlands before reaching the watershed's primary waterbody. During this process, debris and contaminants are washed away by the water. For example, this may include motor vehicle fluids left in parking lots, unprotected construction sites with exposed soil, or pet wastes left in a residential neighborhood. NPS pollution is currently the leading cause of pollution to surface and groundwater. The RWQCB addresses NPS pollution by increasing public awareness of NPS issues through education. Part of this educational process is to promote the use of best management practices that are designed to eliminate or reduce the amount of pollution contributed by current practices.

  The City of Colton regulates nonpoint source pollution through educational programs and requirements for use of BMPs. The City enforces BMPs of the *California Stormwater Best Management Practice Handbook* through Title 14 of the Municipal Code. These include operational and structural BMPs designed to reduce and eliminate waste and other pollutant discharges into the storm drain system. The *California Stormwater BMP Handbook* addresses four primary categories of stormwater pollution: new development and redevelopment, construction, industrial/commercial, and municipal. The Handbook provides both source control and treatment control BMP options in order to provide flexibility in implementing BMPs. A common treatment BMP is to install a filter into a storm water catch basin in order to remove contaminants before they reach downstream waterbodies.

- *Perchlorate Pollution:* Perchlorate pollution is particularly relevant to the City of Colton and the planning area because of the high amounts of this substance that have been detected in area groundwater resources. Perchlorate is a hazardous, regulated, chemical substance used in fireworks, airbags, and rocket fuels. It also is the preferred treatment for hypothyroidism. Perchlorate inhibits the ability for the thyroid to absorb iodide from the blood, posing a potential health problem because normal thyroid function is essential in adults by regulating metabolism and in children for proper development. Primary contamination sources involve the manufacturing, testing, or disposal of solid rocket propellant, manufacturing of perchlorate compounds, and industrial operations where perchlorate compounds are used as reagents.

- *Sanitary Sewer Overflow (SSO):* A sanitary sewer overflow is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease. SSOs pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. Typical consequences of SSOs include the closure of beaches and other recreational areas, inundated properties, and polluted rivers and streams. To provide a consistent, statewide regulatory approach to address SSOs, the SWRCB adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems through Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Order specifically prohibits discharges of untreated or partially treated wastewater into waters of the U.S. or any discharge that may result in a nuisance condition. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order.

  In June 2009, the City prepared a Sewer System Management Plan (SSMP) that includes provisions for the proper and efficient management, operation, and maintenance of the system. The SSMP includes a spill response plan in order to minimize water quality impacts and other nuisance conditions. The City has implemented a Fat-Oil-Grease (FOG) program to educate food service establishments in the proper handling FOG. The City also requires most food establishments to install a standard grease interceptor and to adopt and implement BMPs.[33]

- *Total Maximum Daily Loads:* The CWA Section 303(d) requires that states identify waters that do not or are not expected to meet water quality standards (beneficial uses, water quality objectives and the anti-degradation policy) with the implementation of technology-based controls. Once a

waterbody has been placed on the 303(d) list of impaired waters, states are required to develop a Total Maximum Daily Load (TMDL) to address each pollutant causing impairment. A TMDL defines how much of a pollutant a waterbody can tolerate and still meet water quality standards. Each TMDL must account for all sources of the pollutant, including: discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants such as on-site disposal systems (septic systems) and deposits from the air. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from nonpoint sources, including natural background.

California state law (Porter-Cologne Water Quality Control Act, California Water Code Section 13000 et seq) requires the Regional Board to formulate and adopt water quality control plans, or Basin Plans, for all areas within its region. The Basin Plans must include an implementation plan that describes how the water quality standards established in the Basin Plan will be met. TMDLs, with their associated implementation plans, are adopted into the Basin Plans through the Basin Planning process. Lytle Creek and Reach 4 of the Santa Ana River are both impaired due to pathogens and are currently in the process of having TMDLs prepared. Both TMDLs are anticipated to be completed in 2019. TMDLs for both pathogens and nitrates for Reach 3 of the Santa Ana River and downstream of Colton have been adopted.

- *Watershed Management Initiative:* The Watershed Management Initiative (WMI) is developed by each regional water quality control board to prioritize water quality issues to better allocate time and resources. The WMI has established primary water quality concerns for the Upper Santa Ana River Watershed Management Area (WMA) as follows:

    - Wastewater reclamation due to TDS and nitrogen issues
    - Groundwater recharge and water level management
    - Invasive plant eradication

    In order to address these primary concerns, the WMI has established the following priority activities to be initiated by the RWQCB:

    - Santa Ana River monitoring at Prado Dam
    - Participation in the Nitrogen/TDS task force
    - Development of TMDLs for nutrients, pathogens, and suspended solids
    - Participation in the Storm Water Quality Task Force evaluating application of REC1 beneficial use to inland waterbodies

    Priority activities are meant to be implemented solely by the board and do not require any specific action by local agencies, including the City. The Colton groundwater management zone has no assimilative capacity for additional TDS or Nitrate-Nitrogen.

- *Land Disposal:* The Land Disposal Program regulates the discharge of certain solid and liquid wastes. These wastes include municipal solid waste, hazardous wastes, designated wastes, and nonhazardous and inert solid wastes. In general, these wastes cannot be discharged directly to the ground surface without impacting groundwater or surface water; therefore, they must be contained to isolate them from the environment. Active, individual Waste Discharge Requirements (WDRs) are in effect for two facilities within the City pursuant to the Land Disposal Program as summarized in Table 4.9-6 (Land Disposal Program Facilities).[34]

Table 4.9-6
Land Disposal Program Facilities

Facility	Address	Order No.	Effective
Brine Facility (GATX Rail)	20870 Slover Ave.	88-104	10/14/1988
Colton Landfill	850 Tropica Rancho Rd.	91-039	07/19/1991

Source: SWRCB 2010

- *Non-Chapter 15:* The Non-Chapter 15 (NON15) program regulates wastewater discharges from uses that are not covered under the Chapter 15 program discussed above. This program applies to facilities that can discharge to land or surface waters without full containment, do not involve confined animal facilities, and do not involve discharges regulated by the NPDES program. Such regulated facilities can include municipal wastewater treatment plants, industrial facilities, domestic and site sewage disposal systems, reclaimed water facilities, and municipal sludge application sites. Five NON15 program permits have been issued in the City as summarized in Table 4.9-7 (NON15 Program Permits).

Table 4.9-7
NON15 Program Permits

Facility	Address	Order No.	Effective
CalPortland Cement Co.	695 Rancho Ave	78-059	04/14/1978
Colton Water Reclamation Facility	160 S 10th St	2006-0003-DWQ	09/20/2006
Reche Canyon Mobile Home Park	2751 Reche Canyon Rd	77-148	07/0/1992
Tract 16798	Barton Rd @ Reche Canyon Rd	R8-2008-0025	02/29/2008
Hubbard Horse Trans.	12082 Riverside Ave	90-059	05/11/1990

Source: SWRCB 2010

- *Underground Storage Tanks:* This program is administered by the SWRCB and focuses on unauthorized releases or leaks from underground storage tanks (USTs). Underground storage tanks that contain hazardous materials are common sources of groundwater pollution when they begin to leak. Federal and state laws require every owner and operator of a petroleum

underground storage tank (UST) to maintain financial responsibility to pay for any damages arising from their tank operations.

The Barry Keene Underground Storage Tank Cleanup Fund Act of 1989 was created by the California Legislature, and is administered by the California State Water Resources Control Board, to provide a means for petroleum UST owners and operators to meet the federal and state requirements. The Fund also assists a large number of small businesses and individuals by providing reimbursement for unexpected and catastrophic expenses associated with the cleanup of leaking petroleum USTs.

In addition, the Fund also provides money to the Regional Water Quality Control Boards and local regulatory agencies to abate emergency situations or to cleanup abandoned sites that pose a threat to human health, safety, and the environment, as a result of a petroleum release from a UST.

Regional and Local Regulations

San Bernardino Countywide Stormwater Program

The City of Colton is a co-permittee under Santa Ana RWQCB Order No. R8-2010-0036 (NPDES No. CAS618036) that establishes a countywide Stormwater Pollution Prevention Program referred to as the "MS4 Permit" that complies with Section 402 of CWA regulations. The MS4 permit requires all co-permitees to adopt their own municipal stormwater program to address:

- Program management
- Monitoring
- Implementation plans
- Best Management Practices (BMPs)
- Storm drain system inspection and maintenance
- Enforcement

The countywide MS4 permit prohibits illicit connections to the storm drain system and illegal discharges. An illegal discharge is defined as any discharge into the MS4 system that is not storm water unless exempt from the provisions of the NPDES permit. Permittees are required to inspect construction sites, industrial facilities, and commercial facilities to ensure compliance with the MS4 permit. This includes inspection of BMPs that can be activities or facilities that prevent pollution of storm water to the maximum extent feasibly possible. Permittees are required to implement the provisions of the Permit for new development and significant redevelopment. Key components of this program include coverage under the state's General Stormwater Permit for construction and industrial activities, implementation of BMPs, and review and approval of Water Quality Management Plans (WQMP).

Colton General Plan

The objectives, policies, and programs of the City's current General Plan do not address hydrology and water quality issues.[35]

Colton Municipal Code[36]

The City's Municipal Code addresses hydrology and water quality issues through the following sections:

- Title 14, Storm Drains and Floodplain Management: The purpose of this title is to promote the health, safety and general welfare of the inhabitants of the City by controlling discharges into the city's storm drain system. This is accomplished by eliminating all non-permitted discharges to the municipal separate storm sewers, controlling the discharge to the municipal separate storm sewers from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in stormwater discharges to the maximum extent practicable. This title addresses residential, commercial, industrial, and construction activities pursuant to the Countywide NPDES permit requirements. This title also establishes the City's authority for collection of storm drain management fees to address immediate and long-term system operation, administration, maintenance, and improvement.

- Chapter 15.04, California Codes: The City has adopted the 2007 California Building Code (CBC) and other applicable codes pursuant to this Chapter. The CBC includes grading and erosion control provisions requiring implementation of erosion control measures, as necessary.

- Chapter 15.18, Floodplain Management Regulations: The purpose of this chapter is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions. This chapter addresses standards for construction, utilities, subdivisions, and manufactured homes located within flood hazard areas.

Thresholds of Significance

A significant impact could occur if the General Plan Update would:

A. Violate any water quality standards or waste discharge requirements.
B. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
D. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

E. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
F. Otherwise substantially degrade water quality.
G. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
H. Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
I. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
J. Result in inundation by seiche, tsunami, or mudflow.

Environmental Impacts

IMPACT 4.9.A 4.9.F

Implementation of the General Plan Update will not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality.

There are two major classes of pollutants: point-source and non-point-source. Point-source pollutants can be traced to their original source. Point-source pollutants are discharged directly from pipes or spills. Raw sewage draining from a pipe directly into a stream is an example of a point-source water pollutant. Non-point-source pollutants (NPS) cannot be traced to a specific original source. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. These pollutants include:

- Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas;
- Oil, grease, and toxic chemicals from urban runoff and energy production;
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks;
- Salt from irrigation practices and acid drainage from abandoned mines;
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems;
- Atmospheric deposition and hydromodification

Impacts associated with water pollution include ecological disruption and injury or death to flora and fauna, increased need and cost for water purification, sickness or injury to people, and degradation or elimination of water bodies as recreational opportunities.

The proposed General Plan Update does not authorize any specific development activity within the planning area. However, future development consistent with General Plan land use policy has the potential to increase urban runoff form residential, commercial, industrial, institutional, recreational, utility, and roadway

sources. The Land Use Element allows for the potential conversion of open space lands to industrial development within the Agua Mansa industrial Corridor area and in South Colton. Also, open space areas in the northeast portion of the City will be redesignated *Industrial Park.* Associated runoff could increase pollutant loading in downstream waters, such as Lytle Creek and the Santa Ana River.

Accidents, poor site management, or negligence by property owners and tenants can result in accumulation of pollutant substances on parking lots and loading and storage areas, or result in contaminated discharges directly into the storm drain system. The City currently inspects all commercial and industrial development and enforces structural and non-structural BMPs as adopted in site specific SWQMPs to ensure compliance with the City's MS4 and eliminate such discharges. Future industrial and other development supported by the proposed General Plan Update will be subject to the same monitoring and enforcement procedures.

NPDES regulations applicable to the planning area are designed to reduce NPS pollutant loading through the implementation of BMPs and other control measures that minimize or eliminate pollutants from urban runoff, thereby protecting downstream water resources. The City implements NPDES provisions through the requirements of its MS4 permit, which is applicable to all portions of the City. BMPs implemented to address residential pollutant sources generally revolve around educational programs. Commercial and industrial development is subject to annual inspections to ensure implementation of BMPs and educational programs. The County implements NPDES provisions through the same permitting process for the SOI.

Violations of water quality standards due to urban runoff can be prevented through the continued implementation of existing regional water quality regulations and through the successful implementation of the City's local water quality control standards imposed on new development and redevelopment over the long-term. The proposed General Plan Update would not interfere with the implementation of water quality regulations and standards. Therefore, long-term water quality impacts due to non-point sources can be limited to less than significant levels.

Wastewater discharges from the Colton Wastewater Treatment Plant are regulated by the Santa Ana RWCQB through Order R8-2006-0052. The Reclamation Facility is regulated by Order R8-2005-0075. Additional information regarding treatment methods and requirements of Orders R8-2006-0052 and R8-2005-0075 and the plant's treatment method and requirements can be found in Section 4.17 (Utilities and Service Systems). Current and future operations of the reclamation and treatment plants will be subject to these provisions that require secondary or tertiary treatment of all wastewater prior to being utilized as non-potable recycled water or being discharged into the Santa Ana River. Wastewater treatment requirements are based on the Santa Ana River's water's beneficial uses and the ability for that body to accept effluent loads. The General Plan Update will not result in the violation of the plants' wastewater discharge requirements because no direct increase in wastewater will result from the General Plan's adoption. Future development within the plan area will result in increased wastewater production and

therefore increased need for processing. Any increase in pollutant loading in wastewater received at the plant will be subject to the most current wastewater discharge requirements to properly treat all wastes to help maintain the beneficial uses of the Santa Ana River. Nothing in the proposed General Plan Update would change or interfere with the operations of the treatment plants and thus, would have no effect on wastewater discharge requirements for that facility.

IMPACT 4.9.B ***Impacts related to overdrafting of groundwater resources and lowering of groundwater levels will be less than significant based on existing standards and regulations.***

The proposed General Plan Update will not directly impact groundwater supplies or recharge because no development or land alteration activity is authorized by the Update. Future development within the planning area will require additional water services that will come from local groundwater sources. Future development may also impact groundwater recharge by increasing impervious surfaces that could hinder percolation of drainage into subsurface aquifers. Future development could also impact groundwater recharge if existing spreading grounds are altered (e.g. developed upon) without construction of replacement facilities. Additionally, drainage may be directed away from its natural source where it may be deposited in other water bodies. Impacts associated with depleted groundwater supplies included increased demand on out-of-region water resources and the energy and cost associated with the importing of other resources. The lowering of aquifer and groundwater levels in an area can cause existing wells and pumps to become non-functional because they are not designed to extract water below certain depths.

The Colton Water District produced an estimated 13,800 AF in 2010 and is projected to extract 21,600 AF in the year 2030, a 7,800 AF annual increase. All future water production is anticipated to come from local groundwater resources. The applicable UWMP includes programs for the long-term management of area groundwater basins. The primary means of ensuring long-term groundwater level maintenance are water conservation programs. Future groundwater recharge facilities may also be needed to ensure maintenance of groundwater levels. The existing General Plan supports water conservation through use of natural and drought-tolerant vegetation. Implementation of the policies and programs of City's Water Department are designed to ensure groundwater resources are recharged both through natural and assisted means. Water conservation helps to maintain groundwater levels by reducing the need to extract from them.

The groundwater basins of concern are the Bunker Hill, Riverside-Arlington, and Rialto-Colton subbasins, as discussed in *Existing Conditions* above. Each of these basins has been adjudicated, a safe yield limit established to prevent over-drafting of groundwater resources. Water districts are not permitted to extract beyond the judgment included in the adjudication and will not be able to over the long-term. The General Plan Update does not include policies that would interfere with the determination and enforcement of safe yield limits; therefore, under the proposed polices of the General Plan Update, the provisions of the applicable UWMP, and

existing water rights adjudication, impacts to groundwater supplies will be less than significant.

IMPACT 4.9.C 4.9.D

Flooding and sedimentation impacts caused by on- or off-site flooding will be less than significant with implementation of existing City standards.

The proposed General Plan Update will not directly change drainage patterns in the planning area because no land altering activities are authorized by the Update. Future development within the planning area is likely to change drainage patterns that could have the potential to result in on- or off-site erosion, siltation, or flooding.

Short-term and long-term development activities could potentially result in erosion and siltation impacts as a result of alteration of natural drainage patterns. Siltation is the introduction of increased sediment flows into a water body. This can result in the shrinking of the water body, rising surface waters, habitat destruction, faunal injury or death, and flooding as sediments change the natural character of the water body. Siltation is generally associated with activities such as site grading and deforestation. During grading activities, extensive earth moving activities and vegetation removal could alter existing natural drainage patterns. These short-term changes in natural drainage patterns could result in erosion and siltation because water movement across the affected area is increased without natural barriers in place. Vegetation stabilizes soil, reducing its ability to be washed downstream. As development occurs, impervious surfaces (streets, other paved areas, etc.) are constructed that prevent infiltration and increased rates and volumes of runoff. Additionally, drainage courses could be modified based on site design and hydrologic conditions. This could result in the installation of a number of drainage conveyance devices including v-ditches, culverts, retention basins, curbs, and gutters to collect and direct runoff into specified areas. If local and regional storm drainage/flood control systems are not expanded in conjunction with new development, there could potentially be increased flooding downstream of development areas. On-site flooding could occur if site flow patterns are not engineered correctly or if the amount of runoff from the site exceeds the amount that can be conveyed by stormwater control devices. Additionally, if sufficient energy-reducing mechanisms such as rock rip-rap or detention basins are not provided, or if runoff is not diverted effectively through landscaped areas or other places where runoff can settle prior to discharge, there is a potential for runoff to cause scouring and erosion of open land that could generate silt and sediments that could negatively affect downstream waters. Potential impacts associated with flooding are property damage, impeded vehicle circulation and emergency access, injury, and possibly death.

The majority of the planning area is built out with established drainage infrastructure. Lytle Creek as it transects the planning area is channelized, with little opportunity to be altered or rerouted. The Santa Ana River, however, is still in a semi-natural state, although flood control devices such as levees have been

constructed along certain reaches. Vacant land within the urbanized portions of the planning area contribute to localized drainage conditions, however, development of these lands will not result in the major alteration of any streams or drainage courses because of the existing drainage infrastructure.

The stream alteration potential by future development exists primarily on the banks of the Santa Ana River, where undeveloped lands in the South Colton area and the Pellisier Ranch area and Agua Mansa Industrial Corridor Specific Plan area interface with the River. The City has adopted existing regulations that minimize on- and off-site flooding, erosion, and sedimentation impacts. The floodplain management regulations of the Municipal Code is specifically designed to prevent and regulate unnatural diversion of drainage that could result in flooding in other areas and also addresses potential damage associated with fluvial erosion. Development of storm drainage facilities is subject to the standard designs of the City's Engineering Division. Detail Standards series 200 provide a uniform method for adequate construction of storm drain facilities including catch basins, pipe bedding, culverts, and drop inlets. Implementation of these standards ensures that drainage facilities are designed to effectively transport storm water and thereby minimize on-site and off-site flooding due to development associated with changes in drainage patterns. Impacts related to drainage and on- or off-site flooding and sedimentation will be less than significant.

IMPACT 4.9.E ***Impacts related to polluted urban runoff and storm drain capacity will be less than significant with implementation of existing standards and regulations.***

The proposed General Plan Update would not directly result in an increase in stormwater flows or pollutants because no land altering activity, development, or other construction activity is authorized by the Update. Future development within the planning area could potentially increase stormwater flows into the existing storm drain system, mainly due to an increase in impervious surfaces that inhibit infiltration of stormwater. The increase in development and therefore impervious surfaces also increases the amount of urban runoff that generally increases the amount of pollutants within the stormwater.

The City's Engineering Department requires hydrology and stormwater discharge review during the City's standard development review process. Conditions of approval are issued based on the project's drainage needs pursuant to municipal NPDES permit requirements and standard engineering practices. Stormwater quality is discussed in Impact 4.9.A and notes that adherence to NPDES requirements for the implementation of BMPs during construction and throughout project operation will ensure that stormwater discharges do not introduce excessive pollutants to downstream water bodies. Post-construction BMPs are implemented through preparation of a Water Quality Management Plan (WQMP) to identify site design, structural and non-structural source control, and treatment control BMPs applicable to individual projects. NPDES and City stormwater discharge requirements implementation will ensure that excessive pollutants are not

discharged into the storm drain system and that impacts to downstream water quality will be less than significant.

On- and off-site drainage control and storm drain design is reviewed through applicant submission of hydrology reports and storm drain plans.[37] Drainage design is required to comply with the City's Master Plan of Drainage. Streets must carry the 10-year flood from curb to curb and the 100-year flood within its right-of-way. Retention basins must be sized to control the 100-year frequency flood with a minimum 2-inch per hour percolation rate. Standard drainage analysis and design practices will ensure that future development does not exceed the capacity of the existing or planned storm drain system. Additionally, fees are required pursuant to Section 14.01.050 (Stormwater Management Charges, Collection, and Adjustments) to pay for operation, administration, maintenance, improvement, environmental restoration, and replacement of the existing and future storm drainage system. Impacts related to storm drain capacity will be less than significant with implementation of existing standards.

Scoping Comment, City of Grand Terrace

The City of Grand Terrace requested that the General Plan Update EIR analyze potential impacts to the City of Grand Terrace due to changes in drainage patterns. Changes in drainage patterns and potential impacts are discussed above.

IMPACT 4.9.G ***Impacts due to the placement of housing within 100-year flood zones will not occur as a result of implementation of the General Plan Update.***

The proposed General Plan Update does not authorize any residential construction and therefore could not directly result in the placement of housing within flood hazards areas. Residential properties along Award Drive in the northeastern portion of the City are currently located within the Zone A, 100-year flood hazard zone. The proposed Land Use Element Update does not include land use changes that would increase residential densities in this area; therefore, potential redevelopment of these areas over the long-term are not anticipated to place additional housing within flood hazard zones over those currently existing. The proposed General plan Update does not include any land use changes that would support residential development in flood hazard zones. No impacts to residential development as a result of potential flooding will occur.

IMPACT 4.9.H ***Impacts related to the diversion of floodwaters will be less than significant with implementation of existing City regulations.***

The proposed General Plan Update will not directly place structures within a floodplain that could redirect or impeded flood flows because no construction activity is authorized by the Update; however, development within portions of the Santa Ana River area could potentially place structures within a floodplain, such as roads, bridges, commercial development, and drainage control facilities. These

structures would be subject to the Floodplain Management Regulations (Chapter 15.18 of the Municipal Code) that require hydrological evaluation would be required to ensure that minimal diversion of floodwaters occurs and the development standards are implemented to prevent flooding of on- and off-site uses. These regulations specifically prohibit construction of structures that could cause or divert floodwaters without appropriate site planning and structural design. Implementation of existing regulations will reduce impacts associated with the potential diversion of floodwaters to less than significant levels.

IMPACT 4.9.I ***Impacts related to inundation due to dam or levee failure will be less than significant with implementation of existing Federal and County regulations.***

The proposed General Plan Update provides for the opportunity of development within the City's northeastern area's Industrial Park land use designation. This area is subject to inundation due to failure of the Seven Oaks Dam and failure of Levee ID 4964. The Industrial Park land use designation is also located near the intersection of Mt Vernon Avenue and Cooley Drive. This area is subject to inundation due to failure of Levee ID 13544. Portions of the Pellisier Ranch area are also subject to inundation should levees in the southern reach of the Santa Ana River fail. Over the long-term, core levees in the Colton area will be subject to recertification by the County and accreditation by FEMA. The General Plan Update would not interfere with the County's responsibilities in recertifying any levee within or protecting the planning area. Continued maintenance of area levees in accordance with Federal law will provide sufficient safeguards against potential damage due to levee failure. The proposed General Plan Update would not authorize any flood control solutions that would not meet federal and County flood control standards. Impacts due to levee failure will be less than significant.

The National Dam Safety Act of 2006 authorized a program to reduce the risks to life and property from dam failure by establishing a safety and maintenance program. The program requires regular inspection of dams to reduce the risks associated with dam facilities. The Seven Oaks Dam received final certification in 2011 and is designated for a five-year inspection schedule. Furthermore, all dam operators are required to submit an evacuation plan for review and approval by the State Office of Emergency Services (OES). The evacuation plan for the Seven Oaks Dam is on file with the US Army Corps of Engineers. The Seven Oaks Dam evacuation plan has been prepared in accordance with the Federal Guidelines for Dam Safety. The evacuation plan identifies modes of dam failure, maps inundation areas, classifies hazard potential within inundation areas, determines available time for response under slow, rapid, or instantaneous failure scenarios, and establishes notification procedures. Continued inspection and maintenance of the Seven Oaks Dam and the procedures outlined in the evacuation plan are considered adequate precautions to reduce impacts due to potential dam inundation to less than significant.[38] [39]

IMPACT 4.9.J

Impacts associated with mudflows, tsunami, and seiche will be less than significant with implementation of existing City regulations.

The proposed General Plan Update will not directly subject people to mudflow hazards because no construction, development, or other land alteration is authorized by the Update. The potential for mudflow is minimal throughout the majority of the planning area because of the generally level grade and lack of hillsides and floodplains. However, the southern portion of the planning area is subject to mudflows from the Box Springs Mountains, where the proposed Land Use Map would allow some residential and commercial development within portions of the canyons' floodplain that are potentially vulnerable to mudflows during heavy storms. The City's Floodplain Management Regulations address debris flow hazards and sets provisions for the identification and minimization of hazards within floodways. Regulations identify anchoring, construction materials and methods, elevation and floodproofing as methods for fortifying structures against water and debris flows. Future development within the planning area will be subject to this ordinance to prevent hazards from mudflows and other debris flow issues. The proposed General Plan Update would not change or hinder the implementation of these ordinances. Therefore, impacts associated with mudflow hazards will be less than significant.

Due to the planning area's distance from the Pacific Ocean, no portion of the City is subject to tsunami hazards. There are no open reservoirs or other bodies of water within the planning area that could expose development to seiche hazards.

Mitigation Measures

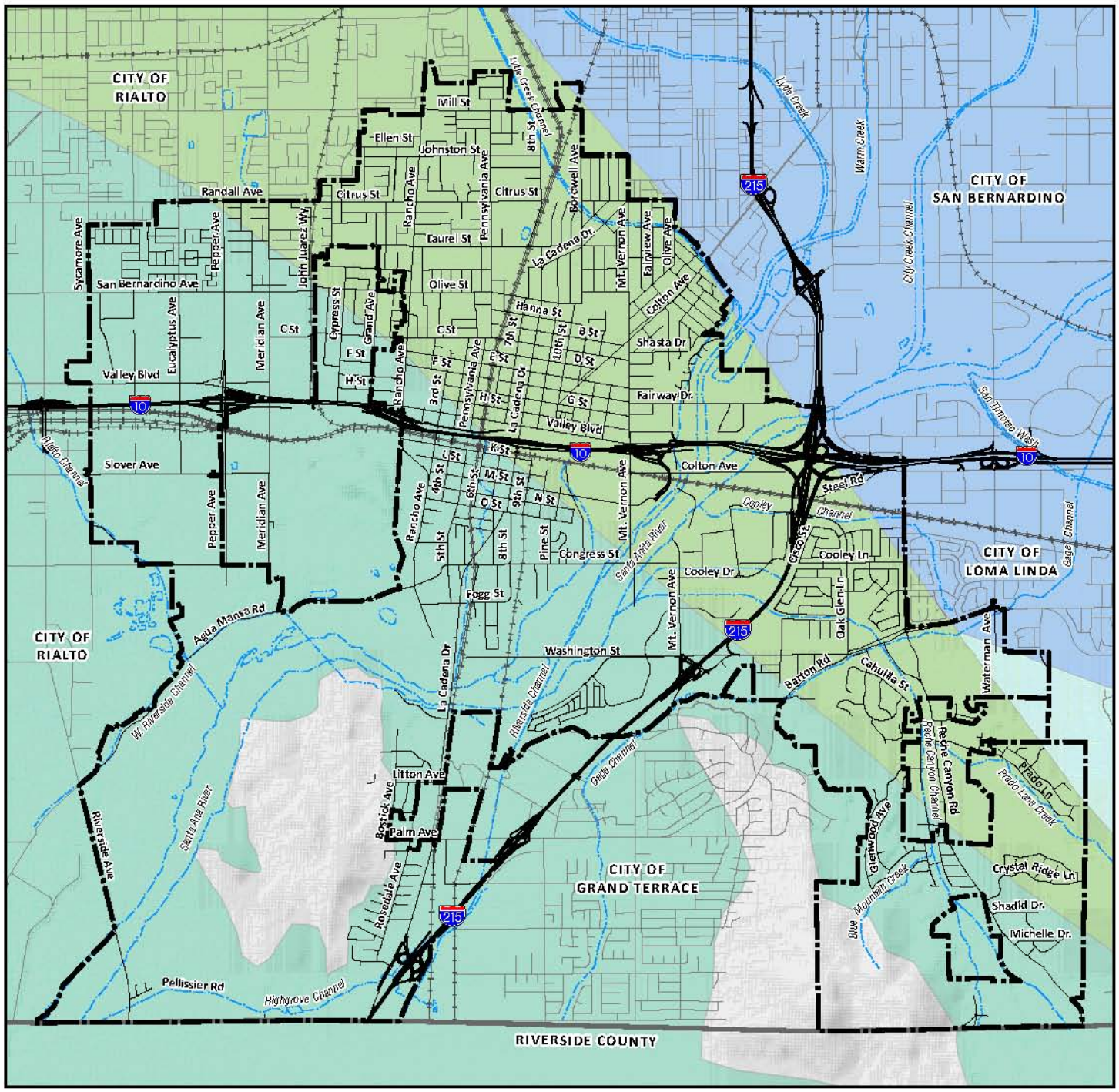
None required

Level of Significance with Mitigation Incorporated

Not applicable



This page intentionally left blank



Upper Santa Ana Valley Groundwater Sub-Basins

- Bunker Hill
- Rialto-Colton
- Riverside-Arlington
- San Timoteo

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroad
- Surface Water

Source: Department of Water Resources. Groundwater Basins (B118v3NAD27UTM10.shp). Available URL: http://www.water.ca.gov [Accessed March 17, 2010].

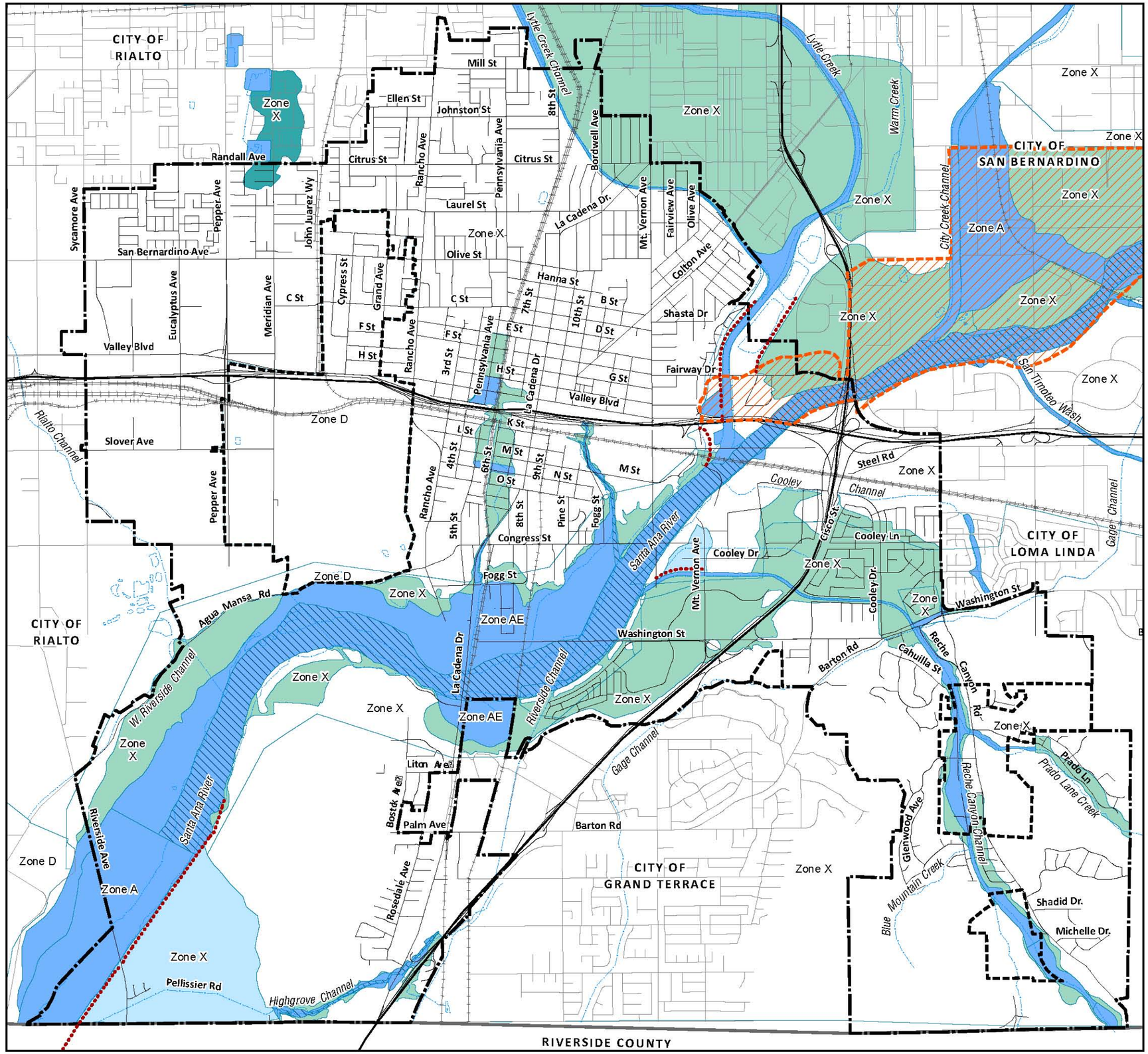
0 0.25 0.5 0.75 1 Mile

Exhibit 4.9-2

Groundwater Basins and Surface Waters

This Page Intentionally Left Blank

Exhibit 4.9-3
Hydrologic Hazards



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD.

The 1% annual flood (100-year flood), also known as the base flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazards include Zones A, AE, AH, and AO. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevation determined.
ZONE AE	Base Flood Elevation determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base flood Elevation determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encrochment so that the 1% annual chance flood can be carried without substannial increases in flood heights.

Other Flood Areas

ZONE X	Areas of 0.2% annual chance flood.
ZONE X	Areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.
ZONE X	Areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain
ZONE D	Areas in which flood hazards are undetermined, but possible

Dam Inudation Area

Flood Control Levees

City Boundary

Sphere of Influence

County Boundary

Freeway

Street

Railroad

Surface Water

Use constraints:
This is not an offtial map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For offtial laundary information, the peripnert Agency or Municipality should be contacted. This map is a representaton of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source: Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps (FIRM), Effective Date 8/28/2008; FIRM - Revised to Reflect LOMR, Effeceve Date 11/15/2010.
Department of Water Resources, Division of Flood Management, Floodplain Management Branch, 2/2/2010.

0 0.25 0.5 0.75 1 Mile

This Page Intentionally Left Blank



References

[1] California Regional Water Quality Control Board. *Santa Ana Region. Water Quality Control Plan*. February 2008
[2] California Watershed Portal. Watershed Browser. Santa Ana (HU). http://cwp.resources.ca.gov/calw_browse.php [February 4, 2010]
[3] United States Geological Survey. Open File Report 2005-1278. Routing Diagram of Surface-Water Flow in San Bernardino Area, California, 1998. 2006
[4] California Regional Water Quality Control Board. Water Quality Control Plan. February 2008
[5] California Department of Water Resources. California's Groundwater, Bulletin 118. Bunker Hill Subbasin. February 27, 2004
[6] San Bernardino Valley Municipal Water District. *2010 San Bernardino Valley Regional Urban Water Management Plan*, 2011
[7] California Department of Water Resources. California's Groundwater, Bulletin 118. Riverside-Arlington Subbasin. February 27, 2004
[8] San Bernardino Valley Municipal Water District. *2010 San Bernardino Valley Regional Urban Water Management Plan*, 2011
[9] California Department of Water Resources. California's Groundwater, Bulletin 118. San Timoteo Subbasin. February 27, 2004
[10] San Bernardino County. *General Plan. Hazard Overlay*, FH30B. May 29, 2007
[11] California Division of Dam Safety. Dams Within the Jurisdiction of the State of California. http://www.water.ca.gov/damsafety/docs/Jurisdictional1.pdf [February 16, 2010]
[12] Riverside County. *General Plan.* 2003
[13] California Department of Water Resources. California Levee Database. Colton. [February 10, 2010]
[14] Federal Emergency Management Agency. Flood Insurance Rate Map. Map No. 06071C8688H. August 28, 2008
[15] Federal Emergency Management Agency. Flood Insurance Study. San Bernardino County, California and Incorporated Areas. August 28, 2008
[16] Federal Emergency Management Agency. Flood Insurance Rate Map. Map No. 06071C8683H. August 28, 2008
[17] Federal Emergency Management Agency. http://msc.fema.gov/webapp/wcs/stores/servlet/LOMCDisplayView [May 9, 2012]
[18] United States Army Corps of Engineers. Institute for Water Resources. Levee Certification for the National Flood Insurance Program (NFIP): USACE Fact Sheet. October 2, 2006
[19] Federal Emergency Management Agency. Flood Insurance Rate Map. Map No. 06071C8691H. August 28, 2008
[20] California Geological Survey, CGS Note 33. Hazards from Mudslides. http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_33/Pages/index.aspx [February 16, 2010]
[21] California State Water Resources Control Board. *Nonpoint Source Program Strategy and Implementation Plan, 1998-2013*. January 2000
[22] California State Water Resources Control Board. *Fact Sheet: Policy for the Implementation and Enforcement of the Nonpoint Source pollution Control Program.* March 20, 2004

[23] California State Water Resources Control Board. Storm Water Program: Municipal Program. www.waterboards.ca.gov/water_issues/programs/stormwater/municipal.shtml [February 17, 2010]
[24] California Regional Water Quality Control Board. Santa Ana Region. Order No. R8-2010-0036, NPDES No. CAS6108036. January 29, 2010
[25] California State Water Resources Control Board. Storm Water Program: Industrial Storm Water. www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.shtml [February 17, 2010]
[26] California State Water Resources Control Board. Active Industrial Storm Water Permittees: Colton. water101.waterboards.ca.gov/dwqdas/stormwater/search/IndSearch.asp [February 17, 2010]
[27] California State Water Resources Control Board. Storm Water Program: Construction Storm Water Program. www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml [February 17, 2010]
[28] California State Water Resources Control Board. *Construction General Permit Fact Sheet.* September 2, 2009
[29] California State Water Resources Control Board. California Integrated Water Quality System. Regulated Facilities Report: Colton. ciwqs.waterboards.ca.gov/ciwqs/readOnly/ciwqsReportRegulatedFacilitiesCriteria.jsp?command=resetCriteria [February 18, 2010]
[30] California Water Code. Division 7: Porter-Cologne Water Quality Control Act. January 1, 2010
[31] California Regional Water Quality Control Board. Santa Ana Region. Water Quality Control Plan. February 2008
[32] California Regional Water Quality Control Board. Santa Ana Region. Santa Ana Region – Programs. www.swrcb.ca.gov/santaana/water_issues/programs/index.shtml [February 17, 2010]
[33] City of Colton. Wastewater Department Fats, Oil, & Grease (FOG) Control Program. www.ci.colton.ca.us/Documents/water/ww/FOG%20Control%20Program.pdf [April 14, 2010]
[34] California State Water Resources Control Board. California Integrated Water Quality System. *Regulated Facilities Report: Colton.* ciwqs.waterboards.ca.gov/ciwqs/readOnly/ciwqsReportRegulatedFacilitiesCriteria.jsp?command=resetCriteria [February 18, 2010]
[35] City of Colton. *General Plan. Open Space and Conservation Element.* 1987
[36] City of Colton. Municipal Code.
[37] City of Colton. Public Works/Engineering Department. Storm Drain Plan Review Checklist.
[38] United States of America. National Dam Safety Act. Public Law Sections 109-406. 2006
[39] Federal Emergency Management Agency. Federal Guidelines for Dam Safety. April 2004

Land Use & Planning 4.10

This section describes the existing land use pattern and land use planning/regulatory framework in the City of Colton and in its Sphere of Influence (SOI). This section evaluates potential long-term land use impacts such as physically dividing an established community and consistency with environmental planning efforts. This section does not evaluate potential impacts on habitat conservation or natural community conservation plans; this issue is discussed in Section 4.4 (Biological Resources). No comments regarding land use and population were received in response to the Notice of Preparation or at the public scoping.

Existing Conditions

Historic Land Use Trends

Colton traces its beginnings to the late 1700s, when explorers from Mexico first passed through on their way north to Monterey. The first permanent settlement occurred in the early 1800s as part of two large, privately owned ranchos, Jurupa and San Bernardino. The ranchos were gradually subdivided, and smaller ranches and citrus orchards dotted the area. With the extension of the Southern Pacific Railway through the area in 1875, a formal town was laid out on a traditional grid street pattern, as evidenced today in Colton's downtown. The City formally incorporated in 1887.

Existing Land Use Distribution

State law enables a General Plan to address the area within the boundaries of an adopting City as well as any unincorporated land outside its boundaries that (in the planning agency's judgment) bears relation to its planning efforts. Colton's SOI includes:

- a 772-acre 'island' that includes the California Portland Cement Plant as well residential neighborhoods and commercial strips;
- a 15-acre parcel just west of Barton Road at the southern border of the City; and
- two areas within the Reche Canyon Specific Plan totaling 319 acres.

Exhibit 4.10-1 (Existing Land Use) depicts the existing land uses in the planning area, and Table 4.10-1 (Existing Land Use Summary) summarizes the distribution of land uses by major categories. The planning area is approximately 9,932 acres with 8,824 acres located within the City and 1,109 acres in the SOI.

Vacant land is the predominant land use category totaling 3,356 acres or 33.8 percent of the planning area. Most of the vacant land is located within the Pellissier Ranch/La Loma Hills area. Residential land use is the second largest land use category, covering 27.3 percent of the planning area. As shown in Table 4.10-2

(Existing Land Use Distribution Details), Low Density Residential represents the largest residential land use.

Table 4.10-1
Existing Land Use Summary

Land Use Category	Acres	Percent
Residential	2,710	27.3%
Commercial	373	3.8%
Industrial	1,620	16.3%
Public Institution/Railroad/Utility Corridor	769	7.7%
Open Space	1,103	11.1%
Vacant	3,356	33.8%
TOTAL	9,932	100.0%
Source: Hogle-Ireland, Inc., 2012		

Residential uses occur throughout Colton at varying development densities. The highest residential densities (ranging from 14.1 to 22 dwelling units per acre) are found in the multi-family developments along Fairway Drive in the eastern portion of the City, along Washington Street and Barton Road in the southern portion of the City, and in the mobile home parks along Ellen Street in the north. The lowest residential densities are in the Reche Canyon Specific Plan area, which average about one dwelling unit per acre. Smaller lot residential development surrounds the City's historic downtown, and suburban tract homes generally comprise the remainder of the housing stock. Commercial uses are focused in the Cooley Ranch area as well as along Valley Boulevard and La Cadeña Drive. Industrial and warehouse facilities are clustered in south Colton, and along the Union Pacific and BNSF rail lines that transect the planning area.

Table 4.10-2
Existing Land Use Distribution Details

Designations		Net Acres			Dwelling Units			Population			Non-Residential Square Feet		
		City	Sphere	Total	City	Sphere	Total	City	Sphere	Total	City	Sphere	Total
VLD	Very Low Density Residential	304	216	520	486	345	832	1,541	1,094	2,636	-	-	-
LD	Low Density Residential	1,485	162	1,647	8,165	892	9,057	25,871	2,825	28,695	-	-	-
MD	Medium Density Residential	363	2	365	4,647	28	4,675	14,724	88	14,812	-	-	-
HD	High Density Residential	173	5	178	3,050	90	3,140	9,662	286	9,947	-	-	-
CO	Commercial Office	67	-	67	-	-	-	-	-	-	587,400	-	587,400
LC	Local Commercial	45	1	46	-	-	-	-	-	-	491,700	13,000	504,700
GC	General Commercial	260	-	260	-	-	-	-	-	-	2,833,400	-	2,833,400
IP	Industrial Park	40	-	40	-	-	-	-	-	-	344,300	-	344,300
LI	Limited Industrial	574	3	577	-	-	-	-	-	-	4,999,400	29,500	5,028,900
HI	Heavy Industrial	425	578	1,003	-	-	-	-	-	-	1,851,500	2,516,600	4,368,100
PF	Public/Institution	635	-	635	-	-	-	-	-	-	-	-	-
RR	Railroad/Utility Corridor	121	12	134	-	-	-	-	-	-	-	-	-
								-	-	-			
OS-R	Open Space - Recreation	105	-	105	-	-	-	-	-	-	-	-	-
OS-RS	Open Space - Resource	983	15	998	-	-	-				-	-	-
								-	-	-			
VAC	Vacant	3,243	114	3,356	-	-	-				-	-	-
		8,824	**1,109**	**9,932**	**16,349**	**1,355**	**17,704**	**51,797**	**4,293**	**56,091**	**11,107,700**	**2,559,100**	**13,666,800**

Source: Hogle-Ireland, Inc., 2012

This Page Intentionally Left Blank

Existing Planning and Regulatory Framework

Southern California Association of Governments/SANBAG

The Southern California Association of Governments (SCAG) is responsible for regional planning in the southern California area. SCAG provides a framework to coordinate local and regional decisions regarding future growth and development and prepares future growth forecasts for the region. As the designated Metropolitan Planning Organization for the area, SCAG is mandated by the federal government to research and develop plans for transportation, growth management, hazardous waste management, and air quality based on the regional growth projections.

As SCAG is the largest MPO in the United States, it has subregional councils of government to provide for the subregions' land use and transportation planning at a more local level. The subregional council for Colton and San Bernardino County is the San Bernardino Association of Governments (SANBAG).

San Bernardino County LAFCO

The San Bernardino County Local Agency Formation Commission (LAFCO) is a state-mandated, independent agency with countywide jurisdiction over changes in organization and boundaries of cities and special districts within San Bernardino County, including Colton. The San Bernardino LAFCO has the responsibility to limit urban sprawl, prevent future conversions of agricultural and open space lands, review and approve changes in boundaries, establish City and County sphere of influence, and assist local government agencies in improving the efficiency of urban services.

County of San Bernardino General Plan

The plan area contains unincorporated areas that are within the City's SOI and, thus, under the jurisdiction of the San Bernardino County General Plan. The San Bernardino County General Plan, adopted in 2007, guides land use decision-making in unincorporated sections of the County. Land use within the unincorporated portions of the plan area is governed by the County's General Plan. The San Bernardino County General Plan includes multiple goals and policies relating to unincorporated areas that serve as a coordination tool and guide to development and the local decision making process. The County General Plan includes policies related to land use, conservation, open space, circulation and infrastructure, seismic and safety, noise, economic development, and housing. The County General Plan allows for 1,172 dwelling units and 2,148,558 square feet of industrial use in the Colton SOI using the County's land use designations.

City of Colton General Plan

The General Plan, required for every municipality by the State of California, is the City's most comprehensive community planning document. Any planning or zoning actions the City takes must be consistent with the adopted General Plan. The

General Plan consists of several mandatory elements, along with any optional elements. Colton's General Plan includes the following required and optional elements, listed with the year they were last updated:

- Land Use (1987)
- Circulation (1993)
- Housing (2002)
- Noise (1987)
- Open Space and Conservation (1987)
- Safety (1987)
- Model Air Quality (1992)
- Cultural Resources (2000)

The adopted General Plan includes the land use designations shown in Table 4.10-3, below (Existing General Plan Land Use Designations).

Table 4.10-3
Existing General Plan Land Use Designations

Designation	Density (du/a)	Intensity (FAR)	Description
Residential Estates	Up to 2		Very low density residential development in a primarily non-urbanized environment
Low Density Residential	Up to 8		Low density residential development in a suburban style
Medium Density Residential	Up to 16		A range of residential land uses including but not limited to small lot single family residential, duplexes, triplexes development, and small scale multi-family uses
High Density Residential	Up to 22		Relatively high intensity residential uses typified by four-plex developments and garden apartment or similar three-story unit types.
Limited Commercial		Not specified in General Plan	A limited range of commercial uses typical of a convenience or neighborhood center anchored by a local store and catering to the day-to-day shopping needs of surrounding residents.
General Commercial		Not specified in General Plan	A full range of commercial activities
Office/Business Park		Not specified in General Plan	Land uses intended, primarily, to meet the business needs of industrial or manufacturing employers and employees. Uses can include offices and other business that service industrial uses.
Industrial Park		Not specified	Master planned industrial parks with a

Table 4.10-3
Existing General Plan Land Use Designations

Designation	Density (du/a)	Intensity (FAR)	Description
		in General Plan	high level of visual amenities and high quality design standards.
Light Industrial		Not specified in General Plan	Low-intensity industrial uses such as packing, assembly, storage, and similar uses that do not adversely affect surrounding residential, office, educational or commercial land uses.
Heavy Industrial		Not specified in General Plan	Intensive industrial activities that can include heavy manufacturing, distribution, assembly, resource extraction, storage, and similar activities not normally compatible with residential uses in close proximity.
Public Uses		Not specified in General Plan	Major public and quasi-public uses, such as the Civic Center, fire stations, future hospitals, cemeteries, libraries, and schools.
Permanent Open Space		Not specified in General Plan	Areas unsafe for human habitation due to environmental hazards.
Agriculture		N/A	Areas currently devoted to agriculture or agriculturally related pursuits.
Parks/Recreation		N/A	Present and future publicly-owned parks and recreation facilities as well as larger privately owned facilities devoted to passive and active outdoor recreational pursuits.
Multi-Use Area		Not specified in General Plan	Multi-Use Area designation permits a two-pronged approach by allowing existing parcels to be used for residential or commercial activities, subject to aesthetic upgrades, and by encouraging more significant residential and commercial projects in the future using density bonuses and design modifications based on the size of the development site.
Planned Community Development		Not specified in General Plan	Encourages sustained growth and investment by minimizing governmental constraints, providing for design flexibility, higher quality of improvements, and/or minimizing constraints to land use location. The Planned Community Development designation has been explicitly identified for the Cooley Ranch area.
Specific Plan		N/A	Specific Plans bridge the gap between the broad focus of the General Plan

Table 4.10-3
Existing General Plan Land Use Designations

Designation	Density (du/a)	Intensity (FAR)	Description
			and the lot-by-lot focus of the Zoning Ordinance.

Source: City of Colton. General Plan. 1987

Issues and goals addressed in the General Plan are listed below by element.

Land Use Element

- To create a balanced land use pattern that serves the residential, commercial, industrial, and open space needs of the community
- To promote future development in a manner consistent with the availability of infrastructure
- To encourage a diversity of residential land uses
- To encourage economy in delivering public services in cases where this is an issue
- To encourage the taking into consideration of environmentally sensitive or hazardous areas where they are encountered
- To establish a healthy and well-balanced commercial community within the City

Circulation Element

- Develop a transportation system that is safe, convenient, efficient, and provides adequate capacity to meet local and regional demands
- Encourage the use of alternate transportation modes
- Separate vehicular traffic associated with commercial, manufacturing, and agricultural uses from residential neighborhoods
- Provision of suitable off-street parking to promote freer and safer movement along roadways

Housing Element



- To utilize public agency resources when possible to increase lower income housing opportunities
- Upgrade and conserve housing units to maintain community character
- Conserve community character and property values by removing blighted structures and facilitating the rehabilitation and maintenance of properties in disrepair
- Promote private industry as the primary and central source for housing production and rehabilitation
- Support efforts to eliminate housing discrimination on the basis of race, color, religion, national origin, age, sex, or family status
- Encourage citizen participation in the planning process

Noise Element

To achieve and maintain an environment where noise is compatible with human activities interacting with a variety of land uses

Open Space and Conservation Element

- Establish and maintain an open space and conservation system that will ensure the conservation and wise use of valuable resources and will meet local and regional open space needs
- Preserve and protect hillsides and other environmentally sensitive areas
- Ensure a wide range of passive and active recreational uses
- Protect open space needed for the preservation of air quality, water quality, water supply, and other environmental resources
- Protect significant mineral resources from irreplaceable extraction
- Establish education and incentive programs for energy and resource conservation
- Protect outstanding scenic vistas and visual features
- Beautify streets through litter cleanup, street tree planting, and landscaping

Safety Element

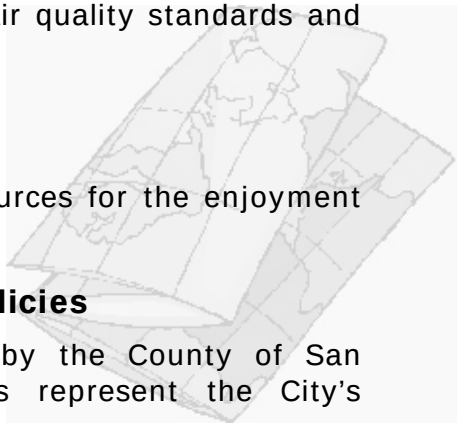
- Avoid or prevent damage from natural or man-made hazards by assessing their nature and location, taking steps to control them, and guiding human activities away from areas in which correction is not feasible
- Minimize unavoidable or preventable losses by requiring a thorough analysis of the geologic environment prior to design approval, and providing or requiring safe design, construction, and maintenance practices
- Take emergency action to save lives and property during or immediately following a natural or man-made disaster

Model Air Quality Element

- Achievement of state and federal air quality standards while maintaining economic growth
- Using market incentives where feasible to achieve air quality standards and regulation where not

Cultural Resources Element

- Identify and protect Colton's rich archeological resources for the enjoyment of future generations



City of Colton v. Sphere of Influence Land Use Policies

Land use policies within the City's SOI are governed by the County of San Bernardino General Plan. City land use designations represent the City's preferences and intent on governing the land, if annexed.

There are two major differences between the San Bernardino County and Colton General Plan land use designations in the SOI. The first difference regards an area just north of the California Portland Cement Plant, on the north side of the I-10 Freeway. The City's General Plan designates this area as Heavy Industrial (HI), whereas the County designates it as General Commercial (CG), which matches the existing land uses. This discrepancy likely arises from the age differences between the two plans; the County plan was adopted in 2007, whereas the City's dates to 1987. In this case, the County's Plan more accurately represents on-the-ground conditions. The second major difference regards the residential neighborhood that begins half a block north of Valley Boulevard, ends at G Street, between half a block east of Cypress Avenue and Kelly Lane. In this case, the County designates the area as Multiple Residential (RM), while the City designates it as High Density (HD). Here, the City's designation, which allows for up to 22 dwelling units per acre, much more closely reflects the area's existing conditions than the 2 dwelling units per acre allowed by the County.

Table 4.10-4 (SOI Land Use Designations Comparison) provides a brief comparison

Table 4.10-4
SOI Land Use Designations Comparison

City of Colton		County of San Bernardino	
Designation	*Density/Intensity*	*Designation*	*Density/Intensity*
High Density (HD)	Up to 22 du/ac	Multiple Residential (RM)	2 du/ac
Low Density (LD)	Up to 8 du/ac	Single Residential (RS)	4 du/ac
Heavy Industrial (HI)	Not specified in General Plan	General Commercial (CG)	0.5 FAR
		Agua Mansa Specific Plan	N/A
Reche Canyon Specific Plan	N/A	Single Residential -1 (RS-1)	1 du/ac

City of Colton Zoning Code

The City of Colton Zoning Code is the General Plan's primary implementation tool. Whereas the General Plan is a policy document and sets forth direction for land use policy-level decisions, the Zoning Code is a regulatory document that establishes specific standards for the use and development of all properties in the City. The Code regulates development intensity using a variety of methods, such as setting limits on building setbacks, yard landscaping standards, and building heights. The Code also indicates the permitted land uses in the various zones.

Specific Plans

A specific plan is a detailed plan for the development of a particular area. Specific plans provide specifications for the permitted land use types, development standards (setbacks, heights, landscape, architecture, etc), circulation, and infrastructure improvements that are broadly defined by the General Plan. By law,

a specific plan must be consistent with the General Plan. Specific plans are often used to ensure multiple property owners and developers adhere to a single common development plan, as well as to provide flexibility in development standards beyond those contained in the zoning ordinance as a means of achieving superior design.

There are four adopted specific plans, one community plan, and one proposed amendment to an existing specific plan within the City of Colton. Together, these cover a significant portion of the planning area.

Exhibit 4.10-2 (Specific Plans and Planned Communities) shows the location of the Specific Plans in accordance with the following Specific Plan documents.

Agua Mansa Industrial Corridor Specific Plan - 1986

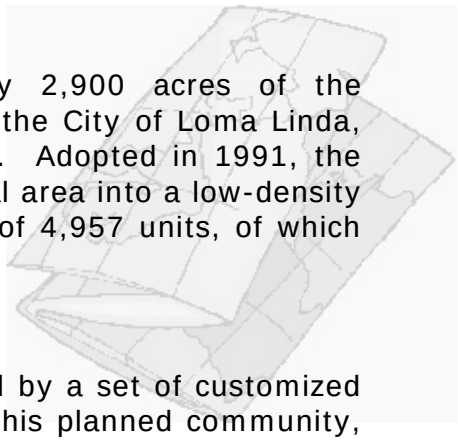
The Agua Mansa Industrial Corridor Specific Plan is intended to be a master plan for the economic development of the 4,285 acre project area that comprises segments of unincorporated San Bernardino and Riverside Counties and the Cities of Colton and Rialto. The Agua Mansa Corridor is located southwesterly of the junction of I-10 and I-215 on the westerly bank of the Santa Ana River. The study area is bounded by Interstate 10 on the north, the Santa Ana River and Rancho Avenue on the east, Market Street and Rubidoux Boulevard on the southwest, and the unincorporated community of Bloomington to the west. In Colton, the Specific Plan primarily encompasses the California Portland Cement Plant area. The land use trend within the study area has been primarily towards heavy industrial development. In recognizing the trend towards concentrated industrial activities (particularly large, land-intensive operations), the four local jurisdictions have adopted appropriate land use designations and zoning districts in the plan area.

Santa Ana River Redevelopment Project Specific Plan

The Santa Ana River Redevelopment Project Specific Plan, adopted in 1984, establishes standards and requirements appropriate to encourage industrial development on 143 acres of land west of Hunts Lane and south of the I-10 Freeway. The Ashley Furniture manufacturing plant takes up much of the land in the plan.

Reche Canyon Specific Plan

The Reche Canyon Specific Plan covers approximately 2,900 acres of the southeastern portion of the City. It covers some area in the City of Loma Linda, and is bounded to the west by the City of Grand Terrace. Adopted in 1991, the Plan manages the orderly transformation of the largely rural area into a low-density suburban development. The plan targets the construction of 4,957 units, of which 1,941 are in the City of Loma Linda.



Cooley Ranch Planned Community

The Cooley Ranch Planned area's development is regulated by a set of customized standards laid out in the City of Colton Zoning Code. In this planned community,

high density residential uses are permitted, along with shopping center and neighborhood commercial development.

West Valley Specific Plan

The West Valley Specific Plan encompasses two areas west of Downtown Colton. The areas are separated by a residential island of unincorporated County land. For the west area, the West Valley Specific Plan encourages an ancillary business-industrial park, medical office, commercial, and hotel development surrounding the San Bernardino County Medical Cener. The plan for the east area allows for a mix of single-family residential, commercial, and mixed-use development that complements Downtown and Colton High School.

West Valley Specific Plan Amendment - Proposed

The western area of the West Valley Specific Plan has experienced a lack of development because development projects have faced prohibitive environmental constraints due to Delhi Sands Flower-Loving Fly (an endangered species native to this section of the Inland Empire) habitat. As such, the West Valley Specific Plan Amendment creates a habitat conservation plan for the Delhi Sands Flower-Loving Fly and reconfigures the allowed uses resulting in the potential for 1,293 multi-family residential units.

Thresholds of Significance

The Land Use Element, Circulation Element, and Housing Element updates could result in a significant land use impact if it:

A. Physically divides an established community.
B. Conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.
C. Conflict with any applicable habitat conservation plan or natural community conservation plan?

General Plan Update Changes

The General Plan Update proposes various changes that affect land use within the City. They are:

- creation of two mixed use designations (Mixed Use – Downtown Colton and Mixed Use – Neighborhood) and the addition of a Residential Overlay;
- creation of new land use categories for three Specific Plan areas and the eventual rescinding of the Specific Plans;
- removal of the Multi-Use land use designation;
- consolidation of the three open space designations into two designations; and
- creation of the Railroad/Utility Corridor designation.

The Mixed Use – Downtown designation aims to create a downtown district integrating civic, public, commercial, office, and residential uses. The Mixed – Use

Downtown designation will allow for residential development (up to 30 dwelling units per acre) and supporting commercial uses. Long-established, low-density residential areas containing homes dating to Colton's early years are encouraged to retain their density and character. The Mixed Use – Neighborhood designation aims to preserve the existing housing stock and character of residential neighborhoods while creating office or commercial opportunities and encouraging the adaptive reuse or residential structure. The Mixed Use – Neighborhood designation allows for residential development (up to 8 dwelling units per acre) and commercial and office uses. The Residential Overlay is designed to encourage higher density residential housing in select Commercial, and Mixed Use – Neighborhood areas by allowing development of up to 30 dwelling units per acre.

Other land use designation changes include the elimination and consolidation of certain designations, and the creation of new categories for the three major Specific Plan areas. The Residential Estate designation from the current General Plan is translated into a new Very Low Density Residential designation and much of the previous Residential Estate designated properties have been subsumed into the new Reche Canyon Specific Plan designation. Likewise, the Planned Community Development category, which was primarily used for the Cooley Ranch area, has been removed in the proposed plan. Parcels that currently have the Planned Community Development designation will be re-designated as Medium Density or General Commercial, to reflect the constructed land use.

The Multi-Use designation, which currently marks a wide swath of properties along Mt. Vernon and Colton Avenues, has been removed in order to focus commercial development for the properties fronting these major thoroughfares and protecting the existing single-family residential neighborhoods behind them.

The three open space categories of the current General Plan: Permanent Open Space, Agriculture Open Space, and Parks/Recreational Open Space – have been consolidated into two: Open Space - Resource and Open Space - Recreation, reflecting the absence of any significant remaining agricultural land in the planning area. Finally, the Railroad/Utility Corridor designation has been added in the proposed plan. In the current General Plan these lands have either been designated with adjacent land use categories, or have no designation at all. The proposed Land Use Plan is shown as Exhibit 4.10-3 (Draft Land Use Plan).

Table 4.10-5 (General Plan Additional Development Potential Comparison) details the overall change in buildout projections caused by the changes from the existing General Plan to the proposed General Plan. Exhibits 4.10-4, 4.10-5, and 4.10-6 (General Plan Designations Comparison) further detail the changes between the existing General Plan and the proposed General Plan land use designations.

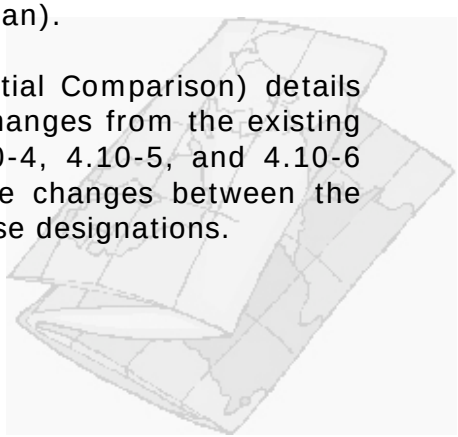


Table 4.10-5
General Plan Additional Development Potential Comparison

	Existing General Plan	Proposed General Plan
Dwelling Units	17,704	22,894
Population	56,091	72,536
Non-Residential Sq. Ft.	13,666,800	26,100,900

Environmental Impacts

IMPACT 4.10.A

No impact will occur as the General Plan Update will not result in a division of an established community.

Division of a neighborhood may occur with the construction of a new freeway, railway, or other large transportation project that may run through an established community. Redevelopment may also lead to the fracturing of a community, for example, when residential units are acquired and cleared for construction of commercial uses and new streets. Impacts associated within the division of an established community include a loss of community identity, disruption or loss of connectivity, and a degradation of the historic character of the planning area.

The General Plan Update is a policy level project designed to direct long-term growth within the planning area. The City's established residential neighborhoods are primarily located north of I-10 as well as the historic pocket just south of I-10 and east of I-215. The proposed Land Use Plan will retain the City's primarily residential character in these areas while providing for additional commercial development within and adjacent to these areas. In addition, the proposed Land Use Plan provides for more intense industrial development to primarily occur in the southern portion of the City and along existing rail lines where similar industrial development exists. The proposed Circulation Element would not establish any new transportation routes or facilities. No other types of major corridors are planned that would require clearing of existing land uses. The proposed plan supports maintenance of established neighborhoods through the following policies from the Land Use Element:

Policy LU-1.6: Ensure that new development projects are compatible with permitted, well-maintained uses and buildings in the surrounding neighborhood or district.

Policy LU-1.9: Apply a Special Development Area overlay zone on industrially zoned properties that abut properties zoned for residential uses, and apply appropriate conditions through the discretionary review process to minimize impacts.

Policy LU-6.1: Protect residential neighborhoods adjacent to industrial areas pursuant to the policy direction provided in Policy LU-1.9.

Policy LU-6.2: Discourage the establishment of incompatible uses in proximity to each other.

Policy LU-6.3: Use land use designations and zones to buffer incompatible uses.

Policy LU-6.4: Promote the use of buildings, setbacks, walls, landscaping, and other design features to buffer and reduce conflicts between adjacent properties.

Policy LU-6.5: As properties recycle from one use to another, ensure that the new use is consistent with the Land Use Plan and policy directives that support this Goal LU-6.

Proposed policies within the General Plan Update will not result in the division of an established community, therefore no impact will occur.

IMPACT 4.10.B

The General Plan Update's implementation potential for impact is discussed in other sections of this EIR; those sections determine that a less than significant impact is anticipated to occur.

The project involves an update of the General Plan's Land Use Element, Circulation Element, and Housing Element. No other agency has jurisdiction over land use issues in the City of Colton. San Bernardino County has jurisdiction over land uses within the SOI. The planning area is subject to a variety of Federal, State, and locally adopted plans designed to mitigate environmental impacts or to preserve important resources.

These plans and potential conflicts have been discussed at length in other portions of this EIR, and a less than significant impact is anticipated to occur.

IMPACT 4.10.C

The proposed General Plan Update's Land Use Plan designation of Recovery Units of the Delhi-Sands Flower-Loving Fly Recovery Plan as open space supports the objectives of habitat and natural community conservation plans.

As detailed in this EIR's Biological Resources section, portions of the City of Colton are located within Recovery Units of the adopted Delhi-Sands Flower-Loving Fly Recovery Plan. The General Plan Update's impacts on this plan are fully discussed in the Biological Resources section. The City is not located within any other

adopted habitat conservation plan or natural community conservation plan that the General Plan Update would conflict with.

As concluded in the Biological Resources section, the proposed General Plan Update's Land Use Plan designates Recovery Units of the Delhi-Sands Flower-Loving Fly Recovery Plan as open space, therefore supports the objectives of the plan, and would have no effect upon the plan.

Mitigation Measures

No significant impacts are anticipated; therefore, mitigation measures are not required.

Level of Impact with Mitigation Incorporated

Not applicable.

Exhibit 4.10-1

Existing Land Use

Existing Land Use

- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Local Commercial
- General Commercial
- Commercial/Office
- Industrial Park
- Light Industrial
- Heavy Industrial
- Open Space-Recreation
- Open Space-Resources
- Public Facility/Institution
- Railroad
- Vacant

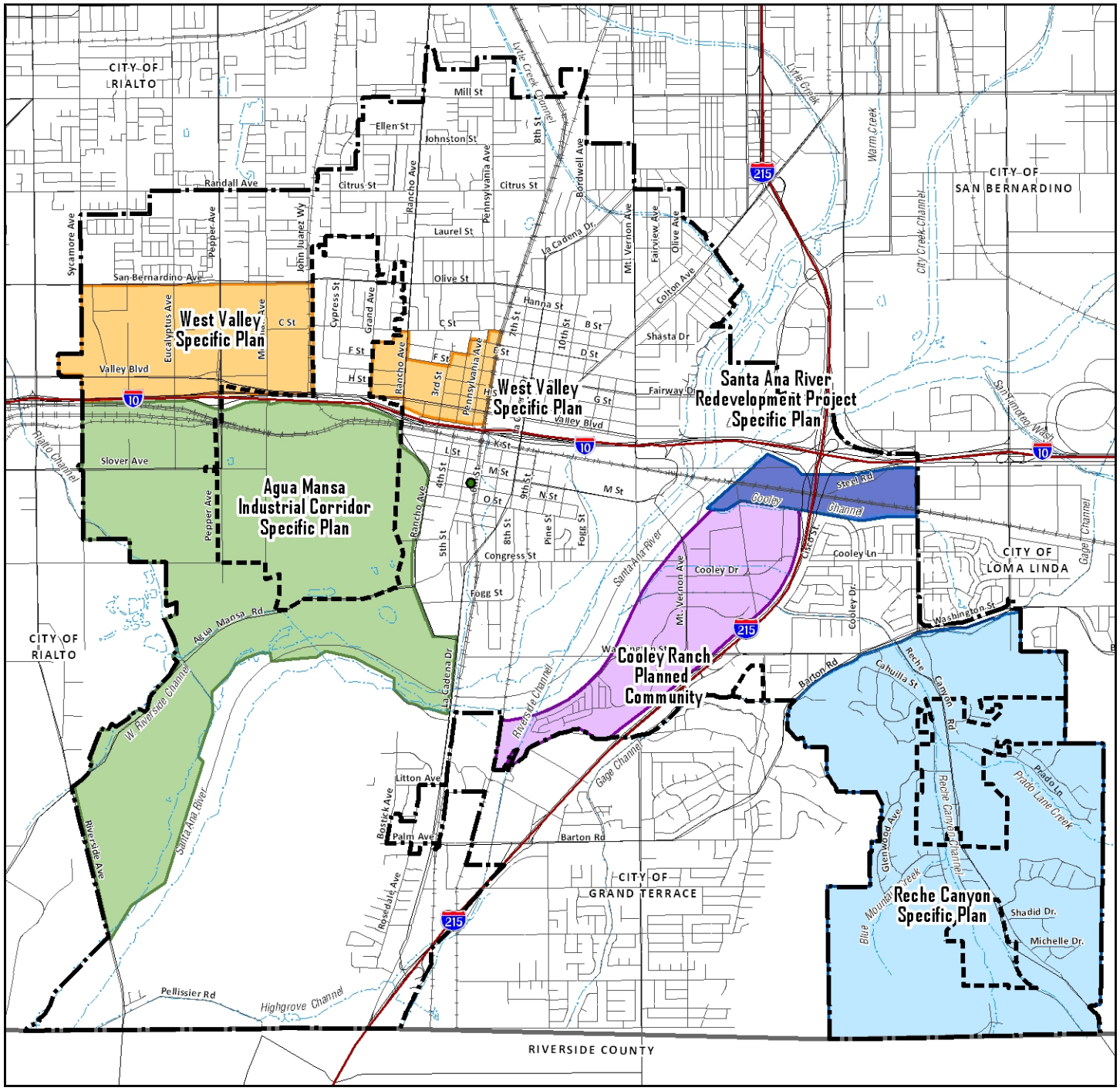
Base Map

- City Boundary
- Sphere of Influence
- Watercourse

Date: March 1, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank



Specific Plans

- Agua Mansa Industrial Corridor Specific Plan (Extends into portions of the City of Rialto)
- Reche Canyon Specific Plan
- Santa Ana River Redevelopment Project Specific Plan
- West Valley Specific Plan

Planned Community

- Cooley Ranch Planned Community

- City Boundary
- Sphere of Influence
- Freeway
- Major Road
- Railroad
- Surface Water

Source: City of Colton, 2012.

0 2,000 4,000 6,000 8,000 Feet

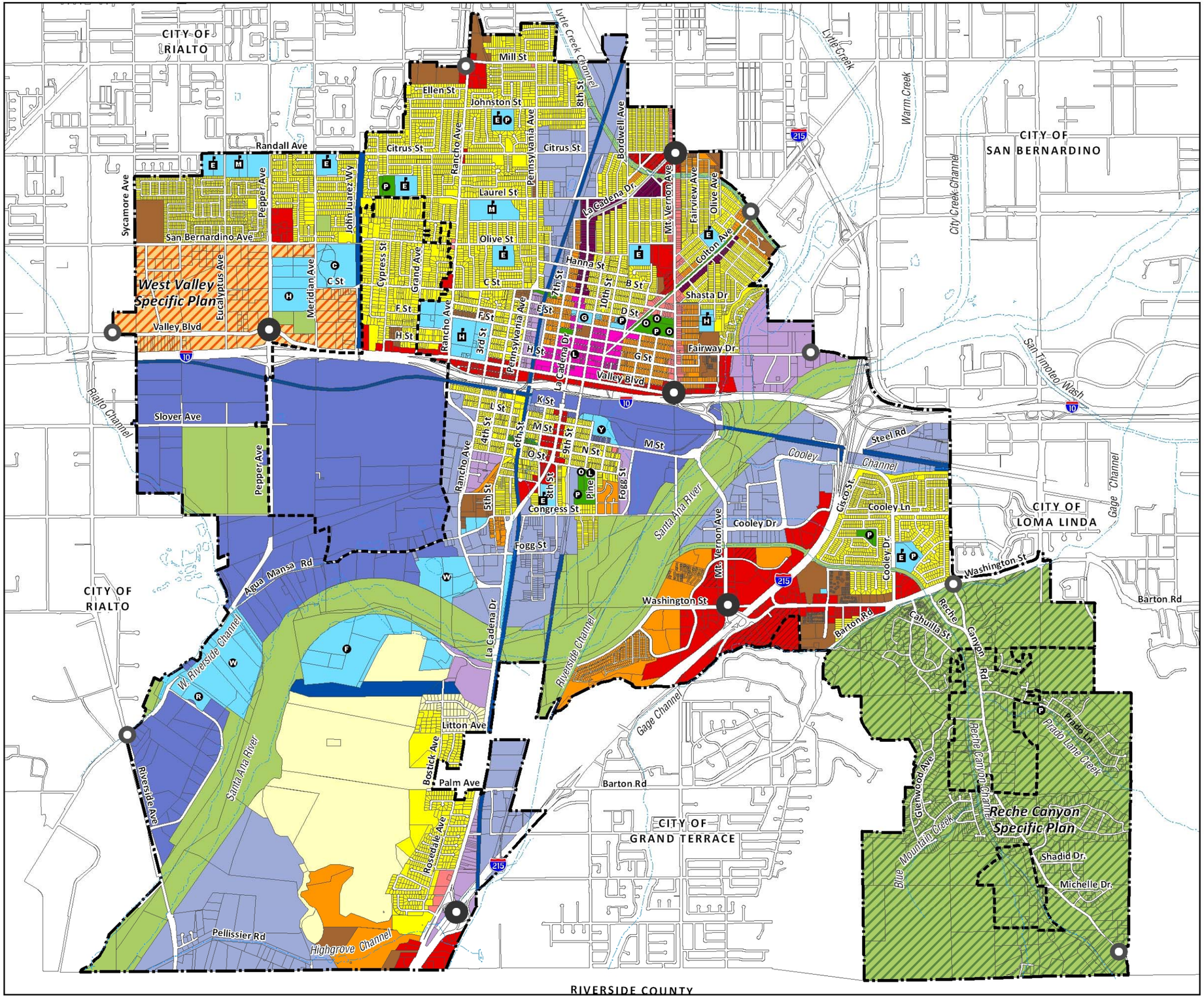
Exhibit 4.10-2

Specific Plans & Planned Communities

The Page Intentionally Left Blank

Exhibit 4.10-3

Draft Land Use Plan



Land Use Designations

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Community Gateways

- Major Gateway
- Minor Gateway

Public Facilities/Institutions

- E Elementary School
- M Middle School
- H High School
- C Cemetery
- O Community Center
- G City Hall
- H Hospital (Private)
- L Library
- F Landfill
- Y City Maintenance Yard
- P Parks
- R Power Plant
- W Wastewater Facility

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

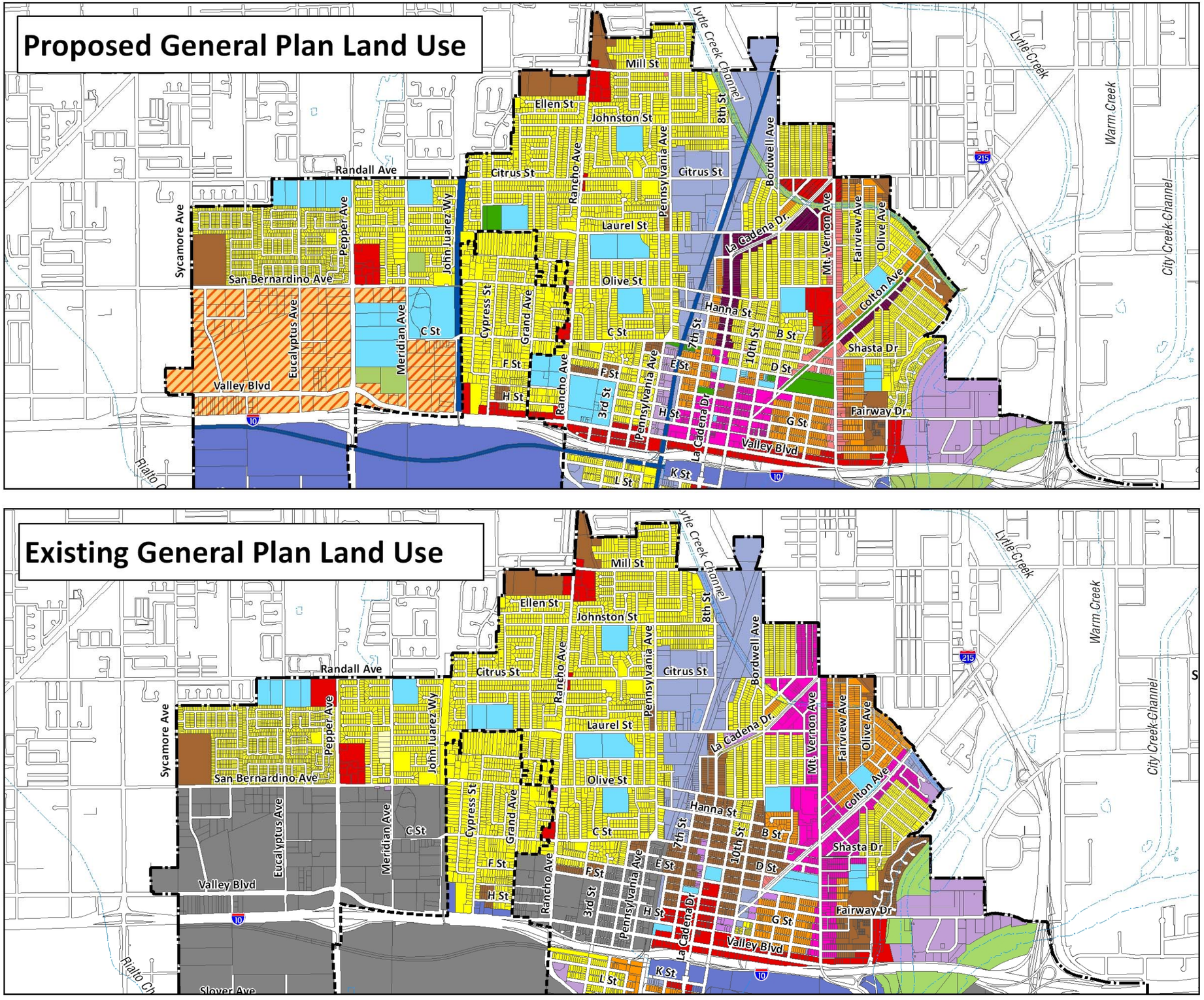
Date: May 21, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.10-4

General Plan Designations Comparison 1



Draft General Plan Land Use

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Existing General Plan Land Use

- Residential Estates
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- General Commercial
- Local Commercial
- Commercial Office
- Industrial Park
- Light Industrial
- Heavy Industrial
- Multi-Use
- Open Space
- Public/Institution
- Planned Community
- Specific Plan

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

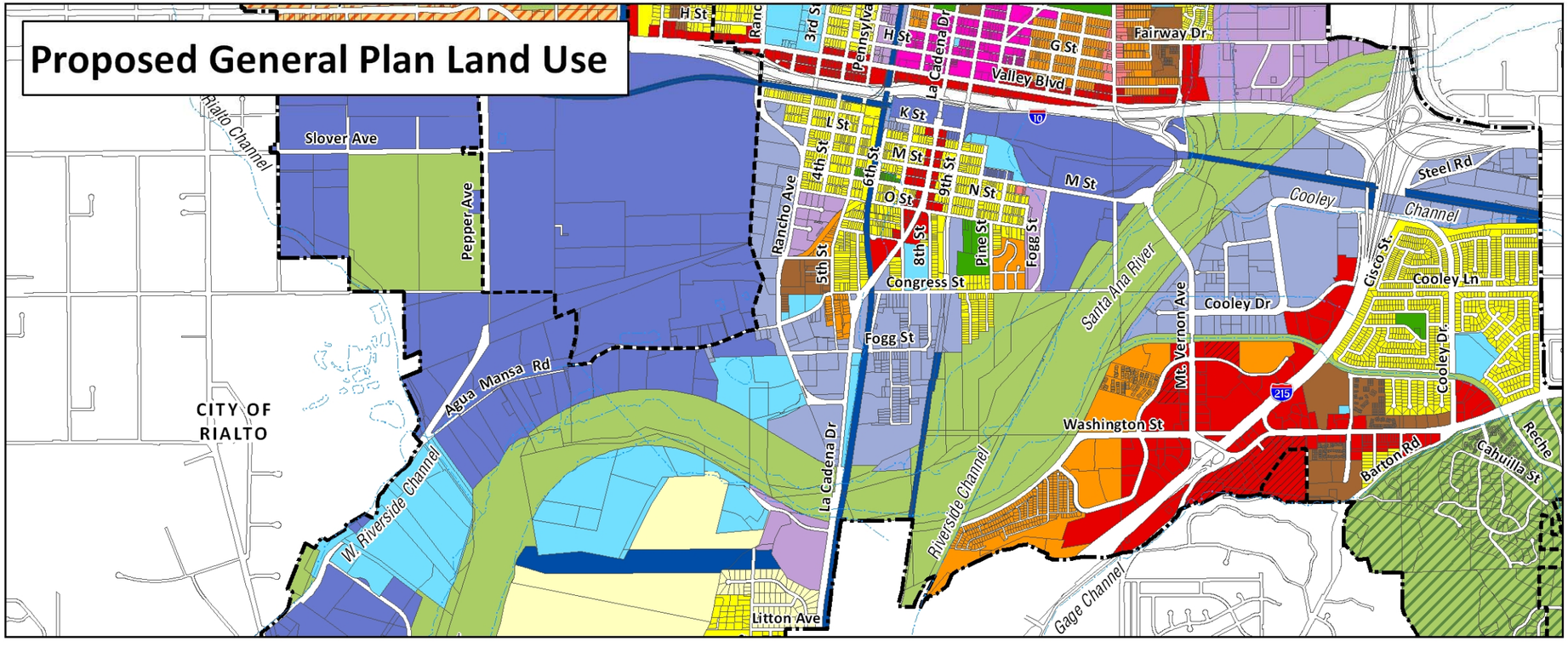
Date: November 12, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

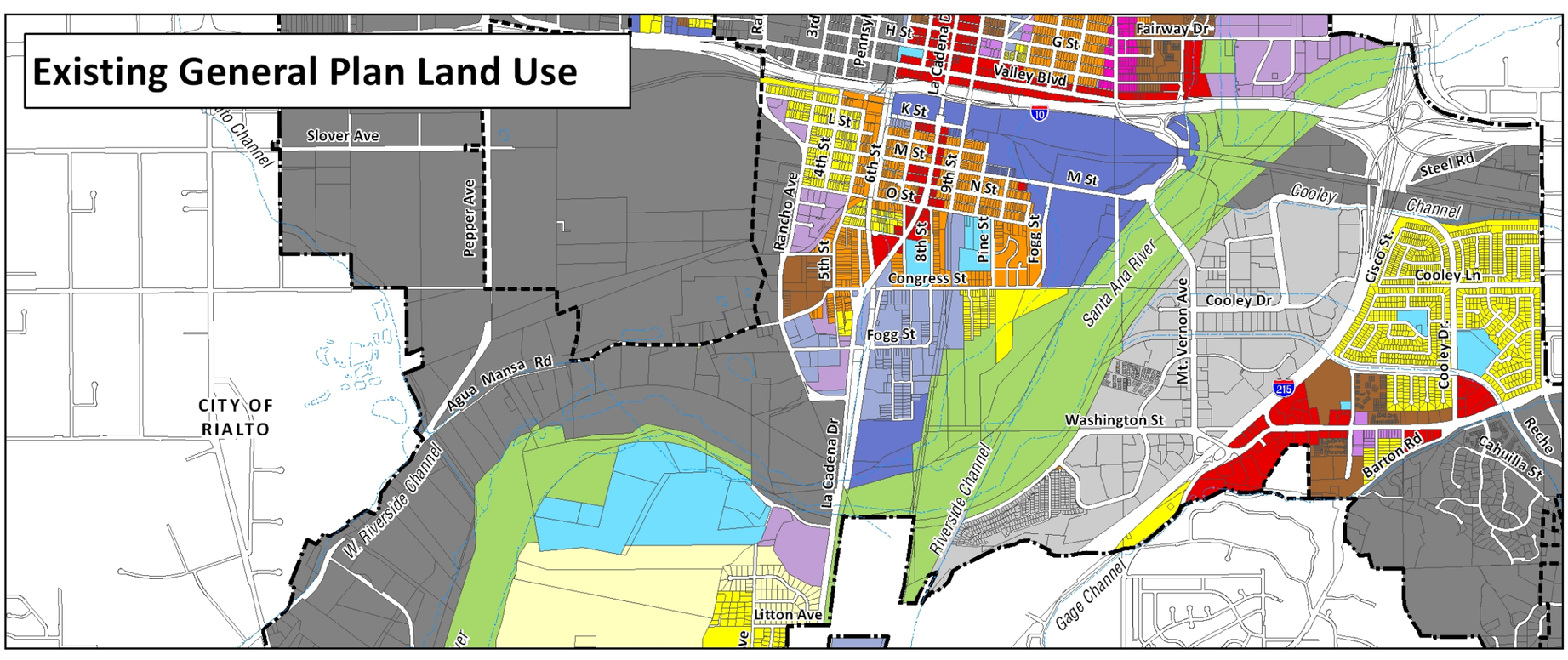
0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.10-5

General Plan Designations Comparison 2





Draft General Plan Land Use

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Existing General Plan Land Use

- Residential Estates
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- General Commercial
- Local Commercial
- Commercial Office
- Industrial Park
- Light Industrial
- Heavy Industrial
- Multi-Use
- Open Space
- Public/Institution
- Planned Community
- Specific Plan

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

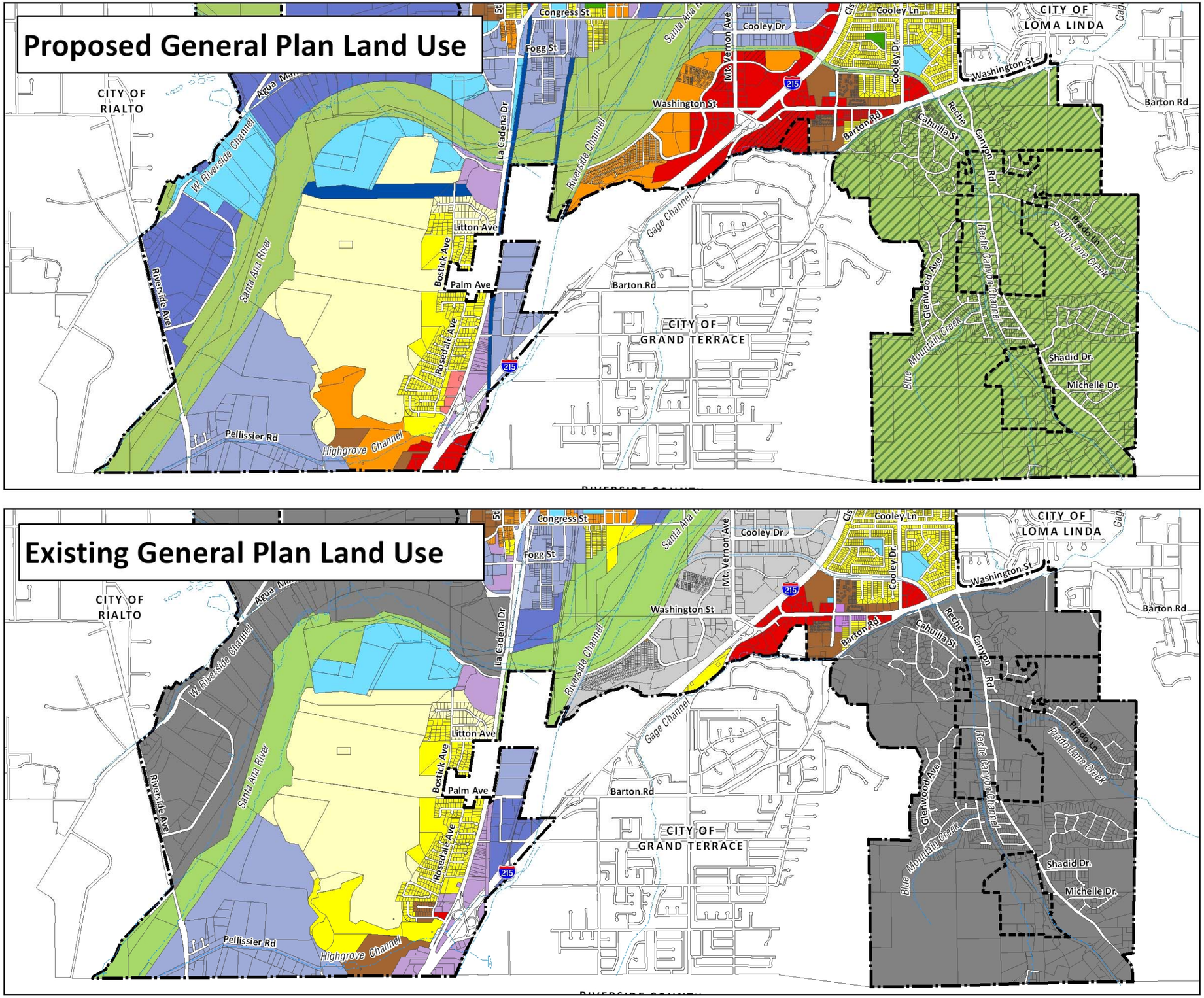
Date: November 12, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.10-6

General Plan Designations Comparison 3



Draft General Plan Land Use

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Existing General Plan Land Use

- Residential Estates
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- General Commercial
- Local Commercial
- Commercial Office
- Industrial Park
- Light Industrial
- Heavy Industrial
- Multi-Use
- Open Space
- Public/Institution
- Planned Community
- Specific Plan

Base Map

- City Boundary
- Sphere of Influence
- Watercourse

Date: November 12, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Mineral Resources 4.11

This section evaluates the potential effects on mineral resources associated with long-term implementation of the Land Use, Housing, and Mobility Elements. This section is primarily based on the California Department of Conservation Open File Report 94-08 entitled *Mineral Land Classification of a Part of Southwestern San Bernardino County: The San Bernardino Valley Area, California* and Special Report 143, Part VII entitled *Mineral Land Classification of the Greater Los Angeles Areas.* No comments related to mineral resources were submitted during circulation of the Notice of Preparation.

Existing Conditions

Minerals are defined as a naturally occurring, inorganic, homogenous solid with a definite chemical composition and an ordered atomic arrangement. Generally, a mineral is a single or compound of elements and serve as the building blocks for rocks. "Ore" is the naturally occurring material that mineral or minerals of economic value can be extracted. Providing and encouraging access to mineral resources is an important consideration for the City of Colton as well as the State of California. In 2008, California non-fuel mineral production totaled $4 billion dollars, with the two top-producing minerals being construction grade sand and gravel and Portland cement (two minerals available within the planning area). These deposits are located primarily in the historic floodplains of Lytle Creek and the Santa Ana River.[1]

The San Bernardino Valley

The San Bernardino Valley is the eastern end of the Los Angeles Basin. The Cucamonga Fault delineates that northern part of the San Bernardino Valley and the San Jacinto and San Andreas faults bound the valley on the east and the northeast. The western boundary is the Puente Hills partially delineated by the Whittier-Elsinore Fault, and the southern boundary is the Santa Ana River. The Valley is characterized by large alluvial fans that have developed over the basement (subsurface) geologic units. In the San Bernardino area that includes Colton, alluvial thickness varies with the maximum thickness estimated at 1,200 feet. Lytle Creek is an important factor in the historic deposition of alluvium in the planning area.[2]

The Lytle Creek Alluvial Fan forms at the mouth of Lytle Creek Canyon and extends south to the Jurupa Hills. It has a surface area of approximately 50 square miles, 32 square miles of which is designated Mineral Resources Zone (MRZ) 2 (see below for further discussion of MRZs). The east boundary of the fan is flanked by Lytle Creek Wash and the historic path of Lytle Creek. The majority of the material deposits in the fan consist of poorly sorted sand, gravel, clay, and boulders. The distal areas of the fan are characterized by significant deposits of suitable aggregate. This includes portions of the planning area.[3]

History of Mining in the Colton Area

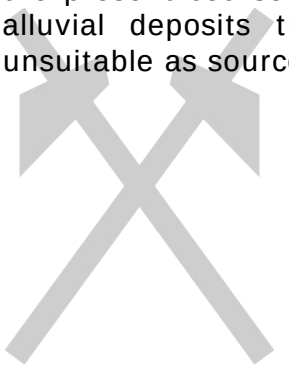
Gold has been mined in the Lytle Creek area. In 1864, placer gold was discovered and yielded over one million dollars in gold over the first 25 years. The Slover Mountain limestone deposit has been a long-standing and important mineral resource in the San Bernardino Valley. The California Portland Cement Colton Plant has been producing cement since 1894 and was the first cement manufacturing plant west of the Mississippi River. Sand and gravel have been produced in various locations in the San Bernardino Valley since the 1900s, with the most active production occurring in the Lytle Creek and Santa Ana River drainage areas. Today, the most important mining activities in the San Bernardino Valley are aggregate mining operations. The California Portland Cement Company Colton Quarry (Mine ID 91-36-0035) is the only mining operation within the planning area, located at 695 South Rancho Avenue within the City's Sphere of Influence.[4]

Mineral Resource Areas

A mineral land classification study of the San Bernardino Valley Area, including the Colton planning area, was conducted from December 1989 to April 1994 by Dinah O. Shumway, California Department of Conservation, with assistance from M.A. Silva. The study researched geologic and mining-related literature from Department of Conservation and the U.S. Geological Survey (USGS) publications as well as published and unpublished mapping and documents by other geologists. The plotting of known mines and prospects was based on Department of Conservation, the USGS, the U.S. Bureau of Mines, and the U.S. Bureau of Land Management (BLM) data. Field and analytical data were integrated and evaluated for assigning Mineral Resource Zones (MRZs) in accordance with mineral land classification guidelines adopted by the California State Mining and Geological Board (see Planning and Regulatory Framework below). The locations of MRZs within the planning area are depicted on Exhibit 4.11-1 (Mineral Resources Map).

Lytle Creek Alluvial Fan MRZ-2

The Lytle Creek Alluvial Fan MRZ-2, first classified in California Division of Mines and Geology Special Report 143 Part VII, is a large fan at the mouth of Lytle Creek Canyon and extends south to the Jurupa Hills. Within the Colton planning area, the Lytle Creek Alluvial Fan and Lytle Creek Wash occur in the northern portion of the planning area. The fan is traversed on its eastern flank by the Lytle Creek Wash, the present course of Lytle Creek. Lytle Creek Fan is underlain at depth by older alluvial deposits that contain large amounts of weathered material generally unsuitable as sources of Portland cement concrete aggregates.



Lytle Creek Wash MRZ-2

Lytle Creek Wash contains 19 square miles of land classified as MRZ-2 and follows flows from Lytle Canyon, on the south margin of the San Gabriel Mountains, southward across the Lytle Creek Fan. The wash merges with Cajon Creek Wash about four miles from the mouth of Lytle Canyon and continues to the Santa Ana River, eight miles to the south. Within the Colton planning area, the Lytle Creek Wash generally occurs in the northern portion of the planning area, following the historic course of Lytle Creek. The material located in this area is similar to that of Lytle Creek Fan with the clast types predominantly being metamorphic and granitic rocks. Lytle Creek Wash is underlain by older alluvial material at depths ranging from 175 feet to 50 feet. The older material contains large amounts of clay and weathered material and is generally suspected to be unsuitable for use as Portland cement concrete aggregate.

Slover Mountain Limestone Area (Map No. 44)

Slover Mountain, designated MRZ-2a, is classified for the extraction of limestone as an industrial mineral. High-grade limestone is mined by the California Portland Cement Company from roof pendants of Paleozoic age. The two principal limestone bodies are separated by schist. Production is marketed in Southern California, Nevada, and Mexico. As of 1995, reserves were estimated to be sufficient to last past 2025.

MRZ-3

The remainder of the planning areas, particularly the La Loma Hills, Box Springs Mountains, and eastern and western portions of the City, are designated MRZ-3. These areas are of undetermined significance for mineral resources.

Planning and Regulatory Framework

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) was enacted by the California legislature to promote the conservation of the state's mineral resources and to ensure adequate reclamation of mined lands. Among other provisions, SMARA requires the State Geologist to classify land in California into Mineral Resource Zones (MRZ) according to the known or inferred mineral potential of the land. The process is based solely on geology, without regard to existing land use or land ownership. Upon completion of each study, the State Geologist submits the mineral land classification report to the State Mining and Geology Board, which transmits the information to appropriate local governments that maintain jurisdictional authority in mining, reclamation, and related land-use activities. Local governments are required to incorporate the report and maps into their general plans and consider the information when making land use decisions.

SMARA addresses the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. The Act applies to anyone, including government

agencies, engaged in surface mining operations in California, including federally managed lands that disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. Regulated mining activities include: prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials.

The California Department of Conservation, Division of Mines and Geology (DMG) "Mineral Land Classification Project" continues to publish mineral resource maps which have proved to be of value in land use planning and mineral conservation. This is an ongoing process with updates taking place approximately every 10 years. DMG is also in the process of identifying lands throughout the county with the potential for mineral resource recovery and will be used by the County in identifying new mineral resource areas to help ensure their preservation.

Areas subject to California mineral land classification studies are divided by the State Geologist into various MRZ categories that reflect varying degrees of mineral potential. The MRZ nomenclature and criteria adopted by the California State Mining and Geology Board (1983) are graphically portrayed on what is referred to as the California Mineral Land Classification Diagram, which is shown on Exhibit 4.11-1 (Mineral Resources). The diagram presents a relationship between mineral resource occurrence and economic significance. The horizontal axis of the diagram represents the degree of knowledge about mineral occurrence, and the vertical axis portrays economic characteristics of mineral deposits (grade and size). The diagram has four main classifications:

- MRZ-1: Areas of No Mineral Resource Significance
- MRZ-2: Areas of Identified Mineral Resource Significance
- MRZ-3: Areas of Undetermined Mineral Resource Significance
- MRZ-4: Areas of Unknown Mineral Resource Significance

The distinction between the MRZ-1 and MRZ-4 categories is important for land use considerations. It must be emphasized the MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.

Reclamation Plans

All reclamation plans shall comply with the provisions of the SMARA (Section 2772 and Section 2773) and state regulations (CCR Section 3500-3505). Reclamation plans approved after January 15, 1993, reclamation plans for proposed new mining operations, and any substantial amendments to previously approved reclamation plans, shall also comply with the requirements for reclamation performance standards (CCR Section 3700-3713). Before a mining project is approved, a reclamation plan must be prepared and approved by the City, and must include specific information and documents identified in the state regulations.

The State requires that a Mining Report be submitted annually by each mine operator. The report must include information as to the amount of land disturbed during the previous year, acreage reclaimed during the previous year, and any amendments to the mine's reclamation plan. This process helps the City and the state to track mining operations.

Because no mining operations are located within the jurisdiction of the City, the City does not inspect, track, and report on active mines pursuant to SMARA. The Slover Mountain mining operation is located within unincorporated San Bernardino County but within the City's Sphere of Influence. The City has no regulatory authority over this operation.

San Bernardino County General Plan

The San Bernardino County General Plan Conservation Element includes goals and policies to protect mineral resources. The policies support identification of valuable mineral resources and their preservation or extraction with appropriate plans for reclamation. Policy CO 7.2 supports use of the MRZ system of resources identification and Policies CO 7.3 and CO 7.5 support buffers and priority access for mineral extraction operations.[5] These policies apply to the Slover Mountain mining operation.

San Bernardino County Development Code

Chapter 82.03 (Agricultural and Resources Management Land Use Zoning Districts) permits mining operations in the RC (Resource Conservation), AG (Agriculture), and FW (Floodway) land use zoning districts subject to a Conditional Use Permit (CUP). Additional provisions are included in the Mineral Resources (MR) Overlay. Mining operations are further regulated pursuant to Chapter 88.03 (Surface Mining and Land Reclamation) in accordance with the requirements of SMARA, California Public Resources Code Section 2207, and the California Code of Regulations Section 3500 et seq. Chapter 88.03 establishes standards for permitting, planning, and financial assurance as well as procedures for annual reporting and inspections. There are no RC, AG, or FW land use zoning districts within the planning area and there are no MR overlays; however, the Colton Quarry cement plant operated by the California Portland Cement Company is located within the County's jurisdiction and the City's Sphere of Influence. The cement plant is zoned AM/SP (Agua Mansa Specific Plan).[6]

Colton General Plan

The Colton General Plan Open Space and Conservation Element includes principles and standards to design to protect mineral resources within the City, protect public health and safety, and ensure reclamation after extraction activities cease.[7]

Colton Municipal Code

Pursuant to the requirements of SMARA, Chapter 18.37 (Surface Mining and Reclamation) of the City's Municipal Code addresses the permitting, planning, and reclamation of surface mining operations.[8]

Thresholds of Significance

Implementation of the General Plan Update will have significant impacts if:

A. The availability of a known mineral resource that would be of value to the region and the residents of the State are lost.
B. The availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan is lost.

Environmental Impacts

IMPACT 4.11.A

Implementation of the General Plan Update will result in a less than significant loss of known mineral resources of value to the region and the state.

General Plan land use policy designates the Slover Mountain mining site (in the Sphere of Influence) as *Heavy Industrial*, which allows for mining operations. Areas along the Santa Ana River are designated *Open Space-Resource* to protect the groundwater recharge and habitat functions the river serves; mining is not specifically permitted.

Although the General Plan Update will not result in the direct loss of a known mineral resource, implementation of the General Plan Update and development pursuant to the proposed Land Use Plan may result in the permanent loss of known statewide and regionally valuable mineral resources. Loss of mineral resources could occur if the proposed Land Use Element changes a vacant area located within an MRZ-2 from a land use designation that supports current or future mineral extraction to a designation that would preclude future extraction of mineral resources. In order for the loss to be considered significant, an area and its surroundings must also be conducive to mineral extraction operations.

Portions of the planning area designated MRZ-2 are associated with the Santa Ana River, Lytle Creek, and Warm Creek due to the presence of alluvial sediments that are considered Portland cement concrete (PCC)-grade aggregate. The proposed Land Use Plan includes changes to land use designations in three areas of the Santa Ana River designated MRZ-2:

- In the Agua Mansa Industrial Corridor Specific Plan area, south of the existing California Portland Cement Company plant, the Land Use Element Update proposes to change the designation from Open Space to Heavy Industrial. This land use change has the potential to preserve mineral resources in this area because the Heavy Industrial land use designation supports mineral extraction facilities. The area is also conducive to industrial activities due to the presence of existing mining and industrial uses. Recovery of mineral resources in this area is not precluded by the proposed General Plan Update.

- In the northeast portion of the planning area, near the Warm Creek Basins, the Land Use Element Update proposes to change the area from Open Space to Industrial Park. Although the Industrial Park land use designation does not support mineral extraction activities, the area is not conducive to resource recovery because of the presence of residential development to the west. Loss of known minerals in this area would not be significant.

Other portions of the planning area are designated MRZ-2, such as west of Mount Vernon Avenue in the north and surrounding Mount Vernon Avenue in the Cooley Ranch Planned Community area. These areas are primarily developed today, and what few vacant parcels exist are surrounded by urban uses and may not be of sufficient size to support mineral extraction operations.

Principal 4 of the existing General Plan Open Space and Conservation Element is designed to protect significant mineral deposit sites until such time a substantial regional need for such resources is demonstrated. The proposed General Plan Update does not contain policies that conflict with this principal; therefore, significant mineral resource deposits will continue to be protected over the long-term. Based on the analysis of the proposed General Plan Update and the principals of the existing General Plan elements that will not be affected by the Update, impacts related to the loss of known mineral resources will be less than significant.

IMPACT 4.11.B ***No impact to locally important mineral resources will occur as a result of the implementation of the General Plan Update.***

The exiting Colton General Plan and the San Bernardino County General Plan do not identify any locally important mineral resources. No other City planning documents identify any locally important mineral resources. No impacts to locally important mineral resources could occur as a result of the implementation of the General Plan Update.

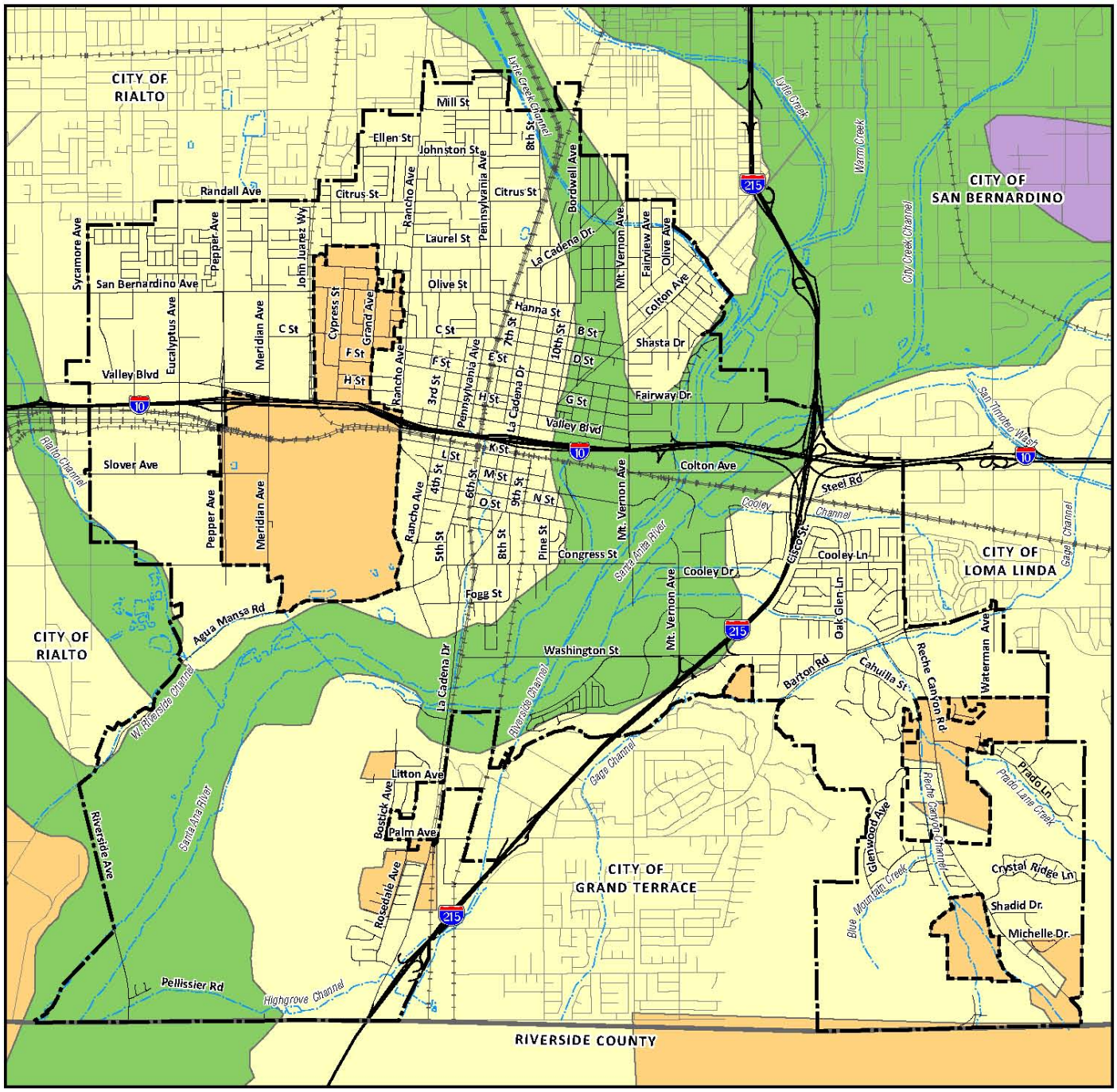
Mitigation Measures

No mitigation is required.

Level of Impact with Mitigation Incorporated

Not applicable.

This Page Intentionally Left Blank



Mineral Resource Zones

- MRZ-1 Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- MRZ-2 Areas where geologic data indicates that significant PCC-Grade aggregate resources are present.
- MRZ-3 Areas containing known or inferred mineral occurrences of undetermined mineral resource significance.
- Urban Area

- City Boundary
- Sphere of Influence
- County Boundary
- Freeway
- Street
- Railroad
- Surface Water

Source: Source: Busch, L.L, & Miller, R.V. Updated Mineral Land Classification Map for Portland Cement Concrete-grade Aggregate in the San Bernardino Production-consumption (P-C) Region, San Bernardino and Riverside Counties, California - Special Report 206, Plate 1. California Department of Conservation, California Geological Survey, 2008.

0 0.25 0.5 0.75 1 Mile

Exhibit 4.11-1
Mineral Resources

This Page Intentionally Left Blank

References

[1] Frank, Dave, John Galloway, and Ken Assmus. United States Geological Survey. General Information Product 17. *The Life Cycle of a Mineral Deposit – A Teacher's Guide for Hands-On Mineral Education Activities.* 2005
[2] Shumway, Dinah O. California Department of Conservation. Open File Report 94-08. *Mineral Land Classification of a Part of Southwestern San Bernardino County: The San Bernardino Valley Area, California*. 1995
[3] Miller, Russell V. California Department of Conservation. Special Report 143, Part VII. *Mineral Land Classification of the Greater Los Angeles Area.* 1987

[5] San Bernardino County. *General Plan.* April 12, 2007
[6] San Bernardino County. Development Code. April 12, 2007
[7] Colton. *General Plan. Open Space and Conservation Element.* 1987
[8] Colton. Municipal Code.

Noise 4.12

This section analyzes potential noise impacts that could result from implementation of the proposed Land Use, Circulation (Mobility), and Housing Elements update. The analysis summarizes the findings of the noise evaluation technical report prepared by Kunzman Associates, Inc (November 2012). The technical report is attached to this EIR as Appendix D. Discussions related to groundborne vibration are based on information provided in Caltrans' *Transportation and Construction Induced Vibration Manual and Technical Advisory 04-01-R0201* (Transportation Related Earthborne Vibrations). No comments related to noise were submitted in response to the circulation of the Notice of Preparation or at the EIR Scoping Meeting.

Existing Conditions

Defining Noise

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and - in the extreme - hearing impairment.

The Production of Sound

Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Measuring Sound

Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the

beginning at which humans generally notice a barely perceptible change in sound.

Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on how humans will respond. While the intensity of the sound is a purely physical quantity, the loudness or human response depends on the characteristics of the human ear. Human hearing is limited not only to the range of audible frequencies but also in the way it perceives the sound pressure level in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hertz (Hz) and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude with less intensity. Hertz is a unit of frequency that defines any periodic event. In the case of sound pressure, a Hertz defines one cycle of a sound wave per second (see Figure 4.12-1, Hertz Diagram). To approximate the frequency response of the human ear, a series of sound pressure level adjustments is usually applied to the sound measured b a sound level meter.

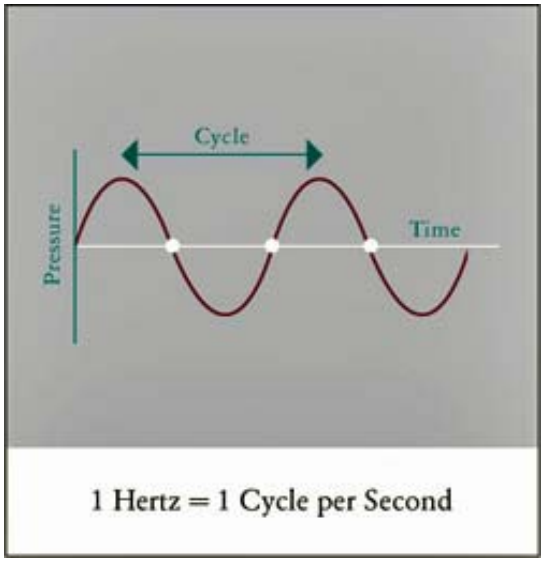


Figure 4.12-1
Hertz Diagram

The adjustments, or weighting network, are frequency dependent. Of all the various scales available for measuring noise, the A-weighted sound pressure level (identified as dBA) is the scale of measurement that is most useful in community noise measurement. The A-scale approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. A range of noise levels associated with common indoor and outdoor activities are shown in Figure 4.12-2 (Activity-based Noise Levels).

Standards for Noise Equivalent

Because a given level of noise may be more or less tolerable depending on the duration of exposure, other measures of noise exposure have been developed. Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL).

Figure 4.5-2
Activity-based Noise Levels

Common Outdoor Activities	Common Indoor Activities	A - Weighted Sound Level dBA	Subjective Loudness	Effects of Noise
Threshold of Pain		140	Intolerable or Deafening	Hearing Loss
Near Jet Engine		130		
		120		
Jet Fly-Over at 1000 ft	Rock Band	110		
Loud Auto Horn		100	Very Noisy	
Gas Lawn Mower at 3 ft		90		
Diesel Truck at 50 ft, at 50 mph	Food Blender at 3 ft	80		Speech Interference
Noisy Urban Area, Daytime	Vacuum Cleaner at 10 ft	70	Loud	
Heavy Traffic at 300 ft	Normal Speech at 3 ft	60		
Quiet Urban Daytime	Large Business Office	50	Moderate	
Quiet Urban Nighttime	Theater, Large Conference Room (Background)	40		Sleep Disturbance
Quiet Suburban Nighttime	Library	30	Faint	No Effect
Quiet Rural Nighttime	Bedroom at Night, Concert Hall (Background)	20		
	Broadcast/Recording Studio	10	Very Faint	
Lowest Threshold of Human Hearing	Lowest Threshold of Human Hearing	0		

To account for increased human sensitivity at night, this measure weights the average noise level at night by adding five dB to the measurement during the 7:00 P.M. to 10:00 P.M. time period and an additional 10 dB on noise measured during the 10:00 P.M. to 7:00 A.M. time period. The City of Colton utilizes the CNEL measurement scale for its community noise/land use compatibility standards (see discussion of existing General Plan noise level standards below).

Vibration and Groundborne Noise

Vibration is the periodic movement of mass over time. It is described in terms of frequency and amplitude. Unlike sound, there is no standard way of measuring and reporting amplitude. Vibration is described in units of velocity (inches per second [in/sec]), and is discussed in dB units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) which describes particle movement over time (in terms of physical

displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison.

In general, earthborne vibrations associated with transportation and construction activities attenuate rapidly with distance from the source. Caltrans has taken vibration measurements throughout California and provides data in the *Transportation Related Earthborne Vibrations* Technical Advisory (TAV-02-01-R9601). Vibration of trucks is characterized by peaks considerably higher than those generated by automobiles. These peaks last often a fraction of a second and drop-off quickly with distance. In general, more trucks will show up as more peaks, not necessarily higher peaks. Caltrans' truck traffic vibration data suggest that at distances greater than 130 feet from the road, the vibration levels are below the threshold of perception.

Temporary, Periodic, and Ambient Noise Levels

Noise can be produced from different sources and for different time periods, resulting in varying noise levels over time. Ambient noise levels, for the purpose of this analysis, are developed using 24-hour average noise level measurements taken throughout the planning area resulting in a general description of the noise environment. Periodic noise levels are characterized by regular increases in noise levels due to reoccurring activities such as the passing of railcars or periods just before and after peak-hour traffic along roadways. Temporary noise levels result from one-time activities that result in increased noise levels, such as construction activities or special events.

Existing Conditions

The following discussion describes the existing noise environment in the planning area. Existing ambient and periodic noise levels are defined through measurement and modeling of noise levels associated with arterial and freeway traffic, airport operations, railroad and railyard activities, and commercial/industrial uses.

A community noise survey, conducted in May 2012, established the baseline ambient noise levels for transportation and non-transportation noise generators throughout Colton. Locations were monitored using the ANSI Level 1 Larson-Davis LxT sound level meter to establish existing ambient noise levels. Seventeen short-term (15-minute) representative measurements were conducted to provide a baseline. Short-term measurement locations are shown on Exhibit 4.12-1 (Noise Measurement Locations) and presented in Table 4.12-1. (Ambient Noise Measurement). The results of these measurements were used to calibrate the noise model prepared to estimate existing noise contours in conjunction with traffic data.

Table 4.12-1
Ambient Noise Measurements

Name	Associated Land Use	Description	Existing Ambient Noise Levels (dBA L_{eq})
LU-1	Very Low Density Residential	2839 Cambria Court	54.5
LU-2	Low Density Residential	1656 North Randall Avenue	54.7
LU-3	Medium Density Residential	590 East F Street	60.8
LU-4	High Density Residential	Apartment Complex, 1915 East Washington Street	56.8
LU-5	Public Institution	High School, 400 North 2nd Street	66.0
LU-6	Mixed Use Neighborhood	--	58.2
LU-7	Mixed Use Downtown	--	60.3
LU-8	Neighborhood Commercial	Thrift Store, 725 South La Cadena Drive	66.2
LU-9	General Commercial	Grocery, tire shop, pharmacy, bank, etc. 2053 East Washington Street	62.5
LU-10	Industrial Park	Business Park, 600 East Cooley Street	55.3
LU-11	Light Industrial	Bakery product factory, 354 North Wildrose Avenue	66.0
LU-12	Heavy Industrial	Aggregate crushing & auto repair, 446 West Fogg Street	61.1

Source: Kunzman Associates, Inc., November 2012

Roadways

The level of traffic noise depends on three key factors: 1) traffic volumes, 2) the speed of traffic, 3) the type or "mix" of vehicles using a particular roadway, and 4) pavement conditions. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Traffic therefore represents a primary contributor to the ambient noise levels in a community and also results in periodic noise level increases based on daily traffic fluctuations.

Traffic noise - including automobiles, trucks, and other motor vehicles - is the most pervasive source of noise in the City of Colton. The roadway network in the City consists of the Interstate 10 and Interstate 215 freeways, regional arterials, local public roads, and private roads.

Railway Noise and Vibration

Train noise is a combination of different noise sources, such as propulsion mechanisms, machinery and auxiliary equipment, wheel-rail interaction, and vehicle-body vibrations. Train noise is a unique noise source that constitutes a single pass-by event per train resulting in periodic noise level increases. Field observations of several passenger and freight railroad activity show that a typical train pass-by event ranges from one to five minutes depending on the train length and speed. Heavy diesel trains operate in intervals of a few minutes due to the operational limitations, so the pass-by events occur in larger time intervals. Heavy diesel freight trains that operate with diesel locomotives operate at relatively low speeds.

At low speeds such as 40 miles per hour (mph), mechanisms that are part of the propulsion system are the dominant source of perceptible noise. Propulsion noise tends to dominate the noise spectrum at relatively low frequencies. Diesel train propulsion noise sources frequency bands are near 1,000 Hz at an average height of approximately 10 feet above the rail line. Rail-wheel interaction is the source of the rolling noise radiated by steel wheels and vehicle-body vibrations. This noise source spectrum peaks in the two kHz to four kHz frequency range, and the source is close to the track bed with a height of approximately two feet above the rails.

Two railways transect the planning area. The Union Pacific Rail Road (UPRR) and Burlington Northern Santa Fe (BNSF) freight railroad lines and operators use multiple rail corridors within the City. The UPRR has a major east-west track along the south side of I-10 and north/south lines located east of Meridian Avenue. The tracks paralleling I-10 include a major transfer yard referred to as the West Colton yard. BNSF operates lines that run north-south through the City, along a corridor between Pennsylvania Avenue and 6th Street. A BNSF transfer yard partially lies within the City near 8th Street and Mill Street.

Metrolink service is also provided on the railroad tracks, with the nearest stations in the cities of Riverside and San Bernardino. The arterial roadway crossings are at Main Street and Barton Road. The Barton Road crossings are grade separated. The Main Street crossing is at grade, which results in roadway traffic delays when trains are using the railroad tracks.

Colton is the site of Colton Crossing, one of the busiest at-grade railroad crossings in the United States. The main transcontinental UPRR and BNSF trunk lines cross at this point. As traffic on each line has soared since the mid-1990s, fueled largely by the vast increase in imports passing through the ports of Los Angeles and Long Beach, the crossing has become a bottleneck. SANBAG and Caltrans, with input from the Federal Rail Administration (FRA), BNSF, UPRR, and the City of Colton, are pursuing a Colton Crossing grade separation project. The project includes grade separation of the mainline tracks and would require the modification, relocation, and/or construction of

retaining structures, bridges, new embankments, tracks, rail devices, and/or other features. The Colton Crossing project will improve train efficiency for both UPRR and BNSF within this area, and also reduce vehicular traffic delays at street crossings caused by slow-moving or stopped trains.

The primary noise sources observed during the Colton Crossing Study north of I-10 included: 1) BNSF and Metrolink train pass-bys, including wheel-rail noise and locomotive engine noise, 2) train horns near the BNSF grade crossings, 3) warning bells at the grade crossings, and 4) traffic on I-10 and local arterials. The primary noise sources south of I-10 included: 1) Union Pacific, BNSF and Metrolink train pass-bys, including wheel-rail noise and locomotive engine noise, 2) train horn noise near the Colton Crossing diamond, 3) wheel impacts at the Colton Crossing diamond and other special track work, and 4) traffic on I-10 and local arterials.

The City is pursuing several projects that will result in a reduction of rail noise, including the establishment of a quiet zone between Valley Boulevard and Olive Street, construction of the Colton Crossing grade separation project, construction of the Laurel Street grade separation, and realignment of the 9th Street rail line. The quiet zone and grade separation projects would eliminate most BNSF horn noise north of I-10, which would substantially reduce noise levels at the sensitive receivers north of I-10. There also would be a small noise reduction south of I-10 because northbound BNSF trains would no longer be required to sound the horn prior to the Valley Boulevard grade crossing. The 9th Street rail line realignment would reduce train noise and vibration at 9th Street receivers by removing the existing 9th Street rail lines and railroad signage.

Each of the observed noise sources are discussed below.

- *Train horns:* Federal Railroad Administration requires the lead locomotive to sound its horns ¼ mile or 20 seconds before an at-grade rail/roadway crossing, unless a special quiet zone has been established, horns on the lead locomotive. The horn is to be sounded in a long - long - short - long pattern with the sequence ending as the lead locomotive clears the grade crossing. The horns are required to generate a sound level of 94 to 105 dBA at a distance of 100 feet in front of the locomotive. In Colton, the maximum sound level from the horns exceeded 100 dBA at two locations near BNSF grade crossings and exceeded 90 dBA at several others when approaching men or equipment on or near the track.

- *Locomotives:* The noise levels generated by locomotives vary depending on throttle setting and are relatively independent of speed. A locomotive cruising at 50 mph and a low-throttle setting will generate less noise than a locomotive accelerating from a stop at full power. All freight trains have locomotives located at the front of the trains; a number of the trains observed during the noise measurements also had “helper” locomotives in the middle or at the end of the train.

- *Rail cars:* The steel wheels of the rail cars rolling on the steel rails will generate noise that is directly related to speed: the higher the speed, the louder the noise. Rail cars with good condition wheels operating on smooth track are relatively quiet. However, there are often several "bad actor" vehicles on a long train that generate substantially higher noise and vibration levels.

- *Wheel squeal:* Locomotives and rail cars operating on sharp radius curves will often generate wheel squeal. The amount of squeal can vary widely with one train generating little or no squeal and the next train generating substantial squeal. Factors such as track lubrication, rail condition, and humidity can have a strong influence on the amount of wheel squeal.

- *Yard movements:* Switching in and around yards will generate additional noises as trains decelerate and accelerate. There will also be noise generated when rail cars are maneuvered into position and joined into a train. This noise source was audible but not an important contributor to averaged noise levels.

Train vibration levels are significantly higher than vibration from trucks. Research by Caltrans suggests that at distances greater than 30 feet, train track vibration levels do not result in architectural damage and at distances greater than 240 feet the vibration level is below the level of perception.

Airplane and Airport Noise

Overflights to and from San Bernardino International Airport are audible in the City. The San Bernardino International Airport is operated by the San Bernardino International Airport Authority, a joint powers authority comprised of the County of San Bernardino and the Cities of San Bernardino, Colton, Loma Linda, and Highland. San Bernardino International has been converted to a commercial airport from its previous use as Norton Air Force Base and is seeking to establish itself as an alternative destination for both passenger and cargo carriers.

According to a noise contour map provided by Mr. Bill Ingraham, the San Bernardino International Airport Aviation Director (May 31, 2012), the ultimate 65 dBA CNEL noise contour for the airport does not encroach into the City of Colton.

Non-Transportation Noise Sources

Non-transportation related noise generators are commonly called "stationary," "fixed," "area," or "point" sources of noise. Industrial processing, mechanical equipment, pumping stations, and heating, ventilating, and air conditioning (HVAC) equipment are examples of fixed location, non-transportation noise sources within the City. Some non-transportation sources are not stationary but are typically assessed as point

or area sources due to the limited area in which they operate, such as truck deliveries.

Industrial and commercial land uses produce noise of various types, intensities and frequencies depending on the nature of the business. Industrial uses often produce additional noise due to the use of heavy machinery. Commercial uses such as large retail complexes can raise localized noise levels due to high volumes of traffic and increased outdoor activities (such as special events). Both industrial and commercial uses may include loading and unloading of trucks in loading docks and generally increase truck traffic in the area. Industrial uses are scattered throughout Colton but heavy industrial is concentrated along the railways.

Intermittent or temporary neighborhood noise from amplified music, public address systems, barking dogs, landscape maintenance, and stand-by power generators can be disturbing to residents but are difficult to attenuate and control.

Planning and Regulatory Framework

Standards applicable to the proposed project include those set forth by the Federal Transit Authority, the Federal Railroad Administration, the Federal Aviation Administration, the State of California Department of Health Services' Noise/Land Use Compatibility Criteria, Title 24 of the State of California Code of Regulations, and the City of Colton General Plan Noise Element and Municipal Code (Sections 10.20.020, 10.20.030, 18.42.010, and 18.42.040). A summary of the pertinent portions of each of these is presented below.

Federal

Federal Transit Authority Standards (FTA)/Federal Transit Administration (FTA)

Rail noise impacts are based on the criteria and analytical methodologies provided in the FRA and FTA guidance manuals (FRA 2005 & FTA 2006). The noise impact criteria in the two manuals are identical as they are applied to freight rail projects. Although neither guidance manual is specifically oriented to freight rail projects, FRA/FTA criteria are based on the best available research on community response to noise and have been used to assess potential impacts from a number of freight rail projects.

Table 4.12-2 (FRA/FTA Land Use Categories and Noise Metrics) lists three land use categories that the FRA/FTA noise impact criteria use along with the applicable noise metric for each category. Category 1 includes land uses such as outdoor amphitheaters, historic landmarks with significant outdoor use, recording studios, and concert pavilions/halls. Category 2 includes homes, hospitals, and hotels, where a nighttime sensitivity to noise is

assumed to be of utmost importance. Category 3 includes schools, libraries, and churches. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities can also be considered to be in this category.

Table 4.12-2
FRA/FTA Land Use Categories and Noise Metrics

Land Use Category	Noise Metric (dBA)	Description of Land Use Category
1	Outdoor $L_{eq}(h)$[1]	A tract of land where quiet is an essential element of their intended purpose. This category includes lands set aside for serenity and quiet and such land uses as outdoor amphitheaters and concert pavilions, as well as national historic landmarks with significant outdoor use. Also included are recording studios and concert halls.
2	Outdoor L_{dn}	Residences and buildings in which people sleep. This category includes homes, hospitals, and hotels, where a nighttime sensitivity to noise is assumed to be of utmost importance.
3	Outdoor $L_{eq}(h)$[1]	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities can also be considered to be in this category. Certain historical sites and parks are also included.

[1] L_{eq} for the noisiest hour of transit-related activity during hours of noise sensitivity.
Source: FRA Guidance Manual, Oct 2005.

For Category 2 land uses, noise exposure is characterized using L_{dn}, while for Category 1 and Category 3 land uses, noise exposure is characterized using the maximum one-hour L_{eq}. The core concept of the FRA/FTA noise impact criteria is to allow more project noise in areas where existing noise is higher, but to reduce the decibel increase in total noise exposure (the decibel sum of existing noise and project noise).

The FRA and FTA define two levels of noise impacts: moderate and severe. In accordance with the FRA and FTA guidance manuals, measures to eliminate noise impacts must be investigated for both degrees of impact. The FRA manual states that for severe impacts "…there is a presumption by FRA that mitigation is incorporated into the project unless there are truly extenuating circumstances which prevent it." In considering measures to reduce potential noise impacts, the goal has been to reduce noise levels to below the moderate impact threshold.

FRA and FTA allow more discretion for mitigation of moderate impacts based on the consideration of factors including cost, number of sensitive receptors affected, community views, the amount by which the predicted levels exceed the impact threshold, and the sensitivity of the affected receptors. The FRA/FTA noise impact criteria are given in tabular format in Table 4.12-3 (FRA/FTA Noise Impact Thresholds) with the thresholds rounded off to the nearest decibel.

Table 4.12-3
FRA/FTA Noise Impact Thresholds

Existing Noise Exposure, Leq or Ldn	Project Noise Exposure Impact Thresholds, Leq or Ldn (dBA)			
	Category 1 or 2 Land Uses		Category 3 Land Uses	
	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
<43	Ambient+10	Ambient+15	Ambient+15	Ambient+20
43	52	58	57	63
44	52	58	57	63
45	52	58	57	63
46	53	59	58	64
47	53	59	58	64
48	53	59	58	64
49	54	59	59	64
50	54	59	59	64
51	54	60	59	65
52	55	60	60	65
53	54	60	60	65
54	55	61	60	66
55	56	61	61	66
56	56	62	61	67
57	57	62	62	67
58	57	62	62	67
59	58	63	63	68
60	58	63	63	68
61	59	64	64	69
62	59	64	64	69
63	60	65	65	70
64	61	65	66	70
65	61	66	66	71
66	62	67	67	72
67	63	67	68	72
68	63	68	68	73

Existing Noise Exposure, Leq or Ldn	Project Noise Exposure Impact Thresholds, Leq or Ldn (dBA)			
	Category 1 or 2 Land Uses		Category 3 Land Uses	
	Moderate Impact	Severe Impact	Moderate Impact	Severe Impact
69	64	69	69	74
70	65	69	70	74
71	65	70	71	75
72	66	71	71	76
73	66	71	71	76
74	66	72	71	77
75	66	73	71	78
76	66	74	71	79
77	66	74	71	79
>77	66	75	71	80

Note: Ldn is used for land uses where nighttime sensitivity is a factor; maximum one hour Leq is used for land use involving only daytime activities
Source: FRA Guidance Manual, Oct 2005

Federal Aviation Administration (FAA) Standards

Enforced by the FAA, Title 14, Part 150 prescribes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses which are normally compatible with various levels of exposure to noise by individuals. It provides technical assistance to airport operators, in conjunction with other local, state, and federal authorities, to prepare and execute appropriate noise compatibility planning and implementation programs. The FAA establishes a 65 dBA CNEL as the noise standard associated with aircraft noise.

State of California

California Environmental Quality Act (CEQA)

CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive noise levels; measure and identify potentially significant permanent or temporary increases in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act of 1973

Sections 46000 – 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of

noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of 45 dBA or below [California's Title 24 Noise Standards, Chap. 2-35].

State of California Department of Health Services

The California Department of Health Services establishes noise criteria for various land uses, Noise/Land Use Compatibility Criteria. The City of Colton has incorporated a modified version of the State standards in the General Plan Noise Element.

Local

City of Colton General Plan Policies

The primary goal of the existing General Plan Noise Element is to protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment. The City of Colton Noise Element sets forth Principles and Standards as guidelines for future land development and policies for existing development, as follows:

Principles:

(1) Establish criteria defining compatible land uses as a function of the level of noise exposure.

(2) Control noise exposure from future noise generators so the ambient environment will be kept within acceptable limits.

(3) Establish acceptable noise standards consistent with health and quality of life goals.

Standards:

(1) Residential structures should be constructed to maintain interior noise levels of not greater than 45 dBA, through the use of sound barrier improvements, building design, construction materials and/or insulating techniques.

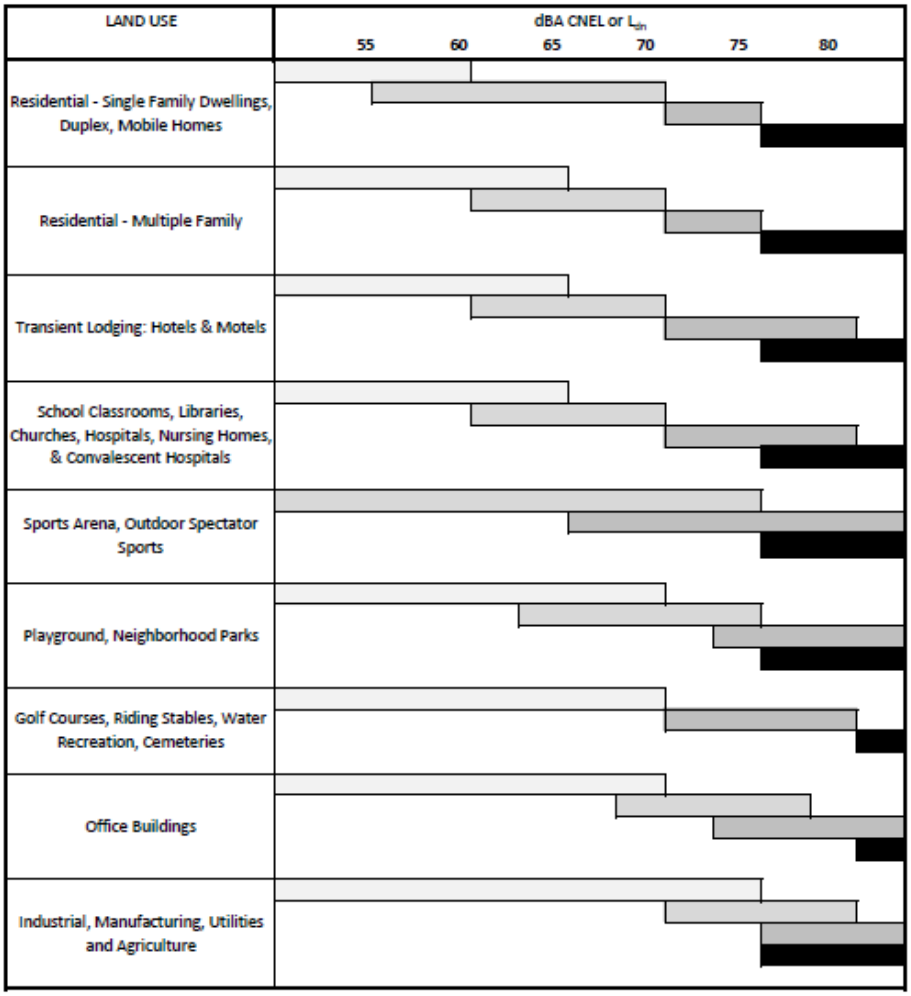
(2) Residential growth in Community Noise Exposure Areas greater than 70 dBA should be discouraged, unless on-site noise levels can be reduced to 60 dBA or lower via on- and off-site noise alleviating improvements.

(3) Exterior noise levels should not exceed 65 dBA during the day or 55 dBA at night for commercial land uses, including general business and general merchandising.

(4) Exterior noise levels should not exceed 60 dBA at any time for such areas important to public need, and where the preservation of serenity and quietness is essential if the area is to continue to serve its intended purpose. Such areas could include parks, open spaces, amphitheaters, and other areas dedicated for activities requiring special qualities of serenity.

A proposed project is subject to the land use compatibility for community noise environments standards set forth in the City of Colton General Plan Noise Element. These standards set outdoor noise levels that are acceptable, conditionally acceptable and unacceptable, for a variety of land uses; see Figure 4.12-3 (Land Use Compatibility for Community Noise Environments). The standards present ranges of compatibility that are intended to allow for enough flexibility to accommodate a range of projects and environments. For example, a commercial project would be evaluated differently than a residential project in a rural area or a mixed-use project in a more densely developed area of the City.

Figure 4.12-3
Land Use Compatibility for Community Noise Environments



Normally Acceptable:	Conditionally Acceptable:	Normally Unacceptable:	Clearly Unacceptable:
Specified land uses is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation or requirements.	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.	New construction and development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.	New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

Source: City of Colton General Plan Table 5-1, 1987

City of Colton Municipal Code

The following sections of the City of Colton Municipal Code are applicable to the proposed project.

10.20.030 – Whistles and horns—Sounding within the city prohibited—Exceptions: It is unlawful for any person, firm or corporation to sound or blow any whistle, horn or other sounding device or cause to sound or cause to blow any whistle, horn or other sounding device upon any railroad locomotive or railroad engine within the city limits of the city unless the same is absolutely necessary at the time as a danger signal to avoid an impending accident or other imminent danger.

10.20.020 – Speed limit in city: It is unlawful for any locomotive, engine, railway train or car to be driven or propelled by steam at a greater rate of speed than ten miles per hour in the city. However, these limits are not applicable to freight train operations because the Federal Railroad Administration is the only government body with the authority to regulate freight rail systems.

18.42.010 – Purpose: The purpose of this chapter is to protect properties in all residential zones and the health and safety of persons from environmental nuisances and hazards and to provide a pleasing environment in keeping with the nature of the residential character. The performance standards set maximum tolerability limits on adverse environmental effects created by any use or development of land.

18.42.010A – Prohibition: Notwithstanding any other provisions of this code and in addition thereto, it shall be unlawful and is hereby declared a public nuisance for any person or entity to willfully make, suffer, permit, continue, or cause to be made or continued, any loud, unnecessary, and unusual noise or any disturbance, commotion, gathering or event, which disturbs or tends to disturb the peace or quiet of any neighborhood or which causes or tends to cause discomfort or annoyance to any reasonable person of normal sensitivity within the area.

18.42.010B – Standards: The standards which may be considered in determining whether violation of the provisions of this section exists may include, but not be limited to, the following:

a. The level of the noise;
b. Whether the nature of the noise is usual or unusual;
c. Whether the origin of the noise is natural or unnatural;
d. The level and intensity of the background noise, if any;
e. The proximity of the noise to residential sleeping facilities;
f. The nature and zoning of the area within which the noise emanates;
g. The density of the inhabitation of the area within which the noise emanates;
h. The time of the day and night the noise occurs;
i. The duration of the noise;
j. Whether the noise is recurrent, intermittent, or constant; or
k. Whether the noise is produced by a commercial or noncommercial activity.

Section 18.42.040 – Noise: The maximum sound level radiated by any use of facility, when measured at the boundary line of the property on which the sound is generated, shall not be obnoxious by reason of its intensity, pitch or dynamic characteristics as determined by the city, and shall not exceed 65 dBA.

Thresholds of Significance

Implementation of the Land Use, Mobility, and Housing Elements would result in a significant impact to noise if they would:

A. Expose persons to or generate noise levels in excess of standards established by the City of Colton General Plan or Municipal Code.
B. Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
C. Result in a substantial permanent increase in ambient noise levels above the existing levels.
D. Result in a substantial temporary or periodic increase in ambient noise levels above existing levels.
E. Expose people residing or working within two miles of any public airport to excessive noise levels associated with air traffic.
F. Expose people residing or working within two miles of a private airport to excessive noise levels associated with air traffic.

Environmental Impacts

IMPACT 4.12.A 4.12.C

Projected long-term traffic volumes, the extension of new roadway segments, and the proposed land uses located near rail lines and other sensitive land uses would increase noise by less than significant levels with continued implementation of General Plan policies.

Future Noise Levels Along Existing Roadway Segments

Future population and employment growth within the planning area would result in increased traffic and the need for roadway and intersection improvements necessary to maintain desired levels of service. Increases in traffic could result in permanent increases in ambient noise levels, e.g., where a roadway segment is proposed to be expanded with additional travel lanes over the long-term to achieve level of service standards. Roadway noise could also increase on an existing roadway that will carry increasing traffic volumes. In either set of circumstances, roadway noise levels could increase to beyond the levels considered acceptable for the adjacent land uses as defined by the City of Colton Noise Guidelines.

Future noise levels for the proposed General Plan roadway segments were modeled by Kunzman Associates. Distances to the 60, 65 and 70 dBA CNEL noise contours were calculated, as shown in Table 4.12-4 (Future CNEL Along Existing Road Segments). The traffic noise levels identified in Table 4.12-4 represent conservative potential noise exposure. In reality, noise levels may vary from those represented in Table 4.12-4, as the calculations do not assume natural or artificial shielding nor do they assume reflection from existing or proposed structures or topography. Intervening structures or other noise-attenuating obstacles between a roadway and a receptor may reduce roadway noise levels at the receptor.

Table 4.12-4
Future CNEL Along Existing Road Segments

Road Segment			Distance from Centerline to CNEL Contour (ft)		
Name	**From**	**To**	**60 dBA**	**65 dBA**	**70 dBA**
La Cadena Drive	I-10 Freeway	N Street	987	312	99
	South of Rancho Avenue	N/A	1,795	568	179
	North of I-215 Interchange	N/A	1,508	477	151
Mt Vernon Avenue	Colton Avenue	La Cadena Drive	738	234	74
	Colton Avenue	E Street	743	235	74
	I-10 Freeway	M Street	257	81	26
	Santo Antonio Drive	Centre Pointe Drive	700	222	70
	I-215 Interchange	Grand Terrace City Limits	319	101	32
Rancho Avenue	Olive Street	C Street	459	145	46
	C Street	Valley Boulevard	452	143	45
	I-10 Freeway	N Street	1,090	345	109
	N Street	O Street	1,281	405	128
Reche Canyon Road	South of Washington Street	N/A	1,020	323	102
Riverside Avenue	South of Agua Mansa Road	N/A	1,492	472	149
San Bernardino Avenue	Indigo Avenue	Pepper Avenue	248	79	25
	Pepper Avenue	Meridian Avenue	248	78	25
Valley Boulevard	Meridian Avenue	Pepper Avenue	318	101	32
	Rancho Avenue	Cypress	431	136	43

Road Segment			Distance from Centerline to CNEL Contour (ft)		
Name	From	To	60 dBA	65 dBA	70 dBA
		Avenue			
Washington Street	Mt. Vernon Avenue (east int)	Meadow Lane	1,527	483	153
	Barton Road/Cooley Drive	Reche Canyon Road	1,527	483	153

Source: KUNZMAN ASSOCIATES, Inc. November 2012

Future Noise Levels Along Proposed Roadway Segments

Some of the proposed road segments would result in permanent noise level increases ranging from 5.2 dBA to 18.8 dBA, as shown in Table 4.12-5. It is, however, possible that the noise level increases may be less than shown if the roadways were planned and constructed in a manner that increases the distance from noise sensitive land uses. Anticipated increases vary widely due to the varied existing noise environment. A five dBA increase is noticeable to most people and a 10 decibel increase is perceived by most people as a doubling of the existing noise level.

Brief discussions regarding the potential for these new road segments to result in significant land use compatibility impacts are presented below.

Pellisier Road - Extension to Iowa Avenue

Pellisier Road, an existing local street serving several businesses, is proposed to be extended east from Riverside Avenue to Iowa Avenue. Although the existing portion of this road largely abuts industrial properties, its extension will pass near to an existing mobile home park. For the purposes of modeling, a distance of 75 feet between the edge of the mobile home park and the centerline of the proposed roadway was assumed as a worst case scenario. Build-out traffic volumes along the Pellisier Road extension would result in a 14.1 dB increase over existing noise levels, and future build-out noise levels due to vehicle traffic along the extension are expected to reach 66.7 dBA CNEL. This level is considered to be "conditionally acceptable[1]". As such, the proposal to extend the roadway would require preparation of a noise study at the time of the roadway's design to determine what mitigation, if any, would most efficiently reduce future traffic noise impacts.

[1] New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy. - City of Colton General Plan Noise Element, Land Use Compatibility for Community Noise Environments.

Reche Canyon Road – Realignment between Shadid Drive and Michelle Drive
Reche Canyon, a busy two-lane major arterial, is proposed to be realigned slightly to the east between Shadid Drive and Michelle Drive in the Reche Canyon Specific Plan area. This area is characterized by low- and very low-density residential. Reche Canyon Road was modeled as a four-lane major arterial at a worst case distance of 110 feet from the nearest residential yard. This resulted in a 6.6 dB increase over existing noise levels and future build-out traffic noise levels of 70.0 dBA CNEL. If the road were realigned, existing nearby residences could be exposed to noise levels that are twice as loud as what currently exists. Noise levels between 60 and 70 dBA are considered to be "conditionally acceptable;" however, a noise study should be prepared at the time of the roadway design to determine what mitigation if any, would most efficiently reduce traffic noise impacts.

Hunts Lane – Connection to Reche Canyon Road
Hunts Lane, a secondary arterial terminating at Washington Street, is proposed to connect Reche Canyon Road to the Hunts Lane/Washington Street intersection. This connection will place traffic closer to an existing cemetery and chapel. The City is currently studying two options for this road segment. Alternative one consists of a four-lane major arterial with two-way traffic and the second alternative would include only two northbound lanes. Both alternatives were modeled. Alternative one would result in an 8.2 dB increase over existing noise levels and a future build-out noise level of 63.9 dBA CNEL; alternative two would result in a 5.2 dB increase over existing noise levels and a future build-out noise level of 60.9 dBA CNEL. Both alternatives would result in a noticeable increase in ambient noise levels, although outdoor noise levels of up to 65 dBA CNEL are considered to be "acceptable" for churches and parks, as shown in the City's Land Use Compatibility for Community Noise Environments Table.

Proposed Reche Canyon Specific Plan Arterial
The draft Mobility Element includes the proposal to provide a new roadway connection from Reche Canyon Road to Barton Road, with an indeterminate alignment. The proposed roadway would extend east from Barton Road through a canyon to Reche Canyon Road, with the potential to impact areas planned for or developed with low-density residential land uses. The proposed roadway was modeled as a four-lane major arterial at a worst case distance of 500 feet from the nearest residential home. The model resulted in a 9.2 dB increase over existing noise levels and a future build-out noise level of 63.5 dBA CNEL. Noise levels between 60 and 70 dBA are considered to be "conditionally acceptable;" as such, the preparation of a noise study at the time of the road's design will determine what mitigation if any, would most efficiently reduce traffic noise impacts. Nearby residences may experience noise levels that are twice as loud as what exists currently.

Washington Street – Westerly Extension
Washington Street, a four-lane major arterial turns into a two-lane road west of RV Center Drive. The draft Mobility Element includes the proposal to

extend Washington Street as a four-lane major arterial west along the Santa Ana River to Riverside Avenue. Most of this extension will run through undeveloped and industrial areas. However, the easternmost portion will affect an existing mobile home park. The proposed roadway was modeled at a worst case distance of 60 feet from the nearest mobile home yard. The model resulted in an 18.8 dB increase over existing noise levels and a future build-out noise level of 72.7 dBA CNEL. This level is considered to be "normally unacceptable;" extension of the roadway will require preparation of a noise study at the time of the roadway's design to determine what mitigation if any, would most efficiently reduce future traffic noise impacts. Residents at the mobile home park may experience noise levels that are twice as loud as what currently exists.

Table 4.12-5
Change in Ambient Noise Levels due to Proposed Road Segments

Nearest Sensitive Receptor				Noise Levels			
Name	Description	Associated Road Segment	Distance, receiver to roadway centerline	Existing Ambient (dBA L_{eq})	Estimated Buildout (dBA L_{eq})	Increase (dBA L_{eq})	Significant Impact? (Unmitigated)
RD-1	Cadena Creek Mobile Home Park, South Graymoor Avenue	Pellisier Road	75'	50.7	64.8	+ 14.1	Yes
RD-2	Existing low density residential, 3008 Shadid Drive	Reche Canyon Road	110'	59.4	66.0	+ 6.6	Yes
RD-3	Our Lady Queen of Peace Cemetery & Mausoleum, 3510 East Washington Street	Hunts Lane Connection, 4-lane Alternative	450'	51.6	59.8	+ 8.2	Yes
		Hunts Lane Connection, 2-lane Alternative			56.8	+ 5.2	Yes
RD-4	Existing very low density residential, 2001 Skyview Drive	Proposed Reche Canyon Specific Plan Arterial	500'	50.2	59.4	+ 9.2	Yes
RD-5	Existing mobile home park, 700 East Washington Street	Washington Street	60'	49.8	68.6	+ 18.8	Yes

Source: Kunzman Associates, Inc., 2012

The proposed General Plan Update would not authorize any specific construction. Potential increases in noise levels along existing and proposed roadways will be assessed in conjunction with the City's review of site-specific noise impact analyses.

Incompatible Uses

The proposed land use plan has been designed to buffer residential land uses from incompatible uses to the greatest extent possible given long-established land use patterns. Residential parcels have been shielded from intensive industrial uses by applying the Industrial Park designation between residential uses and the Heavy Industrial designation wherever possible.

Colton is served by two freight railroad lines and operators that use multiple rail corridors within the City. Although the proposed General Plan Update does not propose new rail lines, it proposes to change the land use designations for parcels located near the rail lines. The proposed changes include Low, Medium and High Density Residential, Neighborhood Commercial, Commercial, Industrial Park, Light Industrial and Public/Institution. To the greatest extent possible, however, the City has avoided redesignating properties along rail lines from a non-residential to a residential use in recognition of the noise, vibration, and risk of upset associated with active rail lines.

A Metrolink commuter rail station is proposed in the City, to be located south of I-10 in the vicinity of South Rancho Avenue. This is an area with light and heavy industrial land uses. Proposed land use changes in the area include additional Light Industrial and Public.

According to the data presented in the ATS report (2011) prepared for the Colton Crossing Grade Separation Project, noise from passing trains could reach up to 94 dBA L_{dn}/CNEL at 30 feet from the rail lines, and train horn noise could reach up to 115 dBA SEL at 50 feet (FRA 2005) at sensitive receptors located adjacent to the rail lines. These levels exceed the City of Colton Municipal Code 18.42.040, which establishes a maximum property-line sound level standard of 65 dBA. Assuming that there are no intervening structures, the maximum noise level due to train horns could exceed 65 for up to 14,300 feet (2.7 miles) from a rail line.

Outdoor activities near the grade crossings may experience temporary disruption during train passes and horn events. Interior noise levels would also be affected by train noise. Building structures typically provide 20 to 25 dB attenuation from exterior to interior noise levels with windows closed. With windows open, a 12 dB reduction can be expected. Enforcement of General Plan Noise Standard 1, which states that residential structures should be constructed to maintain interior noise levels of not greater than 45 dBA through the use of sound barrier improvements, building design, construction materials and/or insulating, will reduce noise impacts related to incompatible land uses to a less than significant level.

IMPACT *4.12.B*

Exposure of persons to or generation of excessive groundborne vibration or grounborne noise levels with implementation of the General Plan Update will result in a less than significant impact.

Typical sources of groundborne vibration and noise include construction activities and train operations. Excessive vibration can lead to structural damage, and general annoyance to the public. Vibration can also adversely affect delicate instruments such as electron microscopes and advanced technology production and research equipment.

Damage to structures due to vibration depends not only on the source of the vibration but also on the age and stability of the structure. Table 4.12-6 (Vibration Levels Resulting in Structural Damage) identifies structural age and maximum thresholds for vibration before damages occur (both under transient and continuous circumstances). There are no extremely fragile or fragile historic structures, ruins, or ancient monuments in the planning area.

Table 4.12-6
Vibration Levels Resulting in Structural Damage

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial & commercial structures	2.00	0.50

Source: Caltrans 2004
PPV: peak particle velocity

"Annoyance" is a subjective term that is a response to human perception and the activities that the receptor is partaking in. A person sleeping or reading in a library would be more easily annoyed with subtle vibration than a person exercising in a crowded gym. Table 4.12-7 (Human Response to Vibration) indicates ranges of perceptibility for human response to vibration.

Table 4.12-7
Human Response to Vibration

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40

Source: Caltrans 2004

Construction Impacts

Pile drivers and rock blasting are generally the primary cause of construction related vibration impacts. Such construction methods are employed on a limited basis, on sites where there are extensive layers of very hard materials that must be loosened and/or penetrated to achieve the grading plan and place foundation supports. Additional noise impacts could occur where heavy machinery is required to break up large, hard rocks into smaller fragments. The need for such methods is determined through site-specific geotechnical investigations that identify the subsurface materials within the

grading envelope, along with the construction methods recommended to handle the types of materials that are found.

Occasionally, large bulldozers and loaded trucks can create perceptible vibration at close proximity; however they generally do not cause vibration that could cause structural or cosmetic damage. Construction equipment and activities are categorized by the nature of the vibration it produces. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate repeated impact vibration include impact pile drivers, blasting, and crack-and-seat equipment. High-rate repeated impact vibrations are common of jackhammers and pavement breakers. Table 4.12-8 (Common Construction Vibration) summarizes the peak particle velocity (PPV) at 25 feet for common construction equipment.

Table 4.12-8
Common Construction Vibration

Equipment	PPV (in/sec at 25ft)
Crack-and-Seat Operators	2.400
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual, June 2004

Vibration varies widely with distance and intensity. Vibration from earthmovers and haulers have no potential to damage buildings after 10 feet, while vibration from blasting activities can damage structures up to 115 feet away. Common mitigation for impact pile drivers include jetting, pre-drilling, use of cast-in-place or auger cast piles, use of non-displacement piles, and use of pile cushioning. Vibration can be reduced from breaking of concrete and other materials through use of hydraulic crushers, saws or rotary rock-cutting heads, hydraulic splitters, and chemicals instead of using hydraulic breakers.

Building and roadway construction has the potential to generate perceptible vibration levels to sensitive receptors within 20 feet from the operation of heavy equipment. Given that vibration levels dissipate rapidly with distance, and that homes along streets and intersections are typically more than 20 feet away from the street edge, residential land uses adjoining roadway and intersection improvement projects would not likely be subject to distinctly perceptible vibration levels over extended periods of time.

The proposed General Plan Update does not authorize any construction or other land altering activity that could result in construction-related vibration.

Potential vibration due to future construction activities would be assessed in conjunction with the City's routine review of site-specific geotechnical studies and the recommended grading and foundation design measures. This will occur in the project planning process, prior to project approval, for projects subject to review under CEQA, and this will provide an adequate mechanism to require special measures to mitigate potentially significant vibration impacts of the updated General Plan. Impacts resulting from construction–generated groundborne vibration and noise would be less than significant.

Train Impacts

Train operations on the UP and BNSF railway lines present the potential for transient vibration impacts within the planning area. At distances of 30 feet, train vibration generally falls below architectural damage risk levels and at 240 feet, falls below the level of perception; therefore, there could be potentially significant impacts involving structures that are built within 30 feet of the rail tracks, and there could be potentially significant impacts involving disturbance of building occupants within 240 feet of the tracks.

BNSF tracks run parallel to I-10 and pass through the center of Colton in an east-west direction. There are vacant lands as well as existing heavy industrial and residential on the south side of the tracks, and vacant and heavy industrial to the north. There is some possibility, therefore, that train movements could generate groundborne vibrations that could result in future structure damage and/or some nuisance for residents in this area. The proposed General Plan Update does not propose residential or other sensitive uses in close proximity to the BNSF tracks.

UP tracks run north-south through the center of Colton. There are existing heavy and light industrial, residential, and commercial uses along both sides of the tracks. The proposed General Plan Update would replace the current Low Density Residential designation with Medium Density Residential for two blocks along 6th Street south of E Street and north of G Street. This would expose a greater number of people to potential vibration and noise impacts from the UP railway. Project-level studies would be required to estimate potential vibration levels at each site and to identify specific building construction methods that would mitigate potentially significant vibration impacts.

IMPACT 4.12.D

The proposed project would allow for additional development of residential and mixed-use development that may result in increased temporary or intermittent noise impacts. Those impacts are less than significant with the continued implementation of the City's Municipal Code.

Temporary Construction Impacts

Construction activities would generate a variety of noise levels associated with different kinds of construction equipment and the location of staging, construction, storage and access routes. Grading, paving, landscaping and building construction processes involve equipment and vehicles that are known to produce intrusive levels of noise. This will result in temporary increase in local noise levels near the active construction sites that could adversely affect neighboring land uses, particularly those where sensitive receptors are located.

Periodic Noise Impacts

Periodic noise occurs from sources that generate perceptible noise on a recurring and often regularly scheduled interval, but not a constant basis, in the normal course of operations. The primary sources of periodic noise impacts within the planning area are train operations. As the planning area and the region grow over the long-term, noise from these sources have the potential to increase as they expand service to meet the needs of regional growth. Routine landscaping is also a common source of periodic noise. Landscaping activities are a minor source and are not affected or addressed by the General Plan Update.

Permanent Noise Impacts

Future population growth within the planning area would result in increased traffic and the need for roadway and intersection improvements necessary to maintain desired levels of service, despite this increase in traffic. Increases in traffic could result in permanent increases in ambient noise levels, e.g., where a roadway segment is proposed to be expanded with additional travel lanes over the long-term to achieve level of service standards. Roadway noise could also increase on an existing roadway that will carry increasing traffic volumes. In either set of circumstances, roadway noise levels could increase to beyond the levels considered acceptable for the adjacent land uses.

Intermittent or temporary neighborhood noise from amplified music, public address systems, barking dogs, landscape maintenance, and stand-by power generators are disturbing to residents but are difficult to attenuate and control. These noise sources could result in a significant impact if they

violate the Municipal Code Section 8.108.020. This Section states that "It is unlawful for any person to make, continue or cause to be made or continued any loud, unnecessary and excessive noise which disturbs, offends, injures or endangers the peace, quiet, comfort, repose, health or safety of any neighborhood or person within the limits of the City."

The Proposed Project would accommodate the development of additional residential and mixed-use development, which may result in an increased number of residents registering noise complaints from neighboring uses. Continuing enforcement of the Municipal Code would reduce potential nuisance noise impacts. As such, impact is less than significant.

IMPACT 4.12.E 4.12.F

The proposed project would not expose people residing or working within two miles of any public ariport nor private airport to excessive noise levels associated with air traffic.

The City of Colton is not located within an airport land use plan area or within two miles of a public airport or private airstrip. San Bernardino International Airport is located approximately three miles east of Colton. Overflights to and from San Bernardino International Airport are audible within the City. San Bernardino International Airport is operated by the San Bernardino International Airport Authority, a joint powers authority comprised of the County of San Bernardino and the Cities of San Bernardino, Colton, Loma Linda, and Highland. San Bernardino International has been converted to a commercial airport from its previous use as Norton Air Force Base and is seeking to establish itself as an alternative destination for both passenger and cargo carriers.

According to a noise contour map provided by Mr. Bill Ingraham, the San Bernardino International Airport Aviation Director (May 31, 2012), the ultimate 65 dBA CNEL noise contour for the airport does not encroach into the City of Colton. Mr. Ingraham provided a draft Airport Noise Contour Map. As such, the proposed project would not expose residents or workers within two miles of an airport to excessive noise levels associated with air traffic.

Mitigation Measures

Potentially significant noise impacts will be avoided through effective implementation of existing and Noise Element and Municipal Code policies.

Level of Impact with Mitigation Incorporated

Not applicable.

This page left intentionally blank

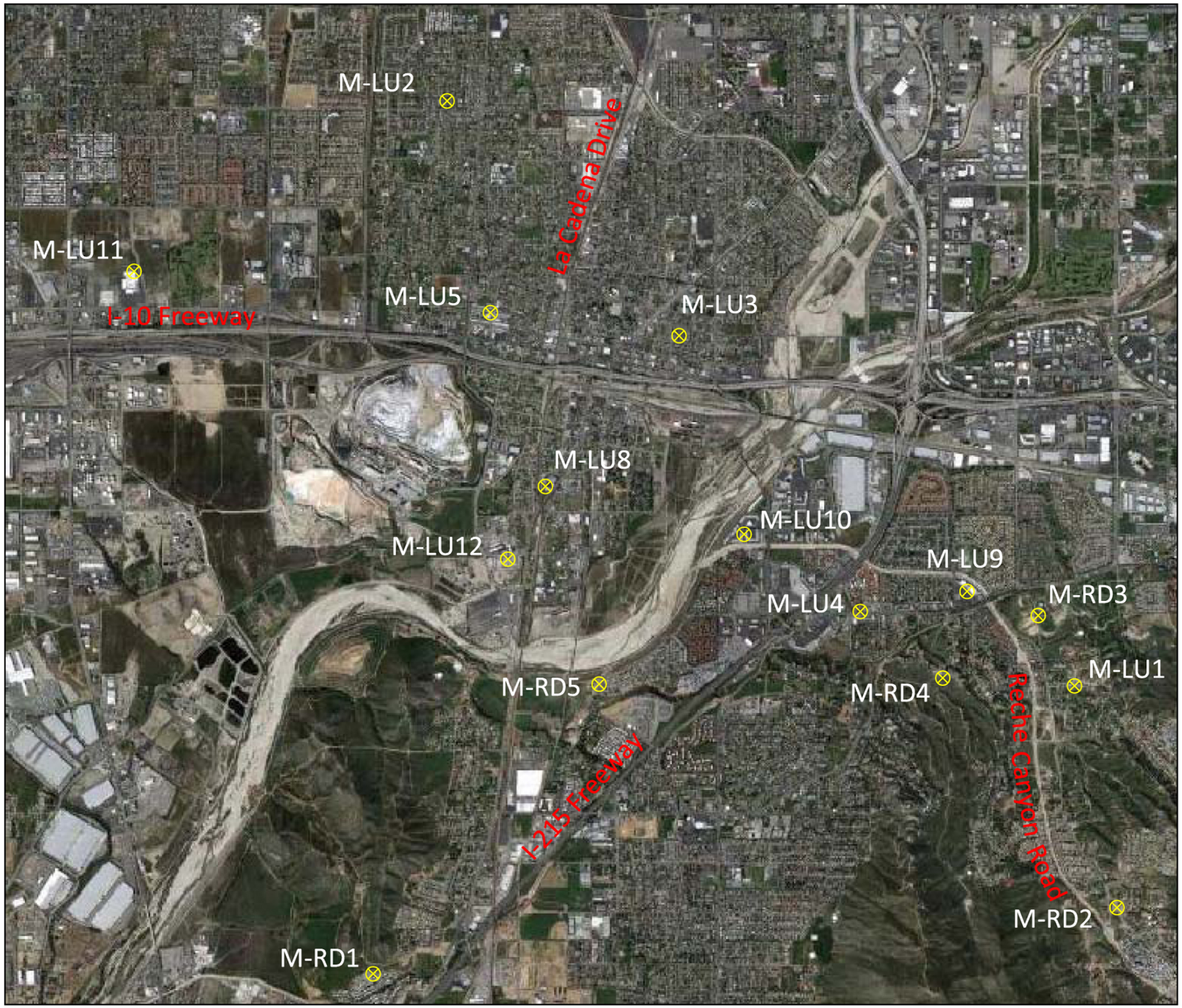


Exhibit 4.12-1

Noise Measurement Locations

Measurement Location

Use constraints:
This is not an official map but for reference use only. The data was compiled from the best sources available, so various errors from the sources may be inherent on the map. All boundaries and features therein should be treated as such. For official boundary information, the pertinent Agency or Municipality should be contacted. This map is a representation of ground features and is not a legal document of their locations. The scale represented is approximate so this is NOT a Survey or Engineering grade map and should by no means be used as such. This map is not intended for all uses. Hogle-Ireland Inc. is not responsible or liable for any derivative or misuses of this map.

Source: Kunzman Associates Inc.

Not to Scale

This page left intentionally blank

Population and Housing 4.13

This section examines population and housing growth impacts associated with implementation of the Land Use, Mobility, and Housing Elements. Population and household estimates and projections for the City were obtained from the California Department of Finance (DOF) and SCAG. Population and household estimates for the City's SOI and the City have been calculated by Hogle-Ireland for comparative purposes. No comments were received regarding population and housing as a result of the Notice of Preparation or EIR Scoping Meeting.

Existing Conditions

Population

The 2010 U.S. Census reported the population of Colton at 52,126 (three-year American Community Survey). According to DOF estimates, the City of Colton has an estimated population of 52,498 as of January 1, 2011. This DOF figure represents a 10.1 percent increase compared to the 2000 population of 47,662. The City's SOI contains approximately 1,109 acres, with an estimated current population of 4,293.[1] SCAG's 2012-2035 Regional Transportation Plan (RTP) forecasts Colton's population to increase to 60,700 and 71,700 in 2020 and 2035, respectively.

Housing

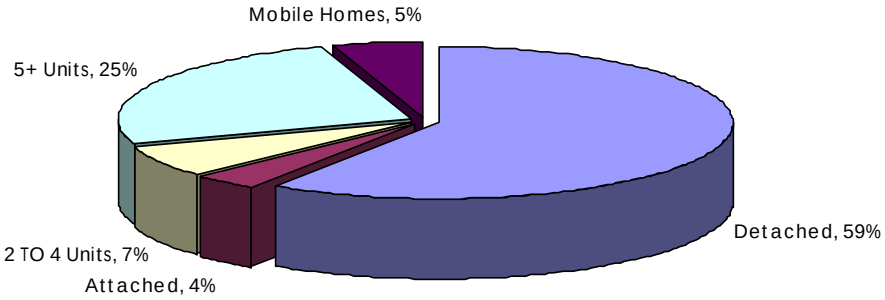
According to the California Department of Finance, the City of Colton has an estimated 16,358 housing units as of January 1, 2011. This figure represents a 4.3% increase compared to the 2000 estimate of 15,680 housing units. The housing stock in the City primarily consists of single-family residential units, as indicated in Exhibit 4.13-1 (Colton Housing Stock). The City's SOI contains approximately 1,355[2] housing units

Employment

According to SCAG's recently adopted 2012-2035 Regional Transportation Plan (RTP), Colton had an estimated employment base of 24,000 in 2008.[3] [4] In an earlier RTP, SCAG estimated Colton's employment base had increased to 28,502 by 2010.[5] The 2012-2035 RTP forecasts Colton's employment base to increase to 25,500 and 29,600 in 2020 and 2035, respectively.



Exhibit 4.13-1
Colton Housing Stock



+

Source: California Department of Finance 2011

Thresholds of Significance

The General Plan Update could result in a significant impact if it:

A. Induces substantial population growth in the area, either directly or indirectly.
B. Displaces a substantial number of existing housing units and necessitates the construction of replacement housing elsewhere.
C. Displaces a substantial number of people and necessitates the construction of replacement housing elsewhere.

Environmental Impacts

IMPACT 4.13.A

Implementation of the proposed General Plan Update would have a less than significant impact on inducing population and housing growth as the anticipated increase is consistent with SCAG's 2012-2035 forecasts.

A variety of economic factors will continue to drive the production of housing and the expansion of the local employment base, with respect to demographics, employment, interest rates, land values, household formation, etc. The General Plan Update does not establish the rate of growth in Colton. Rather, the Plan identifies locations and densities/intensities for the full range of land uses. The actual rates of growth pursuant to land use policy will be driven by forces largely beyond the City's control. The land use plan will, however, accommodate new development and growth in areas currently either undeveloped or underdeveloped.

The updated Land Use Element includes these major policy changes that could be considered growth inducing.

1) West Valley Specific Plan land use designation – The West Valley Specific Plan is currently in the process of being amended, and the updated Land Use Element establishes the foundation for allowing nearly 1,300 housing units in an area where residential uses currently are not permitted.

2) Residential Overlay – The new Residential Overlay is intended to promote high-quality market rate and affordable housing construction in areas where residents can easily walk to shops, services, schools, and transit stops. Residential development can either occur as part of a mixed-use development or as stand-alone, attractive multi-family housing. The Overlay allows up to 30 dwelling units per acre and has been applied to commercial properties where residential development would not otherwise have been permitted.

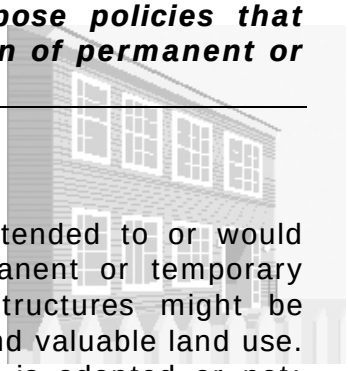
3) Mixed Use: Downtown – This land use designation allows for a mix of commercial and residential uses within Colton's historic downtown area. While residential development is permitted by existing land use regulations, the new Mixed Use: Downtown designation (and subsequent rezoning) will accommodate residential development at up to 30 units per acre.

These land use policy changes could potentially induce population growth in Colton that would not otherwise have occurred. This growth may have *indirect* effects related to traffic, utility use, demand for public services, and other environmental issue areas discussed in detail in the relevant subject area sections of this EIR.

If the estimated potential new housing units allowed by the proposed land use policies were to be built and occupied, this would yield a total residential population of approximately 67,182 persons in the City limits and approximately 5,354 persons in the SOI, for a planning area total of 72,536 residents. This is an approximately 28 percent increase in population over the current (2011) population estimate. However, the population and housing growth is consistent with SCAG's 2012 -2035 RTP forecasts. As such, the proposed plan would have a less than significant growth-inducing impact.

IMPACT 4.13.B 4.13.C

The General Plan Update does not propose policies that would result in displacement or demolition of permanent or temporary residential structures.



The General Plan does not propose any policies that are intended to or would indirectly result in displacement or demolition of any permanent or temporary residential structures. Over time, some older, existing structures might be removed due to deterioration or replaced by a more efficient and valuable land use. This could occur whether the proposed General Plan Update is adopted or not;

therefore, the proposed plan would have no effect involving displacement of housing or businesses.

Mitigation Measures

No mitigation measures are required since no impacts will result.

Significance of Impacts with Mitigation Incorporated

Not applicable.



References

[1] Hogle-Ireland estimate, January 2010
[2] Hogle-Ireland estimate, January 2010
[3] Southern California Association of Government, *2012-2035 Regional Transportation Plan: Sustainable Communities Strategy,* April 2012.
[4] An estimate of the employment base of the Sphere of Influence is not available.
[5] Southern California Association of Government, 2008 Regional Transportation Plan Growth Forecast



Public Services 4.14

This section analyzes potential impacts associated with the provision of new or expanded public service facilities in response to long-term growth guided by the General Plan Update. Public services examined are fire protection and emergency services, police protection, schools, and libraries. Parks are discussed in Section 4.15, Recreation. Rialto Unified School District (RUSD) submitted comments regarding the EIR's scope during circulation of the Notice of Preparation. Those comments are addressed herein.

Existing Conditions

Fire Protection and Emergency Services

Colton Fire Department

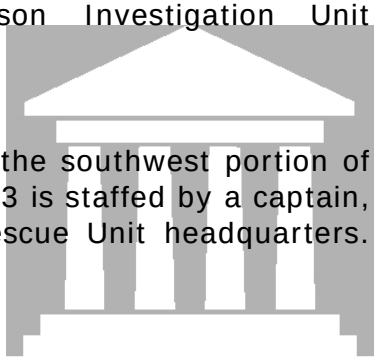
City of Colton Fire Department provides fire suppression and emergency medical services to the planning area.[1] The Colton Fire Department is staffed by 32 uniformed personnel including the Fire Chief, Battalion Chiefs, Fire Captains, Engineers, and Firefighter/Paramedics. Emergency medical service is provided by the Emergency Medical Services (EMS) division staffed by 17 paramedics and nine emergency medical technicians (EMT). American Medical Response (AMR) provides ambulance service to the City of Colton. The Colton Fire Department responds to over 5,000 calls per year from four stations throughout the community. The Colton Fire Department's average response time is 5:56 minutes for all call types.[2] For emergency services, AMR has an established agreement to respond to 90 percent of calls within nine minutes. Details on Station staffing and equipment is discussed below and station locations are mapped on Exhibit 4.14-1 (Public Services Map).

Fire Station 211

Station 211 serves as the Colton Fire Department's administrative headquarters; it is located at 303 East E Street near Downtown. This facility, constructed in 1936, was remodeled in 2009. The Fire Chief, administrative and suppression personnel, a battalion chief, captain, engineer, and firefighter/paramedic staff Station 211. The facility is equipped with a ladder truck and one engine.

Fire Station 212

Station 212 is located at 1511 North Rancho Avenue in the northwest portion of the City. This facility was constructed in 1957. Station 212 is staffed by a captain, engineer, and firefighter/paramedic and is the Arson Investigation Unit headquarters. The facility is equipped with one fire engine.



Fire Station 213

Station 213 is located at 1100 South La Cadena Drive in the southwest portion of the City. This facility was constructed in 1983. Station 213 is staffed by a captain, engineer, and firefighter/paramedic and is the Heavy Rescue Unit headquarters. The facility is equipped with one fire engine.

Fire Station 214

Station 214 is located at 1151 South Meadow Lane in the southeast portion of the City. This facility was constructed in 1989. Station 214 is staffed by a captain, engineer, and firefighter/paramedic. The facility is equipped with one fire engine and one brush engine.

San Bernardino County Fire

Colton and surrounding jurisdictions are located in the San Bernardino County Fire Department's Valley Division (Division 1).[3] The Valley Division service area includes 210,800 people in a 585 square mile area; 15 fire stations provide service to the area. Division 1 is staffed by 250 suppression personnel including one division chief, six battalion chiefs, 39 captains, 33 engineers, 57 firefighters, and 120 limited-term and paid-call firefighters. The Valley Division is equipped with 21 fire engines, three ladder trucks, seven brush engines, five brush patrols, one Haz-Mat response vehicle, 18 squads, five water tenders, and two rescue engines. The three nearest County stations are Station 76 in Bloomington and Station 77 in Fontana, both west of Colton, and Station 23 in Grand Terrace south of Colton.

Police Protection

Colton Police Department

The 18 square miles that make up the City of Colton and its SOI is served by the Colton Police Department.[4] The Police Department headquarters is in the City's civic center located at 650 North La Cadena Drive. Approximately 106 "headquartered" staff includes patrol officers, detectives, traffic officers, and administrative personnel. The Colton Police Department also provides service from a number of substations; substation services include code enforcement, property and evidence, and vehicle impound. Colton is staffed by 75 sworn officers and 44 non-sworn support staff equating to a ratio of 1.46 sworn officers for every 1,000 residents. The Colton Police Department is equipped with 27 patrol vehicles, armored rescue vehicle, mobile command post, tactical equipment, off-road enforcement vehicles, traffic enforcement vehicles, and two police canines. The Department responded to an average of 274 violent crimes and 1,923 property crimes between 2004 and 2008.

San Bernardino County Sherriff-Coroner Department

The San Bernardino County Sherriff serves the unincorporated portions of the City's SOI from the Central Station located in San Bernardino northeast of the City.[5] The Central Station serves a population of approximately 39,342 residents over 95 square miles.[6] The Central Station is staffed with 27 patrol deputies. The Central Station responded to 33,835 calls for service in 2010.

Schools

The majority of the planning area is served by Colton Joint Unified School District. However, the northwest portion of the planning area is served by the Rialto Unified School District (RUSD) and the northeast portion is served by San Bernardino City Unified School District.

Colton Joint Unified School District

Colton Joint Unified School District includes 18 elementary schools, four middle schools, two high schools, one alternative school, and one continuation high school.[7] The District served 23,608 students during the 2009-2010 school year with an average district-wide class size of 25.8. School facilities serving the planning area are summarized in Table 4.14-1 (CJUSD School Enrollment). Enrollment figures indicate that Rogers, Grant, Alice Birney, and Lincoln Elementary Schools, Colton Middle School, and Colton High School exceeded capacity during the 2009-2010 school year.

Table 4.14-1
CJUSD School Enrollment

School	Location	Capacity	Enrollment
Elementary Schools			
McKinley	600 W Johnson St	714	641
Rogers	955 W Laurel St	748	758
Grant	550 W Olive St	680	778
Alice Birney	1050 E Olive St	408	759
Lincoln	444 E Olive St	680	716
Wilson	750 S Eight St	680	661
Cooley Ranch	1000 S Cooley Dr	714	657
Reche Canyon	3101 Canyon Vista Dr	748	694
Middle Schools			
Colton	670 W Laurel St	850	1031
High Schools			
Colton	777 W Valley Blvd	2550	3171
Slover Mountain*	325 Hermosa St	990	266
Washington*	900 E C St	360	209
Source: Ed-Data 2012, CJUSD 2010 * Student attendance varies throughout the day			

Rialto Unified School District

Rialto Unified School District (RUSD) includes 18 elementary schools, five middle schools, three high schools, one alternative school, one continuation high school, and one community day school.[8] The District served 27,170 students during the 2009-2010 school year. School facilities serving the planning area are summarized in Table 4.14-2 (RUSD School Enrollment). Enrollment figures indicate that Garcia, Kelley, and Morris Elementary Schools and Jehue Middle School exceeded capacity during the 2009-2010 school year.[9]

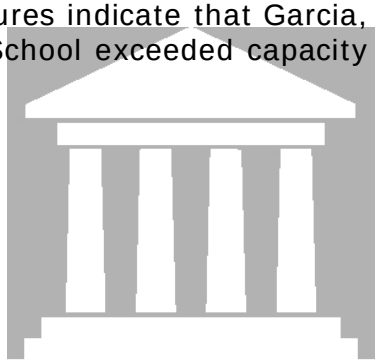


Table 4.14-2
RUSD School Enrollment

School	Location	Capacity	Enrollment
Elementary Schools			
Garcia	1390 E Randall Ave	650	727
Kelley*	380 S Meridian Ave	450	748
Morris	1900 W Randall Ave	600	633
Middle Schools			
Jehue	1500 N Eucalyptus Ave	1,215	1,472
High Schools			
Rialto*	585 S Eucalyptus Ave	3,132	2,974
Source: Ed-Data 2012, RUSD 2010 * located within the City of Rialto			

San Bernardino City Unified School District

San Bernardino City Unified School District (SBCUSD) includes 45 elementary schools, eleven middle schools, seven high schools, three K-12 schools, two alternative schools, three special education schools, two continuation schools, and one community day school.[10] The District served 53,837 students during the 2009-2010 school year. However, the small portion of the district that is located within the City of Colton does not currently contain any residential land uses, therefore does not serve any population within the City of Colton.

Libraries

The Colton Public Library's three facilities provide library services in the City of Colton.[11] The Main Public Library is located at 656 Ninth Street, the Luque Branch Library is located at 294 East "O" Street, and the Carnegie Building is located at 380 North La Cadena Drive. The Main Library is 10,700 square feet in size, the Luque Branch Library is approximately 3,000 square feet in size, and the Carnegie Building is approximately 6,400 square feet in size. These facilities serve approximately 60,000 borrowers annually and house over 80,000 items in circulation. Full staffing employs approximately 296 staff hours per week.

Planning and Regulatory Framework

Insurance Services Office

The Insurance Services Office (ISO) provides rating and statistical information for the insurance industry in the United States. The ISO evaluates a community's fire protection needs and services and assigns each community a Public Protection Classification (PPC) rating. Insurance rates are based upon the community's rating. For planning purposes, the ISO recommends that developed portions of a community should have a first-due engine company within 1.5 miles and a ladder-service company within 2.5 miles.

National Fire Protection Association

The National Fire Protection Association recommends that fire departments respond to fire calls within six minutes of receiving the request for assistance 90 percent of the time. These time recommendations are based on the demands created by a structural fire. It is critical to attempt to arrive and intervene at a fire scene prior to the fire spreading beyond the room of origin. Total structural destruction typically starts within eight to ten minutes after ignition. Response time is generally defined as one minute to receive and dispatch the call, one minute to prepare to respond in the fire station or field and four minutes (or less) travel time.

Colton General Plan

The adopted Colton General Plan Safety Element includes objectives to avoid and prevent damage to property or loss of life through implementation of codes, ordinances, special conditions, and emergency action.[12] The principles, standards, and proposals identified herein were adopted in the current General Plan to ensure adequate provision of fire and police protection in response to the long-term growth of the City.

Fire Hazards

Principle 2. Provide protection to property and life from fire.

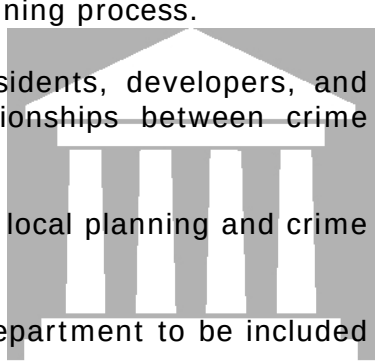
Standard 8. Reliable and sufficient water supplies for fire protection are to be provided to all development within fire hazard areas.

Standard 10. All development plans shall be reviewed by local planning, fire, water, health, road, and flood control authorities.

Proposal 8. Require all proposed development to be adequately served by water supplies for community fire protection, in accordance with standards of the San Bernardino County Fire Chief's Association. In addition, no hook-up to existing water supply should be considered, if it would lower the underground water table.

Crime and Defensible Space

Principle 2. Develop inter-agency input, coordination, and review to incorporate crime prevention techniques and methodology into the planning process.



Standard 4. Provide the business community, local residents, developers, and general public with written information about the relationships between crime prevention and physical planning.

Standard 7. All development plans are to be reviewed by local planning and crime prevention authorities.

Proposal 11. Require a representative from the Police Department to be included on the subdivision review process.

The adopted General Plan Open Space and Conservation Element identifies the objective to provide open space that meets local and regional open space needs. The principles, standards, and proposals identified herein were adopted in the current General Plan to ensure the provision of adequate parkland and recreational uses.

Leroy F. Green School Facilities Act

California Government Code Section 65995 (The Leroy F. Green School Facilities Act of 1998) sets base limits and additional provisions for school districts to levy development impact fees and to help fund expanded facilities to house new pupils that may be generated by the development project. Sections 65996(a) and (b) state that such fees collected by school districts *provide full and complete school facilities mitigation* under CEQA. These fees may be adjusted by the District over time as conditions change.

Colton Municipal Code

The City of Colton collects Development Impact Fees (DIF) for proposed projects to offset incremental increases in service demand on civic center, fire, library, park, police, and transportation facilities.

The Quimby Act (Government Code Section 66477)

The Quimby Act (Government Code Section 66477), enacted in 1975, created a framework that allows cities and counties to provide parks for growing communities. The Quimby Act authorizes jurisdictions to adopt ordinances that require parkland dedication or payment of in-lieu fees as a condition of approval of residential subdivisions. The Quimby Act also specifies acceptable uses and expenditures of such funds, such as allowing developers to set aside land, donate conservation easements, or pay direct fees for park improvements. The City of Colton has adopted a local ordinance implementing the provisions of the Quimby Act. The ordinance requires dedication of land, payment of fees in-lieu of parkland dedication, or a combination thereof at a rate of three acres of parkland per 1,000 residents for proposed residential subdivisions.

The City also collects parkland fees as part of its Development Impact Fee program to fund the acquisition and/or improvement of parkland. This funding may not be used for ongoing operational funding since it is intended to provide for additional parkland to offset impacts associated with new development (other than residential subdivisions). These parkland impact fees are applicable to both residential and non-residential developments.

Thresholds of Significance

A significant impact could occur if the General Plan Update would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered

governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

A. Fire Protection
B. Police Protection
C. Schools
D. Parks
E. Other Public Facilities

Environmental Impacts

The proposed General Plan Update provides for 5,191 new dwelling units and 12,434,100 square feet of new non-residential development over existing developed conditions. Opportunities for low-density residential development are provided for in the Pellissier Ranch and Reche Canyon areas. Higher density residential development is allowed in the West Valley Specific Plan area. Future industrial development is provided for in the Aqua Mansa Corridor and in the industrial park identified near the Santa Ana River north of Interstate 10. Other future growth will generally occur as infill development. The proposed Housing Element Update identifies focus areas for housing redevelopment to meet regional housing goals. These areas include portions of Downtown, the West Valley Specific Plan area, and areas covered by the *Residential Overlay* identified on the proposed Land Use Plan.

IMPACT 4.14.A

Impacts related to the expansion of fire protection facilities to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.

Based on the ISO recommendation that all development be within 1.5 miles of a fire station equipped with a fire engine, the majority of the planning area is within the first-response range of an engine-equipped station that includes all four Colton Fire Department stations. Portions of the Pellissier Ranch, Reche Canyon, and West Valley areas, however, are not within 1.5 miles of an engine-quipped fire station. The ISO also recommends that developed areas be within 2.5 miles of a ladder-equipped fire station. Station 211 is the only ladder-equipped station and is generally within 2.5 miles of any portion of the planning area. Similarly, the Pellissier Ranch, Reche Canyon, and West Valley areas are not entirely within 2.5 miles of Station 211. Considering that these areas are the only predominately vacant areas of the City and represent the greatest potential for accommodating future growth, fire protection facilities will need to be expanded in order to ensure that engine- and ladder-equipped facilities are within the appropriate distance and ensure that emergency service calls are responded to within the recommended six minute response time.

Ensuring that fire protection and emergency services are adequate in serving the community as it grows over the long-term can be achieved through the

construction of new fire stations and purchase of new equipment with a corresponding increase in fire and emergency service personnel. For instance, equipping Station 213 with a ladder-truck would increase service to the Pellissier Ranch and West Valley area. Similarly, equipping Station 214 with a ladder-truck would increase service to the Reche Canyon area. Construction of new fire stations near undeveloped areas would increase first-response services. Another key component of fire protection is adequate fire flow at local hydrants. Local water mains and hydrants may need to be upgraded and/or replaced over the long-term to ensure adequate fire flow to existing and future development.

The General Plan Safety Element requires review of development proposals by the Fire Department to monitor the adequacy of fire service and ensure adequate water pressure and supply. Collection of DIF will incrementally fund expansion or construction of new facilities as growth is accommodated in the City guided by the proposed General Plan Update's policies.

An analysis of the impacts associated with a possible fire facility expansion or construction is too speculative at this time because the facility's size, design, and location are not known. Section 15145 states that if a particular impact is too speculative, then its discussion should be terminated. If a fire facility is to be expanded or constructed, the fire facility will undergo a development review process and will be subject to environmental review pursuant to the CEQA. That environmental review will identify site specific conditions and physical changes resulting from fire station expansion, construction of new fire stations, or trenching needed for fire flow and water supply. Typical impacts may likely include short-term construction activities related to air quality pollutant emissions, temporary traffic detours, and equipment noise. Mitigation will be identified, as necessary, to reduce impacts related to fire and emergency service facilities expansion or new construction, as mandated by CEQA and implemented by the City through its local environmental review procedures. Impacts related to the expansion and new construction of fire protection and emergency service facilities will be less than significant with implementation of General Plan policies and environmental review standards.

IMPACT 4.14.B

Impacts related to the expansion of police protection facilities to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.

The Colton Police Department identifies a service ratio of 1.46 officers per 1,000 residents as an acceptable level of service.[13] Based on an estimated build-out population of 72,536, a total of 106 sworn officers will be required to meet the long-term service needs of the planning area, an increase of 31 officers. Officer to resident ratios is just one standard that can be used to measure Department performance; other sources include crime statistics, response times, number and basis of citizen complaints, and employee performance evaluations.

Future residential growth in the planning area will be generally accommodated in the Pellissier Ranch, West Valley, and Reche Canyon areas with other growth focused in the *Residential Overlay* and Downtown areas. Ensuring that police protection and emergency services are adequate in serving the community as it grows over the long-term can be achieved through the hiring of sworn officers and support personnel, purchasing of new and replacement equipment, and construction of new and expanded facilities. Specifically, the Police Department has identified the need for two additional facilities:

- a 1,500 to 2,500 square foot satellite police station in the southern portion of the planning area to provide local access to police services south of I-10; and
- a 2,000 square foot substation for the West Valley Specific Plan area.

The General Plan Safety Element requires Police Department review of development proposals to monitor the adequacy of police services and implement crime prevention development techniques. Collection of DIF will incrementally fund expansion or construction of new facilities as growth is accommodated in the City guided by the proposed General Plan Update's policies.

An analysis of the impacts associated with a possible police protection facility expansion or construction is too speculative at this time because the facility's size, design, and location are not known. Section 15145 states that if a particular impact is too speculative, then its discussion should be terminated. If a policy protection facility is to be expanded or constructed, the police facility will undergo a development review process and will be subject to environmental review pursuant to CEQA. Environmental review will identify site specific conditions and physical changes resulting from police station expansion and construction of new fire stations. Typical impacts will likely include short-term construction activities related to air quality pollutant emissions, temporary traffic detours, and equipment noise. Mitigation will be identified, as necessary, to reduce impacts related to police service facilities expansion or new construction, as mandated by CEQA and implemented by the City through its local environmental review procedures. Impacts related to the expansion and new construction of police protection facilities will be less than significant with implementation of General Plan policies and environmental review standards.

IMPACT 4.14.C

Impacts related to the expansion of school facilities to maintain applicable service standards will be less than significant with implementation of existing state regulations.

New housing will be constructed over the long-term as population growth occurs throughout the planning area. Approximately 4,184 student units are anticipated to be constructed over the long term, both on vacant land and as a result of land use conversion. New homes will be occupied by a variety of households, including those with school aged children. Student generation rates for residential development are developed by school districts for facilities planning and impact fee assessments based on past enrollment. Table 4.14-6 (Student Enrollment

Increases by School District) presents the potential additional students by district and school level based on the potential new dwelling units and generation rates.

As previously mentioned in Existing Conditions, although a portion of the San Bernardino City Unified School District is located within the City of Colton, no residences currently exist there. Similarly, no residential land use designations are proposed within this area that might generate any population that might be served by this school district. Therefore, the proposed General Plan Update's student generation impact on this district is not included. However, new non-residential development within the district would still be required to pay appropriate impact fees as determined by the district.

Table 4.14-6
Student Enrollment Increases by School District

School Level	Generation Rate	Potential Additional Dwelling Units	Potential Additional Students
Colton Joint USD			
Elementary (K-6)	0.46	4,390	2,019
Middle (7-8)	0.13		571
High (9-12)	0.22		966
		Subtotal	3,556
Rialto USD			
Elementary (K-5)	0.34	800	272
Middle (6-8)	0.17		136
High (9-12)	0.23		184
		Subtotal	592
Total			
Elementary (K-5/6)			2,292
Middle (6/7-8)			707
High (9-12)			1,150
		Total	**4,148**
Source: Colton Joint USD, Rialto USD			

Assuming a maximum capacity of 750 students for an elementary school, 1,500 students for a middle school, and 2,700 for a high school, an additional three new elementary schools, one new middle school, and one new high school would need to be constructed to house the estimated 4,184 additional students that could be added to the local school districts over the long-term.[14]

Local school districts will monitor growth in the planning area and update facilities plans to identify new facilities needs including locations, timing, and funding for expanded or new classrooms and related facilities. Each district will continue to collect development impact fees to pay for the costs of expanded facilities, in accordance with state law. Any required expansion of construction of school facilities will be subject to environmental review pursuant to state law and CEQA. Environmental review will identify site specific conditions and physical changes resulting from school expansion and construction of new fire stations. Typical impacts related to new and modernized schools will likely include short-term construction activities related to air quality pollutant emissions, temporary traffic detours, changes in traffic distribution, and noise. Pursuant to state law, collection of fees by school districts is sufficient in mitigating for any potential impacts to school facilities resulting from long-term growth in the community. Impacts related to the expansion and new construction of school facilities will be less than significant with implementation of existing state law.

IMPACT 4.14.D

Impacts related to the expansion and construction of parks to maintain applicable service standards will be less than significant with implementation of existing General Plan and Municipal Code policies and requirements.

The City of Colton currently does not meet its goal of providing parkland at five acres per 1,000 persons. As the population in the planning area grows, additional parkland will need to be provided in order to maintain the existing ratio of 2.07 acres of parkland and joint-use facilities per 1,000 persons and begin approaching the City's goal. Parks provide a number of benefits including places to gather, opportunities for exercise and play, and an increased community aesthetic. Failure to provide adequate parkland reduces these benefits and lowers service levels and quality. Additionally, lack of adequate parkland may result in increased use of regional parks and surrounding City parks, thereby lowering the service standard of those parks (see *Cumulative Impacts* for further discussion). Impacts associated with the expansion or construction of parkland facilities may involve air quality, biological resources, cultural resources, noise, and traffic due to short-term construction activities and permanent physical changes to underdeveloped and developed lands.

The existing General Plan Open Space and Conservation Element includes proposals for the acquisition, maintenance, and financing of parkland and open space. These are implemented by the City primarily through collection of Quimby fees and DIF during building plan check of development projects. Impacts related to the physical impacts associated with use of existing recreation facilities is addressed in Section 4.15 (Recreation). Over the long-term, as the City acquires and develops parkland, localized environmental impacts are likely to occur depending on the conditions and location of the sites involved. Identification and mitigation of potentially significant impacts would occur as part of the City's routine planning and design process for development projects, including proposals

Based on an estimated build-out of the proposed General Plan Update, a total of 363 acres of parkland will be required to meet the General Plan goal, an increase of 254 acres of existing parkland and joint-use facilities. In order to maintain and not deteriorate the existing ratio of 2.07 acres, an additional 41.4 acres of parkland would be required for the projected population growth.

The proposed General Plan Update designates 1,219 acres as *Open Space* throughout the community, of which 46 acres are designated as *Open Space-Recreation* on existing parkland. Additionally, the West Valley Specific Plan includes approximately 30 acres of *Open Space* for recreation and resource purposes and the Reche Canyon Specific Plan designates 817 acres of *Open Space*. Overall, the General Plan supports 2,066 acres of *Open Space* for recreation and resource purposes. In addition, approximately 3,356 acres has been identified as vacant within the planning area, of which approximately 820 acres are designated for residential land use. While not all of the area designated as *Open Space* or vacant land may be suitable as parkland, it could be assumed that acquisition and provision of an additional 41.4 acres of parkland (five percent of the residential designated vacant area) is feasible through existing Quimby Act fee and DIF collection from future development to not deteriorate beyond the existing park provision ratio at a minimum. However, the provision of 363 acres to meet the General Plan goal within either the residentially designated vacant area (44 percent of the area) or within the overall vacant land area (10 percent of the area) is not as likely due to developed, urban character of the area, anticipated development footprint, and location of parks to residential areas. Therefore, the level of service will not likely be met and it would result in a significant and unavoidable impact.

IMPACT 4.14.E

Impacts related to the expansion and construction of libraries to maintain applicable service standards will be less than significant with implementation of existing Municipal Code requirements.

Long-term growth in the planning area provided by the General Plan Update will require incremental library facility expansion to meet the needs of the community. A facility needs assessment was prepared for the Colton Public Library system and concluded that a new 53,000 to 68,000 square foot building would be required to meet the long-term demands of the service area.[15] Currently, a new library facility is tentatively planned to be constructed with future Civic Center improvements. The City collects DIF to support incremental expansion of library services commensurate with development proposals. Any new or expanded library facilities will be subject to environmental review pursuant to CEQA to identify any potentially significant environmental impacts and, if necessary, identify appropriate mitigation. Typical impacts will likely include short-term construction activities related to air quality pollutant emissions, temporary traffic detours, changes in traffic distribution, and noise. Impacts related to the expansion or construction of library facilities will be less than significant with implementation of existing regulations.

Mitigation Measures

No mitigation measures are required since no impacts will result.

Significance of Impacts with Mitigation Incorporated

Not applicable.

[1] Colton Fire Department. www.coltonfire.com [April 11, 2012]
[2] Colton Fire Department. Strategic Plan 2007-2012.
[3] San Bernardino County Fire Department. http://www.sbcfire.org/ [May 15, 2012]
[4] Miller, Bob and B. Burrows. Colton Police Department. Personal Communication. March 16, 2010
[5] San Bernardino County Sheriff-Coroner's Department. http://www.sbcounty.gov/sheriff/index.asp [May 15, 2012]
[6] San Bernardino County Sherriff's Department. 2010 Annual Report
[7] Education Data Partnership. District Report: Colton Joint Unified. http://www.ed-data.k12.ca.us [May 16, 2012]
[8] Education Data Partnership. District Report: Rialto Unified. http://www.ed-data.k12.ca.us [May 16, 2012]
[9] Rialto Unified School District. Developer Fee Justification and Impact Analysis. March 2010
[10] Education Data Partnership. District Report: San Bernardino City Unified. http://www.ed-data.k12.ca.us [May 16, 2012]
[11] Smith, Bill. Director of Community Services. City of Colton. Personal Communication. March 18, 2012
[12] City of Colton. General Plan. Safety Element. 1987
[13] Ibid 4
[14] Rialto Unified School District. Facilities Master Plan. August 2006
[15] Ibid 11

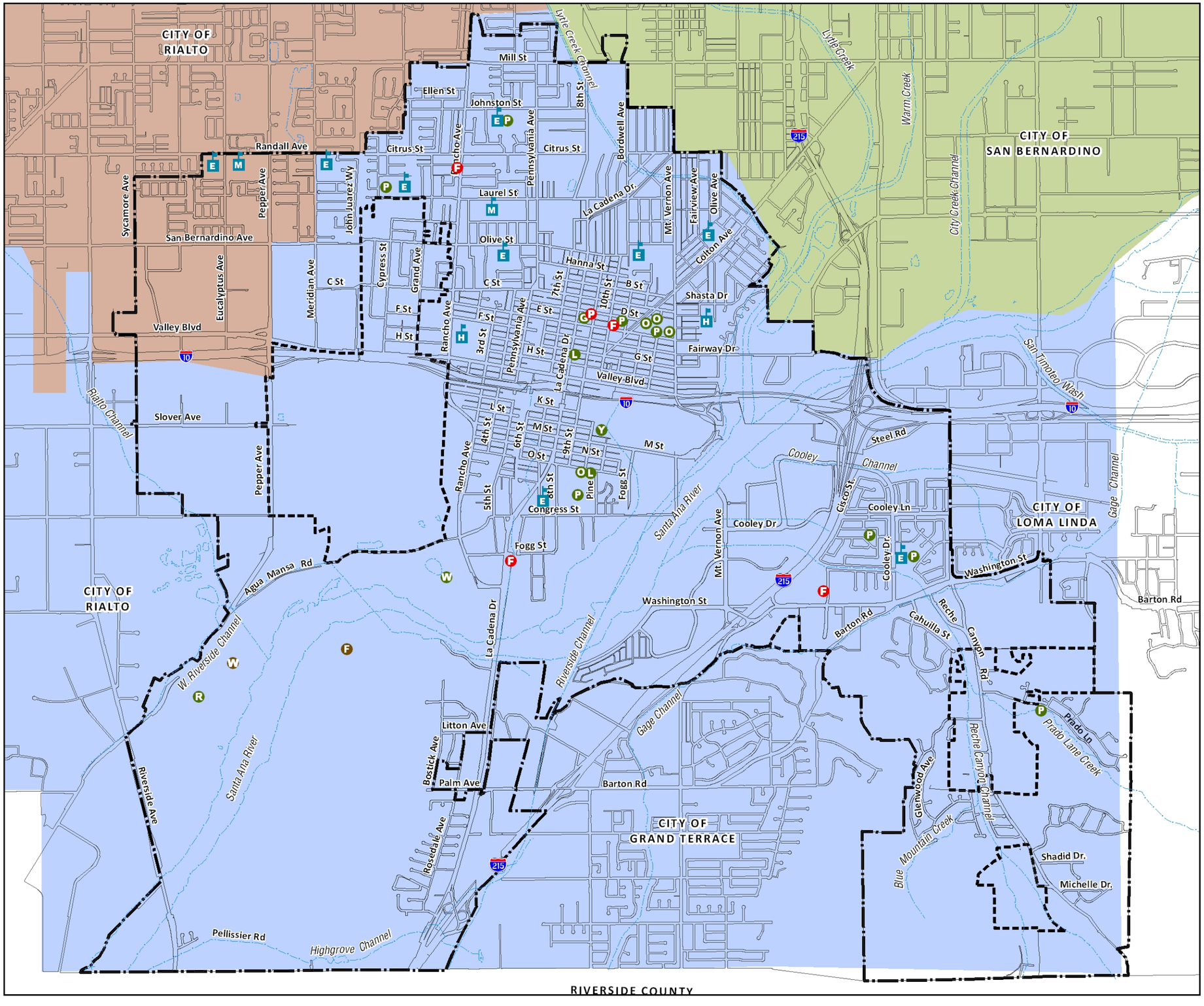


This page intentionally left blank



Exhibit 4.14-1

Public Services Map


CITY OF RIALTO
CITY OF SAN BERNARDINO
CITY OF LOMA LINDA
CITY OF GRAND TERRACE
CITY OF RIALTO
RIVERSIDE COUNTY
Lytle Creek Channel
Lytle Creek
Warm Creek
City Creek Channel
Mill St
Ellen St
Johnston St
Randall Ave
Citrus St
Laurel St
Olive St
Hanna St
Shasta Dr
Fairway Dr
Valley Blvd
San Bernardino Ave
Sycamore Ave
Pepper Ave
John Juarez Wy
Eucalyptus Ave
Meridian Ave
Cypress St
Grand Ave
Rancho Ave
Pennsylvania Ave
La Cadena Dr
Bordwell Ave
Mt. Vernon Ave
Fairview Ave
Olive Ave
Colton Ave
7th St
8th St
10th St
C St
B St
D St
E St
F St
G St
H St
K St
L St
M St
N St
O St
3rd St
4th St
5th St
6th St
9th St
Pine St
Fogg St
Congress St
Cooley Dr
Cooley Ln
Cooley Channel
Steel Rd
Gage Channel
Cisco St
Cooley Dr.
Washington St
Barton Rd
Cahuilla St
Reche Canyon Rd
Prado Ln
Prado Lane Creek
Reche Canyon Channel
Glenwood Ave
Blue Mountain Creek
Shadid Dr.
Michelle Dr.
San Timoteo Wash
Slover Ave
Rialto Channel
Agua Mansa Rd
W. Riverside Channel
Riverside Ave
Santa Ana River
Riverside Channel
La Cadena Dr
Mt. Vernon Ave
Litton Ave
Bostick Ave
Palm Ave
Barton Rd
Rosedale Ave
Pellissier Rd
Highgrove Channel
Gage Channel
Santa Ana River
Cooley
Channel
Gage Channel
Barton Rd
Washington St
Steel Rd
Cooley Dr
Cooley Ln
Fogg St
Congress St
Valley Blvd
Barton Rd
Washington St
Barton Rd
Fairway Dr
Shasta Dr
Olive St
Hanna St
Laurel St
Citrus St
Citrus St
Randall Ave
San Bernardino Ave
Valley Blvd
Slover Ave
Pellissier Rd
Riverside Ave
Bostick Ave
Palm Ave
Litton Ave
Rosedale Ave
Michelle Dr.
Shadid Dr.
Prado Ln
Prado Lane Creek
Reche Canyon Channel
Glenwood Ave
Blue Mountain Creek
Barton Rd
Cahuilla St
Reche Canyon Rd
Washington St
Barton Rd
Cooley Dr.
Mt. Vernon Ave
Fogg St
Santa Ana River
Cooley Channel
Steel Rd
Gage Channel
Cisco St
Cooley Ln
Cooley Dr
Washington St
Barton Rd
Riverside Channel
La Cadena Dr
Agua Mansa Rd
W. Riverside Channel
Riverside Ave
Santa Ana River
Highgrove Channel
Pellissier Rd
Rosedale Ave
Bostick Ave
Palm Ave
Litton Ave
Gage Channel
Prado Ln
Prado Lane Creek
Reche Canyon Channel
Glenwood Ave
Blue Mountain Creek
Shadid Dr.
Michelle Dr.
San Timoteo Wash
Gage Channel
Warm Creek
City Creek Channel
Lytle Creek
Lytle

This page intentionally left blank

Recreation 4.15

This section examines whether implementation of the General Plan Update could result in substantial adverse environmental impacts due to the need for new or expanded parkland in order to meet the service objectives of the City. No comments regarding Recreation issues were received during the Notice of Preparation process.

Existing Conditions

The City has 11 developed parks in addition to a number of recreational facilities that are shared with the Colton Joint Unified School District. These parks and schools are labeled on the draft Land Use Plan included in Section 3.0 (Project Description).

Parkland Inventory

Presently, there are 54.09 acres of parkland within the City, as summarized in Table 4.15-1 (Parkland Inventory).

Table 4.15-1
Parkland Inventory

Park Name	Acres
Veteran's Park	13.70
Cesar Chavez park	10.93
Elizabeth Davis Park	6.34
Fleming Park	1.66
George Brown Park	10.46
McKinley Park	4.13
Rich Dauer Park	2.23
Cooley Ranch Park	1.95
Prado Park	1.00
N Street Parks	1.00
Max Lofy Park	0.69
Total	**54.09**

Based on 54.09 acres of parkland and the estimated population of 52,498 (2011 Department of Finance), the City currently provides approximately 1.03 acres of parkland per 1,000 residents. The amount of parkland does not meet the City's stated standard of five acres per 1,000 residents (per the Open Space and Conservation Element). Based on the existing population, a total of 262.5 acres of parkland would need to be provided to meet the General Plan goal.

The City Parks and Recreation Department and the Colton Joint Unified School District (CJUSD) have an agreement that allows residents to use the schools'

recreation areas when they are not in use for school activities. Joint-use agreements are in affect for 10 school sites within the planning area, as listed in Table 4.15-2 (CJUSD Joint-Use Facilities Field/Recreation Area).

Table 4.15-2
CJUSD Joint-Use Facilities Field/Recreation Area

School	Acres
Colton High School	14.10
Colton Middle School	11.06
Grant Elementary School	5.74
Lincoln Elementary School	5.00
Wilson Elementary School	4.92
Paul J. Rogers Elementary School	4.91
Reche Canyon Elementary School	4.54
Alice Birney Elementary School	4.39
McKinley Elementary School (included within McKinley Park)	3.33
Total	**57.99**

City parks and joint-use facilities total 108.75 acres, for a ratio of 2.07 acres of parkland per 1,000 residents. Even with the school sites included, the City remains deficient with respect to the parkland goal, as summarized in Table 4.15-3 (Existing and Projected Park and Open Space Ratios). The table also indicates the amount of parkland that would be required in 2030 to accommodate the City's population at buildout.

Table 4.15-3
Existing and Projected Park and Open Space Ratios

Year	Population	Existing Park Acreage	Required Acreage of parkland per 1,000 persons			Park Excess/Deficit of parkland per 1,000 persons		
			3	*4*	*5*	*3*	*4*	*5*
City Parks								
2011	52,498	54.09	157.5	210	262.5	-104.1	-155.9	-208.4
2030	67,182	54.09	201.5	268.7	335.9	-147.4	-214.6	281.8
CJUSD Joint-Use Facilities								
2011	52,498	57.99	157.5	210	262.5	-99.504	-152	-204.5
2030	67,182	57.99	201.5	268.7	335.9	-143.5	-210.7	-277.9
Total								
2011	52,498	108.75	157.5	210	262.5	-49.1	-101.3	-154.1
2030	67182	108.75	201.5	268.7	335.9	-93.1	-160.3	-227.5

Planning and Regulatory Framework

The Quimby Act (Government Code Section 66477)

The Quimby Act (Government Code Section 66477), enacted in 1975, created a framework that allows cities and counties to provide parks for growing communities. The Quimby Act authorizes jurisdictions to adopt ordinances that require parkland dedication or payment of in-lieu fees as a condition of approval of residential subdivisions. The Quimby Act also specifies acceptable uses and expenditures of such funds, such as allowing developers to set aside land, donate conservation easements, or pay direct fees for park improvements. The City of Colton has adopted a local ordinance implementing the provisions of the Quimby Act. The ordinance requires dedication of land, payment of fees in-lieu of parkland dedication, or a combination thereof at a rate of three acres of parkland per 1,000 residents for proposed residential subdivisions.

The City also collects parkland fees as part of its Development Impact Fee program to fund the acquisition and/or improvement of parkland. This funding may not be used for ongoing operational funding since it is intended to provide for additional parkland to offset impacts associated with new development (other than residential subdivisions). These parkland impact fees are applicable to both residential and non-residential developments.

State Public Park Preservation Act 1971

The Public Park Preservation Act of 1971 (California Public Resources Code, Sections 5400-5409) states that any jurisdiction acquiring parkland for non-park purposes shall either pay compensation that is sufficient to acquire substantially

equivalent substitute parkland, or provide substitute parkland of comparable characteristics.

Colton General Plan

The City's current General Plan addresses parks and recreation issues primarily in the Open Space and Conservation Element. The principles and standards within the element encourage the provision of parkland and recreation facilities. As stated previously, the Element establishes five acres of parkland per 1,000 residents as a standard.

Thresholds of Significance

As identified in Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), the General Plan Update could result in a significant impact if it:

A. Increases the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

B. Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Environmental Impacts

IMPACT 4.15.A

The proposed General Plan Update has the potential to result in the deterioration of existing parks and recreation facilities, and adequate funding cannot be identified at this time to mitigate the impacts. Therefore, impact is potentially significant and unavoidable.

The General Plan Update would not result in direct deterioration to recreational facilities because it does not authorize any specific development project or other kind of land altering activity that could increase the use of existing recreational facilities.

However, the increase in the resident population associated with long term implementation of land use policy could result in increased use of existing parks and recreation facilities. Substantial deterioration of existing facilities could occur if the level of usage intensifies significantly, the maintenance of affected facilities do not keep pace with intensified use, and no new park facilities are provided to meet increased demand. The draft Land Use Element does not include specific provisions for new public parklands, but does include the goal and policies below. Within the West Valley Specific Plan, 9.33 acres are designated Open Space/Park. No timeline has been established for construction of park facilities; the Specific Plan has not yet been adopted.

Goal LU-12. *Provide for open space and recreation areas that meet the needs of Colton residents.*

Policy LU-12.1. *Preserve and protect the City's established recreational and open space uses.*

Policy LU-12.2. *Pursue opportunities for providing additional open space and recreation areas for residents, working toward the goal of having a City park within one-half mile of every residential neighborhood in Colton.*

Policy LU-12.3. *Prioritize the development of a regional park and/or sports park within City limits.*

Policy LU-12.4. *Provide five acres of park space for every 1,000 residents.*

As indicated in Table 4.15-3, Colton currently is very deficient in park space relative to the goal of five acres per 1,000 residents, and this deficiency can be expected to continue with adoption of the General Plan Update. While residential subdivision activity will result in new park facilities through Quimby fees and all new development projects will require payment of Development Impacts Fees (a portion of which will fund parkland acquisition and park maintenance), the degree to which these fees will actually result in new park space and adequate maintenance cannot be projected. Park maintenance levels and any future park improvements to address deficiencies or expand recreational opportunities would be determined through the City's normal budgeting program, varying from year to year. If adequate funding is not allocated for park maintenance or new parks are not constructed, deterioration of existing facilities may occur. Impact would be significant.

IMPACT 4.15.B

Impacts related to the expansion and construction of recreational facilities will be less than signfiicant since the General Plan Update does not specifcally provide for new park facilities.

The General Plan Update does not result in the direct construction or expansion of any recreational facility because the Update does not authorize any specific land development activity. Also, the Land Use Element does not specifically identify any location for the creation of new recreational facilities. As indicated above, Land Use Element policies indicate the City's intent to seek out opportunities to create new parklands. However, the land use policy map does not specifically identify locations for new parks or other recreational facilities. Thus, no construction of park space will result from General Plan implementation, and no impact will result.

Mitigation Measures

Mitigation 4.15-1

Either as part of a parks master plan or other method, the City will identify residential neighborhoods that are not well served by public parks, and will establish a long-range strategy for meeting the goals of: a) providing five acres of park space per 1,000 residents and b) having a City park within one-half mile of every residential neighborhood. In addition to using Quimby Act and Development Impact Fees to fund parkland acquisition and enhancements, the City will seek grant funds to finance these initiatives.

Level of Impact with Mitigation Incorporated

At this time, the availability of funding needed to implement Mitigation Measure 4.15.1 and thus close the gap between existing parkland resources and parklands needed to respond to future demand and City objectives cannot be identified. Thus, impact to recreation resources will be significant and unavoidable.

Transportation and Traffic 4.16

This section analyzes the potential impacts associated with long-term implementation of General Plan Mobility and Land Use Element Updates. Existing baseline traffic conditions are described and compared to projected traffic conditions associated with build out pursuant to the Land Use Policy Map and planned and funded circulation improvements. The analysis also considers regional circulation facilities, air traffic, parking, roadway design, alternative transportation, and emergency access issues. The following discussion draws from City of Colton General Plan Circulation Element technical report prepared by KOA Corporation and the San Bernardino County Congestion Management Program (CMP). The study prepared by KOA Corporation is included in Appendix E. Comments were submitted by the City of Riverside, in response to the circulation of the Notice of Preparation that raised concerns about certain traffic issues. These comments are addressed in the discussion throughout this Section.

Study intersections and roadway segments are identified in Exhibit 4.16-1 (Studied Intersections) and Exhibit 4.16-2 (Studied Roadway Segments).

Existing Conditions

Circulation System

The circulation system consists not only of roadways but is considered a broad, multi-modal system designed to provide motorized and non-motorized forms of transportation to meet a variety of mobility needs. The existing circulation system within the planning area is described below in terms of pedestrian, bicycle, rail, automobile, and airplane transportation modes.

Roadways

The classification types for all roadways within the City of Colton are based on the current adopted General Plan Circulation Element of January 1993. The City currently designates roadways as one of four primary classifications according to function:

- Freeways
- Major Arterials
- Secondary Arterials
- Collectors

Exhibit 4.16-3 (Existing Circulation Plan) illustrates the roadway classifications within the City, as defined by the existing Circulation Element. Facilities not identified are local roadways (designations include Local Street and Hillside Local Street). In keeping with State of California designations for local roadways, the City has generally adopted these changes in arterial roadway classification naming since the adoption of the 1993 General Plan:

- Major Arterials = Principal Arterials

- Secondary Arterials = Minor Arterials

The modified designations for these two categories are based on the functional classification system for the *California Road Systems* maps, published by the State of California Department of Transportation (Caltrans). These designations are used through out the remainder of this section, but the current designations were applied to Exhibit 4.16-3.

The general operating characteristics of the primary elements of the City roadway hierarchy are described below.

Freeways

Freeways are controlled access, high-speed roadways with grade-separated interchanges. They are intended to carry high volumes of traffic from region to region. The planning, design, construction, and maintenance of freeways in California are the responsibility of the California Department of Transportation (Caltrans).

The City of Colton is directly served by two freeways, which effectively connect the community with other local areas and sub-regions:

Interstate 10 – I-10 (San Bernardino Freeway/Christopher Columbus Transcontinental Highway) is a major freeway in the greater Los Angeles metropolitan area, traversing Colton in an east-west direction. The facility provides access to the Pomona Valley and the Los Angeles metropolitan area on the west and the Coachella Valley, eastern California, and beyond on the east. I-10 is a transcontinental facility. Within the study area, it is a 10-lane freeway without high occupancy vehicle (HOV) lanes. (I-10 carpool lanes from Los Angeles County end at a point west of the I-15 freeway.) The primary access points to Colton from I-10 include interchanges with Pepper Avenue, Rancho Avenue, La Cadena Drive/9th Street, and Mount Vernon Avenue (including a westbound off-ramp connection at Sperry Drive).

Interstate 215 – I-215 (Riverside Freeway/San Bernardino Freeway) is an eight-lane freeway, traversing the east side of Colton in a north-south direction. Between the SR-60/SR-91 interchange to I-10 it is named the Riverside Freeway; between I-10 and SR-210 it is named the San Bernardino Freeway. South of the SR-60 freeway, I-215 transitions into the SR-91 freeway. SR-60 and I-215 continue as a merged route to the east of the I-215/SR-60/SR-91 interchange, and a separate segment of the I-215 continues south of SR-60 in Moreno Valley. North of the Colton area, I-215 merges with the I-15 freeway to the south of Cajon Pass. The primary access points from I-215 to Colton include interchanges at Auto Plaza Drive-Orange Show Road, Inland Center Drive (which transitions to Colton Avenue at the Colton city line), and Mt. Vernon Avenue/Washington Street.

The name “San Bernardino Freeway” is generally applied to I-10 west of the I-215 interchange, and to the I-215 to the north of that interchange. To the east, the

name of I-10 reverts to the national name of "Christopher Columbus Transcontinental Highway."

Arterials

The function of Major and Secondary Arterials is to connect traffic from secondary roadways and collectors to other parts of the City, freeway interchanges, and adjacent major land uses. They are the principal urban thoroughfares and provide a linkage between activity centers within the City to adjacent communities and other parts of the region, as well as intra-city mobility.

Major Arterials, as defined under the existing Colton General Plan Circulation Element, have right-of-way widths of up to 114 feet. These roadways are designed to move large volumes of traffic, typically in the range of 40,000 to 60,000 vehicles per day. On-street parking is often prohibited on these facilities, either during the peak period or continuously. They are generally served by regional transit routes and are the primary truck routes in the community. Access is sometimes restricted to these facilities, either through frontage road treatments or breaks in the street grid.

Secondary Arterials are generally located between parallel sets of collector roadways, or in outlying areas where a street grid is not established. They are intended to provide access to all types of land uses and generally have no limitations on access. Parking is generally allowed during most of the day. Traffic controls typically consist of stop signs and signalization at intersections with arterials; however, left-turn lanes and/or left-turn signalization are generally not provided. Similar roadways in most cities are designed to carry moderate levels of traffic, generally in the range of 15,000 to 25,000 vehicles per day. Where Primary Arterials provide access between cities and sub-regions, Secondary Arterials primarily provide access in a cross-town manner.

Traffic control along Arterials typically consists of signalization at major intersections, often with protected left-turn phasing. At high-volume intersections, exclusive right-turn lanes may be present, as may dual left-turn lanes. Additional traffic control consists of medians or two-way left-turn lanes for access to adjacent land uses.

Existing Arterial facilities in the City of Colton include Pepper Avenue, Rancho Avenue, La Cadena Drive, Mount Vernon Avenue, Colton Avenue, Valley Blvd, Washington Street, Barton Road, and Reche Canyon Road. Secondary Arterial facilities include San Bernardino Avenue-Olive Street, 10th Street, Fairway Street, Meridian Avenue, and Hunts Lane.

Collector Streets

The primary purpose of Collector Streets is to serve as intermediate routes to carry traffic between local roadways and Arterials. On-street parking is generally acceptable on Collector Streets, although it can be prohibited during certain hours,

or on a time limit. Access to adjacent land uses is generally unrestricted. The right-of-way width of this roadway type is variable but generally averages 60 feet. Collectors carry fewer than 15,000 vehicles per day. Roadways classified as Collector Streets in Colton include Citrus Street, Laurel Street, C Street, E Street, H Street, M Street, N Street, Pennsylvania Avenue, 7th Street, and 10th Street.

Local Streets

Circulation elements typically do not define roadways smaller than collector roads, but by implication all unclassified roads are local roadways. These facilities are designed to provide vehicular, pedestrian, and bicycle access to individual parcels throughout the City. They are intended to carry low volumes of traffic, and allow unrestricted parking. Local Streets typically have two travel lanes and commonly utilize cross-sections of 50 feet in width (no center median or continuous left turn lane).

In residential neighborhoods, there is a growing trend to design and implement traffic control measures on local streets. Some of these control measures include speed humps, traffic diverters, chokers, traffic circles and pavement treatments. The intent of these treatments is to slow traffic or prevent through traffic from infiltrating residential neighborhoods.

Truck Routes

A significant amount of goods movement passes through the City of Colton as railroad traffic. With the significant presence of transfer/switching yards along the I-10 corridor and north of Colton, much of the rail traffic travels through Colton and on to other destinations. These transfer facilities, however, can generate a sizeable number of truck trips for intermodal freight container transfers to and from area industries. A high proportion of the rail mileage within Colton is mainline trackage rather than rail sidings (which would serve local businesses directly through switching movements to building loading bays). Therefore, delivery of goods directly to and from Colton businesses is primarily provided by trucks on surface streets.

The State of California Vehicle Code establishes regulations on the use of local streets and roads by trucks and other heavy vehicles.

The City of Colton, typical of local jurisdictions that have heavy truck traffic, has designated a number of streets and street segments as truck routes to ensure the orderly movement of commercial vehicles carrying goods and materials through the community. These designations are established via City ordinance and currently include Valley Boulevard, Pepper Avenue, Mount Vernon Avenue, Colton Avenue, Fairway Drive, La Cadena Drive, and Washington Street. Truck routes in Colton connect with truck routes in adjacent cities and nearby freeway access to form an integrated regional network for the movement of goods. The truck routes are updated by the City as needed based on development and traffic trends.

Non-Motorized Transportation Routes

Non-motorized transportation includes bicycle and pedestrian facilities. The following sections describe these elements in detail.

Bicycle Facilities

Caltrans has developed statewide standards and definitions for the planning, design and implementation of bicycle facilities. The following summarizes these standards.

Class I (Bicycle Path) – A bicycle path is a special facility that is designed exclusively for the use of bicycles. They are physically separated from motor vehicle traffic by a physical barrier or landscaped area. Bicycle paths are more often used for recreation and are generally provided in San Bernardino County along river channels and former railroad rights-of-way. They are classified by Caltrans as Class I bicycle facilities.

Class II (Bicycle Lane) – A bicycle lane is a facility where a portion of the paved roadway area is marked as a special lane for use by bicycles only. It is identified by signage along the street that denotes "BIKE LANE", pavement markings, and lane line markings. Motor vehicles are prohibited from driving in bike lanes except when turning to and from driveways, intersections, or on-street parking. They are classified by Caltrans as Class II bicycle facilities.

Class III (Bicycle Route) – A bicycle route is defined as a bicycle way designated within a public right-of-way. The purpose of the bicycle route is to encourage a sharing of the roadway between vehicles and bicycles. They are identified by signage along the street that denotes "BIKE ROUTE." No other pavement markings are employed with these facilities. They are classified by Caltrans as Class III bicycle facilities.

Bicycle facilities within and near the City of Colton are primarily the Class I type (path/trail). A major area Class I facility, the Santa Ana River Trail, runs along the east bank of the river.

Regional Bicycle Facility Planning

The San Bernardino County Non-Motorized Transportation Plan (2001 Update) was published by the San Bernardino Associated Governments (SANBAG). The effort undertaken for that plan report provided for a bicycle facility inventory within all cities and communities of San Bernardino County, a survey of users of the system, and a set of recommendations and a summarized list of planned bicycle facility projects.

Pedestrian Circulation

Pedestrian walking areas are an integral part of a city's circulation system. The connectivity of a sidewalk system, in terms of an overall network and links to neighboring major land uses, is a primary factor in pedestrian mobility. A sidewalk is an area of refuge from vehicle traffic that provides a safe route for pedestrian transport.

Public Transit

Public transportation in the City of Colton, as defined here, consists of fixed route bus service and demand response service. This latter type of service is an advance reservation, shared ride transportation service for senior residents and disabled of any age and their attendants. Regional commuter rail service is provided by Metrolink. The nearest Metrolink stations are located in downtown Rialto west of Colton and downtown San Bernardino to the east.

Public Bus Transit Service - Omnitrans is the public transit agency serving the San Bernardino Valley, operating fixed-route bus services, OmniLink (a general public dial-a-ride operation), and Access (a paratransit service for the disabled).

The Omnilink service is provided to communities and cities within the County that do not have demand responsive service through local providers. The south Colton area is served by Omnilink service. Passengers can schedule pick-ups within a 40-minute window on weekdays during the timeframe of 7:00 AM to 6:00 PM Omnilink service options include same-day service, advance reservation service (up to three days in advance), and repeater service (for riders who travel at least three days a week on the same route).

The following paragraphs describe the scheduled fixed-route bus transit lines within Colton.

Route 1 is a local service bus that serves a route that traverses the Inland Empire. Within the study area, the route provides service along Valley Boulevard and Mount Vernon Avenue. The southern terminus is at Arrowhead Regional Medical Center, and the northern terminus is at Sterling Avenue and Date Place. The route provides daily service at an approximate peak weekday trip frequency of 15 minutes.

Route 15 is a local service bus that serves stops between Fontana and Redlands. Within the study area, the route provides service along Mill Street. The eastern terminus is at the Fontana Metrolink station, and the western terminus is at the Redlands Mall. The route provides daily service at an approximate peak weekday trip frequency of 30 minutes.

Route 19 is a local service bus that serves stops between Fontana and Redlands. Within the study area, the route provides service along San Bernardino Avenue, Rancho Avenue, C Street, La Cadena Drive, Mount Vernon Avenue, and Washington Avenue. The eastern terminus is at the Fontana Metrolink station, and the western

terminus is at the Redlands Mall. The route provides daily service at an approximate peak weekday trip frequency of 30 minutes.

Route 22 is a local service bus that serves stops between Colton and Rialto. Within the study area, the route provides service along Riverside Avenue, Valley Boulevard, Meridian Street, Pepper Street, San Bernardino Avenue, and Wildrose Avenue. The northern terminus is at Arrowhead Regional Medical Center, and the northern terminus is at Riverside Avenue and Live Oak Avenue. The route provides daily service at an approximate peak weekday trip frequency of 30 minutes.

Route 215 is a freeway express/local service bus that serves limited stops between the cities of San Bernardino and Riverside. Within the study area, the route uses the I-10 and I-215 freeways for the express service portion. Within the City of Colton, Valley Boulevard and Mount Vernon Avenue are used by this route. It provides daily service at an approximate peak weekday trip frequency of 30 minutes.

OmniGo Route 325 is operated as a local community shuttle, serving Grand Terrace, Loma Linda University Medical Center, and other locations near the southeast areas of Colton, including the Barton Road corridor.

Railways

Public Commuter Rail Service - Metrolink, the regional commuter rail service operated by the Southern California Regional Rail Authority, does not have direct service to Colton. Metrolink serves commute trips to downtown Los Angeles and Orange County from Ventura, Los Angeles, Riverside, San Bernardino, and Orange Counties.

The Metrolink station closest to Colton is the San Bernardino station at Viaduct Boulevard and 2nd Street (approximately 2.5 miles north of the Colton city center). This station provides access to the San Bernardino Line, Inland Empire/Orange County Line, and 91 Line Metrolink trains. The latter two sets of trains pass through Colton to reach Riverside and other stations to the south. The San Bernardino Line provides service to the west of San Bernardino, through the Pomona Valley and San Gabriel Valley, with a western terminus at Union Station in Los Angeles. The Inland Empire/Orange County Line provides service through Riverside, Colton, and Orange County with a southern terminus in San Juan Capistrano. The 91 Line parallels the SR-91 freeway within the Inland Empire and also serves north Orange County and Fullerton, and has a western terminus at Union Station in Los Angeles.

Intercity Rail - Amtrak Sunset Limited cross-country trains pass through the City utilizing Union Pacific tracks along the south side of I-10. However, no direct intercity rail service is provided to the City of Colton, as Amtrak does not have a station facility in Colton. The nearest Amtrak station is located in San Bernardino, which is shared with Metrolink.

Freight Rail - Two national freight railroad companies utilize multiple rail corridors within Colton, and both have main lines that traverse the City. Both railroads have large transfer yards within or in close vicinity to, Colton. Primary destinations are the Los Angeles metro area and the port facilities of Los Angeles and Long Beach to the west, Cajon Pass and the high desert area to the north, and Coachella Valley and cities beyond to the east.

The Union Pacific Railroad (UP) has major east-west tracks along the south side of I-10 and north-south tracks located east of Meridian Avenue. The tracks along I-10 include a major transfer yard referred to as the West Colton yard.

Burlington Northern Santa Fe Railroad (BNSF) tracks run north-south through the City along a corridor between Pennsylvania Avenue and Sixth Street. A BNSF transfer yard lies partially within the Colton city limits near 8th Street and Mill Street.

The UP and BNSF railroads both have lines that extend north of Colton into the Cajon Pass and the high desert, and west to the Los Angeles area. Both railroads have spur lines that serve local industry.

The numerous railroad at-grade crossings in Colton create localized traffic congestion during train movements that can be measured through detailed operations studies. The focus of the traffic study for this EIR is primarily on capacity impacts caused by new development and facility lane/control configuration changes. Long freight trains that travel on main lines can be a mile or more in length, and stop traffic at grade crossings for several minutes at a time. The main lines that traverse Colton are double-tracked; some are also triple-tracked, providing an abundant amount of freight capacity that creates frequent conflicts with cross-town traffic.

Airports

No aviation facilities exist within the planning area. Scheduled air carrier services are provided at Ontario International Airport, located approximately 15 miles west of Colton and directly accessible from the I-10 freeway. Major cargo operations also are based at Ontario Airport.

San Bernardino International Airport is located northeast of Colton (approximately 4.5 miles), at the former Norton Air Force Base. Current flights are comprised mainly of charter, corporate, and general aviation users. The passenger terminal at the airport was recently upgraded, and future scheduled passenger service is anticipated. The airport also has leasable areas available for major cargo operations.

Existing Traffic Conditions

Traffic operating conditions were analyzed for select roadways in the City. The analysis was conducted by comparing the average daily traffic volume, or "V", for each roadway segment from the traffic counts to the corresponding estimated daily capacity, or "C". A volume-to-capacity ratio was then determined for each study segment. The V/C ratio is a comparison of the estimated daily traffic volume of a segment of roadway and its maximum theoretical capacity (in terms of the # of vehicles). The analysis is based on two-way volumes, and the calculations represent averages for the entire roadway segment extent.

Level of Service (LOS) is a qualitative approach to describing roadway performance based on the V/C ratio. The lower the ratio, the better the segment of roadway performs, meaning freer flowing traffic. Traffic congestion occurs as the number rises and approaches 1.0. Table 4.16-1 (Level of Service Range Definitions) reports the LOS as it relates to the amount of delay in seconds per vehicle at an unsignalized and signalized intersection. The general conditions represented by each LOS value are described in Table 4.16-2.

Table 4.16-1
Level of Service Range Definitions

Level of Service (LOS)	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	< 10	< 10
B	> 10 and < 15	> 10 and < 20
C	> 15 and < 25	> 20 and < 35
D	> 25 and < 35	> 35 and < 55
E	> 35 and < 50	> 55 and < 80
F	> 50	> 80

Table 4.16-2
Level of Service Operational Characteristics

Level of Service	Description
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.

Table 4.16-3 (Roadway Segment Levels of Service – Existing Conditions) provides the classifications of each of the roadway segments analyzed, as well as the results of the traffic analysis calculations and a level of service based on the capacity definitions for each roadway type. The calculated volume-to-capacity ratios and corresponding levels of service are shown in the right two columns. LOS values vary from A through F, with A representing the best possible free-flow conditions, and F representing forced-flow or failing conditions. Deficient conditions are defined by the Congestion Management Program (CMP) of San Bernardino County at LOS F.

Standards and Regulatory Setting

San Bernardino County Congestion Management Plan

The 2007 CMP for San Bernardino County is a state-mandated program intended to address regional congestion by linking transportation, land use, and air quality decisions. The CMP includes a deficiency plan that is designed to implement strategies that either fully mitigate congestion or provide measurable improvement to congestion and air quality. The purpose of the CMP roadway network is to monitor system performance. The CMP designates a system of regionally significant roadways and establishes procedures to be used to calculate LOS. These CMP roadways are monitored to identify deficiencies in the system. The CMP includes the following elements:

The **System Level of Service Element** defines the CMP roadway system, establishes traffic LOS standards on the system and prescribes procedures for computing traffic levels of service. The baseline LOS standard is LOS E or the LOS established in 1992 (whichever is furthest from LOS A) for any roadway segment or intersection. If a segment or intersection has been assigned a LOS F standard because the segment or intersection's LOS in 1992 was F, a 10% degradation in its V/C will cause the segment to be classified as deficient (see deficiency plans below).

The **Performance Element** provides a basis on which to objectively assess the relative merits among available modal alternatives and a framework for selecting appropriate alternatives.

The **Land Use/Transportation Element** addresses the impacts of land use decisions made by local jurisdictions on regional transportation systems including the estimate of costs related to those impacts. The CMP defines rolls for local jurisdictions to implement the goals and objectives of the plan. This element requires preparation of Traffic Impact Analysis (TIA) Reports for local projects that will affect CMP facilities. A TIA Report is required to be prepared if a project is modeled to add 250 or more two-way peak hour trips (1,000 or more two-way peak hour trips for retails uses). These reports are reviewed by SANBAG and local jurisdictions.

Table 1.16-3
Roadway Segment Levels of Service – Existing Conditions

ID #	Name	Start	End	Roadway Type	Capacity (Daily Vehicles)	Existing Conditions		
						VOLUME	V/C	LOS
A.	Laurel St.	Rancho Ave.	Pennsylvania Ave.	Collector	13,900	2,740	0.197	A
B.	La Cadena Dr.	Mt Vernon Ave.	Oak St/8th St.	Minor Arterial *	20,000	6,293	0.315	A
C.	Mt Vernon Ave.	Colton Ave.	La Cadena Dr.	Primary Arterial	36,700	14,448	0.394	A
D.	San Bernardino Ave.	Indigo Ave.	Pepper Ave.	Minor Arterial	20,000	13,758	0.688	B
E.	San Bernardino Ave.	Pepper Ave.	Meridian Ave.	Minor Arterial	20,000	11,927	0.596	A
F.	San Bernardino Ave.	Cypress St.	Rancho Ave.	Minor Arterial	20,000	5,315	0.266	A
G.	Olive St.	Rancho Ave.	Pennsylvania Ave.	Minor Arterial	20,000	3,727	0.186	A
H.	Olive St.	Pennsylvania Ave.	7th St.	Minor Arterial	20,000	2,874	0.144	A
I.	Olive St.	La Cadena Dr.	9th St.	Minor Arterial	20,000	2,745	0.137	A
J.	Olive St. [a]	Mt. Vernon Ave.	Holly Ave.	Minor Arterial	20,000	1,453	0.073	A
K.	Rancho Ave.	Olive St.	C St.	Primary Arterial	36,700	17,488	0.477	A
L.	La Cadena Dr.	Olive St.	C St.	Minor Arterial	20,000	5,520	0.276	A
M.	Colton Ave.	Fairview Ave.	Mt Vernon Ave.	Minor Arterial	20,000	6,786	0.339	A
N.	Mt Vernon Ave.	Colton Ave.	E St.	Primary Arterial	36,700	18,561	0.506	A
O.	Rancho Ave.	C St.	Valley Blvd.	Primary Arterial	36,700	18,581	0.506	A
P.	La Cadena Dr.	C St.	Valley Blvd.	Minor Arterial *	20,000	8,133	0.407	A
Q.	Colton Ave.	Mt Vernon Ave.	G St/10th St.	Minor Arterial *	20,000	3,062	0.153	A
R.	Fairway Dr.	Auto Center Dr.	Mt Vernon Ave.	Minor Arterial	20,000	7,688	0.384	A
S.	Valley Blvd.	Meridian Ave.	Pepper Ave.	Primary Arterial	36,700	15,028	0.409	A
T.	Valley Blvd.	Rancho Ave.	Cypress St.	Primary Arterial	36,700	13,867	0.378	A
U.	Valley Blvd.	Pennsylvania Ave.	Rancho Ave.	Primary Arterial	36,700	9,589	0.261	A
V.	Valley Blvd.	Mt Vernon Ave.	10th St.	Primary Arterial	36,700	6,602	0.180	A
W.	Rancho Ave.	I-10 Fwy.	N St.	Primary Arterial	36,700	16,245	0.443	A
X.	La Cadena Dr.	I-10 Fwy.	N St.	Primary Arterial	36,700	14,655	0.399	A
Y.	Pepper Ave.	I-10 Freeway	Slover Ave.	Minor Arterial *	20,000	1,795	0.090	A
Z.	Slover Ave.	Pepper Ave.	Eucalyptus Ave.	Collector	13,900	534	0.038	A
AA.	Slover Ave.	Pepper Ave.	Eastern Terminus	Collector	13,900	984	0.071	A
BB.	N St.	Rancho Ave.	4th St.	Collector	13,900	2,393	0.172	A
CC.	N St.	7th St.	5th St.	Collector **	13,900	3,636	0.262	A
DD.	N St.	7th St.	La Cadena Dr.	Collector	13,900	3,352	0.241	A
EE.	N St.	10th St.	11th St.	Collector	13,900	431	0.031	A
FF.	M St.	Congress St.	Mt. Vernon Ave.	Collector	13,900	6,783	0.488	A
GG.	Mt Vernon Ave.	I-10	M St.	Minor Arterial *	20,000	23,270	1.164	F
HH.	Rancho Ave.	N St.	O St.	Primary Arterial	36,700	15,274	0.416	A
II.	Hunts Ln.	Cooley Ln.	Stewart St. – Harwick Dr.	Secondary Arterial	24,200	7,594	0.314	A
JJ.	Agua Mansa Rd.	west of Rancho Ave.		Minor Arterial *	20,000	5,991	0.300	A
KK.	Mt Vernon Ave.	San Antonio Dr.	Centre Pointe Dr.	Primary Arterial - 6 Lanes	55,000	18,205	0.331	A
LL.	Rancho Ave.	Fogg St.	La Cadena Dr.	Primary Arterial	36,700	7,975	0.217	A
MM.	La Cadena Dr.	South of Rancho Ave.		Primary Arterial	36,700	15,909	0.433	A
NN.	Agua Mansa Rd.	East of Riverside Ave.		Minor Arterial *	20,000	7,149	0.357	A
OO.	Riverside Ave.	South of Agua Mansa Rd.		Primary Arterial	36,700	20,094	0.548	A
PP.	Tropicana Ranch Rd. [a]	West of La Cadena Dr.		Collector	13,900	947	0.068	A
QQ.	Washington St.	Mediteranian	Western terminus	Minor Arterial	20,000	600	0.030	A
RR.	Washington St.	Mt. Vernon Ave. (west intx.)	Mediteranian	Primary Arterial	36,700	5,512	0.150	A
SS.	Washington St.	Mt. Vernon Ave. (east intx.)	Meadow Lane	Primary Arterial	36,700	30,694	0.836	D
TT.	Washington St.	Barton Rd./Cooley Dr.	Reche Canyon Rd.	Primary Arterial	36,700	31,428	0.856	D
UU.	Mt. Vernon Ave.	I-215 interchange	Grand Terrace City Limits	Minor Arterial *	20,000	12,481	0.624	B
VV.	Reche Canyon Rd.	South of Washington St.		Minor Arterial *	20,000	26,648	1.332	F
WW.	La Cadena Dr.	North of I-215 interchange		Minor Arterial *	20,000	13,368	0.668	B
XX.	La Cadena Dr.	South of I-215 interchange		Minor Arterial *	20,000	3,142	0.157	A

** This is a two-lane segment within a designated arterial roadway. As two-lane arterials are atypical, the two-lane secondary arterial capacity was utilized.*

*** The capacity of this four-lane segment was defined by the two-lane collector capacity, as the designation would be atypical and this is a short segment.*

**** This is a two-lane arterial. The future roadway improvement was assumed to be a widening from 2 to 4 lanes, rather than 4 to 8 as is noted in the Measure I arterial projects list.*

[a] - A growth rate was applied to these segments based on growth at nearest model roadway segment.

This element also requires development of fair-share mitigation programs to address impacts to CMP facilities. Local jurisdictions are also required to participate in the development of the CMP capital improvement program to address cumulative impacts to CMP facilities over the long-term.

The **Travel Demand Management Element** includes strategies that are consistent with achieving air quality goals including reductions in trip making, trip length, and travel demand, as well as increasing the availability of modal alternatives.

The **Monitoring Program and Transportation Modeling Element** provides information on current levels of service, identifies system deficiencies, and determines local jurisdiction conformity with the CMP.

The **Capital Improvement Element** includes a seven-year plan using performance measures to improve the performance of the multimodal transportation system.

The **Deficiency Plan** identifies locations where LOS at intersections and on roadway segments (arterials and freeways) fail to attain the County's established LOS standards. Deficiency is based on the 1992 baseline established when the first CMP was adopted.

The arterial segment of Cedar Avenue between Slover Avenue and Valley Boulevard, currently operating at LOS F, is the only deficient system segment within the planning area.

Zoning Code

Title 18 (Zoning) of the City's Municipal Code regulates how all properties in the City are used and developed. Design standards include the size and dimensions of parking spaces, parking lot landscaping, and commercial/industrial loading space requirements. Primary standards and restrictions related to emergency access are addressed in Chapter 15.16 (Fire Code). The Fire Code (as adopted and amended by the City) addresses obstruction of emergency access roads, as well as the provision of emergency access in general.

Development Impact Fees

Chapter 12.32 of the Municipal Code establishes the City's Public Improvement Fee program. These fees are imposed on any project requiring a building permit or other land development permit that will result in the attraction or generation of traffic trips. Traffic attraction and generation are determined through a special study that also serves to apportion a project's "fair share" impact on existing or future infrastructure. These funds are permitted to be used for any traffic-related capital improvement project, meaning transportation planning, preliminary

engineering, engineering design studies, land surveys, right-of-way acquisition, engineering, permitting, construction and inspection of all the necessary features for any road construction project.

Thresholds of Significance

The General Plan update could result in impacts associated with transportation and traffic if it:

A. Causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., results in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
B. Exceeds, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
C. Results in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks.
D. Substantially increases hazards due to design features or incompatible uses.
E. Results in inadequate emergency access.
F. Results in inadequate parking capacity.
G. Conflicts with adopted policies, plans, or programs supporting alternative transportation.

Environmental Impacts

Analysis Methodology

The traffic analysis for the project included use of the East Valley Transportation Model (EVTM), incorporation of land use data for the existing General Plan and the proposed General Plan Update, analysis of model output, post processing of data into intersection turn movement volumes, and a traditional level of service, impact, and mitigation analysis.

Use of East Valley Transportation Model

For modeling efforts within the area, the regional model produced by the Southern California Association of Governments (SCAG) is the primary tool. The sub-regional EVTM used for the future-period analysis was created from the SCAG model but customized for the local area. The EVTM is maintained by the City of San Bernardino for use within local jurisdictions in the East San Bernardino Valley area. At the time of the start of modeling efforts for this project, the EVTM was the active model for the area. The EVTM passenger car model has a horizon (future forecast) year of 2030, and contains data on the local and regional roadway/freeway network, employment levels, and residential densities.

The EVTM network was edited during multiple coordination meetings with the contract EVTM modeler for the City of San Bernardino. The local model links and roadway configurations were customized to provide more detail for the Mobility Element traffic impact study area.

The output of the model analysis runs were then input into a post-processing spreadsheet, along with existing study intersection turning movement counts, to develop future turning movements for the analysis scenarios. The spreadsheet used for this purpose was consistent with the National Cooperative Highway Research Program (NCHRP Report 255). The NCHRP methodology provides for the calculation of individual turning movements that match the directional (north, south, east, and west) roadway segment model volumes. The output from this process is a matrix of estimated intersection turning movements, which mathematically relate to the intersection approach counts and the turning proportions to and from each approach leg.

Land Use Plan Source

The Land Use Plan defines the planned future intensity of development within the planning area, which is then used in traffic impact analysis to calculate trips generated within Transportation Analysis Zones (TAZ). A TAZ is constituted by one or more census blocks from the United States Census.

The existing General Plan land use plan and Circulation Element were used to define the Future Base scenario, and the proposed General Plan land use and circulation plans were used to define the Future Proposed General Plan scenario.

Intersection Operations Analysis

As required by the County of San Bernardino CMP, the Highway Capacity Manual (HCM) methodology was utilized for analysis of LOS at the study intersections. LOS values were calculated for existing, future baseline, and future General Plan scenarios at the study intersections. HCM operations calculation methodologies have been defined for both signalized and unsignalized intersections. The HCM method was utilized to determine the average delay of vehicles approaching each intersection (expressed in seconds of time) and the corresponding LOS values.

Proposed Circulation Policy Framework

The proposed Mobility Element includes policies to: (1) provide for Complete Streets; (2) encourage the use of alternative modes of transportation; (3) ensure an efficient street system; (4) provide efficient and safe freight movement; (5) meet parking needs; and (6) provide for cooperation with regional partners to meet regional transportation needs. The policies are as follows:

Policy M - 1.1: Provide for the needs of drivers, public transportation vehicles and patrons, bicyclists, and pedestrians of all ages and abilities in planning,

programming, design, construction, reconstruction, retrofit, operations, and maintenance activities of all streets.

Policy M‑1.2: View all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in Colton. Recognize bicycle, pedestrian, and transit modes as integral elements of the transportation system.

Policy M‑1.3: Require all new nonresidential, mixed-use, and large-scale residential development projects, through the development review process, to include public transit, bicycle, and pedestrian facilities.

Policy M‑1.4: Plan for multi-use recreation trails and paths that allow for physical activities, including running, walking, and bicycling.

Policy M‑1.5: Minimize vehicle emissions by encouraging land use patterns and multi-modal transportation improvements that reduce the need for automobile trips by making biking, walking, and use of public transit for short trips more convenient and available.

Policy M‑2.1: Work with Omnitrans to increase the use of public transit, establish or modify routes, and improve connectivity to regional services that respond to the needs of the Colton community.

Policy M‑2.2: Support Omnitrans' expansion of Bus Rapid Transit (BRT) into Colton. Support establishment of BRT stations near major activity areas, including the Arrowhead Regional Medical Center, Colton High School, and Downtown Colton.

Policy M‑2.3: Require that private development projects provide transit amenities, including bus stops that meet Omnitrans' bus stop design guidelines.

Policy M‑2.4: Work with Omnitrans and other regional transit operators to provide attractive, convenient, and modern bus stops that include shade/weather protection, seats, and timely transit information.

Policy M‑2.5: Work with Metrolink and the Southern California Regional Rail Authority to establish a Metrolink station in Colton along existing Metrolink rail lines.

Policy M‑2.6: Develop and maintain a citywide comprehensive bicycle network of off-street bike paths, on-street bike lanes, and bike streets to provide connections between neighborhoods, schools, parks, civic center/facilities, recreational facilities, and major commercial centers.

Policy M‑2.7: Improve and add amenities, such as staging areas, to the Santa Ana River Trail, as identified in the *Santa Ana River Trail Blue Ribbon Committee Trail Vision* document.

Policy M - 2.8: Add bicycle amenities and facilities to new projects and at existing activity centers.

Policy M - 2.9: Condition discretionary projects to require bicycle amenities such as bike racks and secure storage areas.

Policy M - 2.10: Provide pedestrian amenities such as benches, shade trees, and refuse cans on sidewalks along streets that are key pedestrian routes.

Policy M - 2.11: Pursue funding to create and maintain safe routes to schools, as well as similar access to parks and recreational facilities.

Policy M - 2.12: Develop a prioritization program that lists sidewalks that are missing and the level of importance of replacing the missing sidewalks.

Policy M - 2.13: Require that within Reche Canyon Specific Plan area, sidewalks be provided on one side of the street at a minimum.

Policy M - 2.14: Require that all new subdivision projects provide sidewalks on both sides of the street, except for subdivisions that create residential lots that are one acre or larger in size.

Policy M - 3.1: Apply General Plan roadway standards for roadways to the design and construction of future street improvements. Take into account not only automobiles, but also transit vehicles, bicycles, and pedestrians as identified by the Street Typology system.

Policy M - 3.2: Implement traffic-calming measures in Colton's residential neighborhoods that are severely impacted by speeding, excessive vehicular volumes, truck traffic, and/or cut-through traffic. Use the City's adopted traffic-calming policies to apply appropriate solutions.

Policy M - 3.3: Maintain the City's transportation infrastructure in good condition.

Policy M - 3.4: Develop and maintain adequate funding sources for the ongoing maintenance and upkeep of the local street network.

Policy M - 3.5: Maintain intersection traffic flows at Level of Service of D during peak hours for all roadways in Colton, except at those locations identified in this Mobility Element where peak-hour LOS E is allowed.

Policy M - 3.6: Restrict driveway entrances onto surrounding arterial, secondary and major streets when practical, and minimize through traffic on residential Collector streets.

Policy M - 3.7: Establish a periodic review schedule to assess the adequacy of traffic impact fees charged for new developments.

Policy M - 3.8: Require new developments of more than 100 employees (per building or per tenant/company) to develop Transportation Demand Management programs to minimize automobile trips and to encourage use of transit, ridesharing, bicycling, and walking.

Policy M - 3.9: Connect N Street to Fogg Street in south Colton to provide greater connectivity to the residential properties within this neighborhood.

Policy M - 3.10: Require new subdivision in Reche Canyon and Pellisier Ranch/La Loma Hills areas to provide adequate local and emergency connections to arterial roadways.

Policy M - 3.11: Reconfigure the Mount Vernon, Valley Boulevard, and I-10 freeway interchange to remove the five-legged intersection and improve the operations of this interchange.

Policy M - 3.12: Provide themed signage and related aesthetic enhancements at City gateways, as identified in Figure LU-6 (Land Use Plan) in the Land Use Element.

Policy M - 3.13: Maintain the Long-range Developer Impact Fee program to help fund the cost of transportation system improvements.

Policy M - 4.1: Widen the Fogg Street bridge under the Burlington Northern Railroad BNRR in south Colton to allow for adequate vehicle access, including emergency vehicles.

Policy M - 4.2: Extend Washington Street westerly to connect to La Cadena Drive.

Policy M - 4.3: Study the La Cadena Drive and 9th Street and I-10 freeway interchanges to develop a better configuration that would allow traffic to be directed efficiently into Downtown Colton and avoid driver confusion.

Policy M - 4.4: Provide for the continuity of Washington Street with any interchange improvements at the Washington Street and I-215 freeway.

Policy M - 4.5: Require that the La Cadena Drive and I-215 freeway interchange improvements keep the entire interchange within the Colton city limits.

Policy M - 4.6: Ensure that all interchange reconfiguration projects, grade separation improvements, and bridge widening projects be designed and implemented in a manner that provides positive benefit to the City of Colton.

Policy M - 4.7: Work with Caltrans and the San Bernardino Association of Governments to replace the Mount Vernon Avenue bridge crossing of the Santa Ana River to alleviate congestion.

Policy M - 5.1: Work with railroad operators to limit the aesthetic, noise, vibration, traffic congestion, and air quality impacts of new projects on residential neighborhoods adjacent to railroad lines and railroad projects.

Policy M - 5.2: Ensure that Colton Crossing design, construction activities, maintenance, and railroad operations do not create negative adverse impacts to surrounding residential properties.

Policy M - 5.3: Maintain the Railroad Quiet Zones through Colton to limit locomotive horn blowing adjacent to residential neighborhoods.

Policy M - 5.4: Support the abandonment or the realignment of railroad spurs that no longer serve industrial-support services and that create pedestrian safety conditions.

Policy M - 5.5: Vigorously enforce established truck routes to discourage truck shortcuts through residential neighborhoods.

Policy M - 5.6: Ensure that the designated truck routes conform to the following performance criteria:

- Truck routes must avoid intrusions into residential neighborhoods to limit noise, vibration, and air quality impacts.
- Truck routes will not be provided on Local Streets and on streets with mostly residential frontage.
- Truck routes must be located on roadways that provide direct and convenient access between Major Arterials and freeways (I-10 and I-215) and industrial and commercial businesses.
- Truck routes must be located on roadways with the design and construction capacity to accommodate truck traffic.

Policy M - 6.1: Require that all new developments provide off-street parking to meet local needs and minimize congestion on streets.

Policy M - 6.2: Require that all new commercial and manufacturing developments provide adequate loading areas within off-street parking areas.

Policy M - 6.3: Develop neighborhood traffic control plans for residential neighborhoods experiencing spillover traffic and parking shortages from adjacent commercial and industrial areas.

Policy M - 6.4: Allow for joint use and the sharing of parking facilities in mixed-use developments and for other projects which demonstrate the benefits of alternative parking approaches.

Policy M - 6.5: Cooperate with Caltrans and the County of San Bernardino to provide sites and improvements for park-and-ride facilities serving transit projects.

Policy M - 6.6: Allow for a reduction in parking standards as an incentive for the provision of senior and affordable housing.

Policy M - 7.1: Actively pursue Federal, State, and regional funds for local and regional roadway improvements.

Policy M - 7.2: Require the provision of appropriate mitigation of traffic impacts in surrounding communities resulting from development in Colton. Work with surrounding communities to ensure that traffic impacts in Colton resulting from development outside the City are adequately mitigated.

Policy M - 7.3: Consult with Caltrans, SCAG, the South Coast Air Quality Management District, SANBAG, Omnitrans, San Bernardino County, Riverside County, and the cities of Rialto, San Bernardino, Loma Linda, Grand Terrace, and Riverside to coordinate regional transportation facilities, and to pursue Federal, State, and regional funds for local and regional traffic improvements.

Policy M - 7.4: Continue to work with regional agencies in implementing Intelligent Transportation System measures and advanced traffic management technologies.

Exhibit 4.16-4 (Proposed Circulation Plan) illustrates the proposed future roadway network, and Exhibit 4.16-5 (Proposed Enhancements and Connections) shows where roadway enhancements and new connections are proposed by the Mobility Element (relative to existing conditions) to accommodate anticipated mobility needs. Exhibit 4.16-6 (Complete Streets) identifies the priority for streets within the network to implement City complete streets policy.

IMPACTS 4.16.A and B

Long-term implementation of land use policy, in combination with regional contributions to traffic on the local road network, will cause an increase in traffic that will result in several intersections and roadway segments to operate at Level of Service F. Impact will be significant.

Study Intersection Operations Analysis

A level of service analysis was conducted based on the output from the EVTM, after the addition of the proposed General Plan land use data. The analysis scenario includes this land use growth, as well as programmed roadway improvements that include intersection and roadway segment capacity enhancements (funded future conditions). The analysis results for this scenario are presented in Table 4.16.4 (Study Intersection Operations – Future (2030_ Proposed General Plan Scenario – Peak Hours). Intersections that are projected to operate at LOS values of E or F are indicated by highlighted cells.

Table 4.16-4
Study Intersection Operations – Future (2030)
Proposed General Plan Scenario – Peak Hours

#	Study Intersections	AM PEAK		PM PEAK	
		Delay (sec.)	LOS	Delay (sec.)	LOS
1	Mt. Vernon Ave. / La Cadena Dr.-Citrus St.	31.0	C	33.7	C
2	Wildrose Ave. / San Bernardino Ave. [a]	>100	F	>100	F
3	Pepper Ave. / San Bernardino Ave.	21.2	C	20.6	C
4	Meridian Ave. / San Bernardino Ave. – Olive St. [b]	17.3	C	19.6	C
5	Rancho Ave. / Olive St.	12.8	B	12.5	B
6	Pennsylvania Ave. / Olive St. [b]	18.2	C	11.6	B
7	La Cadena Dr. / Olive St.	12.7	B	12.1	B
8	Mt. Vernon Ave. / Olive St.	8.2	A	7.1	A
9	Mt. Vernon Ave. / Colton Ave.	24.7	C	23.1	C
10	Colton Ave. / F St. [a]	>100	F	>100	F
11	Mt. Vernon Ave. / F St. – Fairway Dr.	15.2	B	15.7	B
12	Colton Ave & 10th St & G St	>100	F	>100	F
13	Pepper Ave. / Valley Blvd.	28.9	C	27.4	C
14	Hermosa Ave. / Valley Blvd. [a]	>100	F	>100	F
15	Rancho Ave. / Valley Blvd.	90.8	F	33.8	C
16	La Cadena Dr. / Valley Blvd.	39.1	D	32.1	C
17	10th St. / Valley Blvd. [a]	33.8	D	19.6	C
18	Mt. Vernon Ave. / Valley Blvd.	47.6	D	37.4	D
19	Rancho Ave. / I-10 Westbound Ramps	>100	F	68.7	E
20	La Cadena Dr. / I-10 Westbound On-Ramp [a]	>100	F	45.0	E
21	9th St. / I-10 Westbound Off Ramp [a]	18.9	C	23.4	C
22	Rancho Ave. / I-10 Eastbound Ramps	>100	F	62.3	E
23	9th St. / I-10 Eastbound On-Ramp [a]	>100	F	>100	F
24	Mt. Vernon Ave. / I-10 Eastbound Ramps	>100	F	>100	F
25	Pepper Ave. / Slover Ave. [a]	16.4	C	14.3	B
26	Rancho Ave. / N St. [a]	51.7	F	27.1	D
27	La Cadena Dr. / N St.	6.2	A	10.1	B
28	Mt. Vernon Ave. / M St.	>100	F	46.4	D
29	Rancho Ave. / Agua Mansa Rd. [b]	>100	F	>100	F
30	Mt. Vernon Ave. / Washington St. (west)	67.2	E	41.0	D
31	Mt. Vernon Ave. / Washington St. (east)	>100	F	51.9	D
32	Barton Rd. / Washington St.	>100	F	86.4	F
33	Reche Canyon Rd. / Washington St.	45.4	D	70.9	E
34	Hunts Ln. / Washington St.	>100	F	63.9	E
35	La Cadena Dr. / Washington St. [a] *(Future Intersection)*	>100	F	>100	F
36	La Cadena Dr. / Barton Rd.	35.4	D	33.3	C
37	La Cadena Dr. / I-215 Southbound Ramps [a]	>100	F	>100	F
38	La Cadena Dr. / I-215 Northbound Ramps [a]	>100	F	>100	F

[a] Unsignalized intersection, partial stop control.

[b] All-way stop-control intersection

With the intensities of development associated with the proposed General Plan Land Use Element, Table 4.16.4 indicates that 19 study intersections would operate at deficient LOS F. Conditions at the following intersections would worsen to LOS F, or compound to worse LOS F operations, in the future due long-term implementation of proposed General Plan land use policy:

Wildrose Avenue/San Bernardino Avenue – LOS F during both the a.m. and p.m. peak hours
Colton Avenue/F Street – LOS F during both the a.m. and p.m. peak hours
Colton Avenue/10th Street-G Street – LOS F during both the a.m. and p.m. peak hours
Hermosa Avenue/Valley Boulevard – LOS F during both the a.m. and p.m. peak hours
Rancho Avenue/Valley Boulevard – LOS F during the a.m. peak hour
Rancho Avenue/I-10 Westbound Ramps – LOS F during the a.m. peak hour
La Cadena Drive/I-10 Westbound On-Ramp – LOS F during the a.m. peak hour
Rancho Avenue/I-10 Eastbound Ramps – LOS F during the a.m. peak hour
9th Street/I-10 Eastbound On-Ramp – LOS F during both the a.m. and p.m. peak hours
Mt. Vernon Avenue/I-10 Eastbound Ramps – LOS F during both the a.m. and p.m. peak hours
Rancho Avenue/N Street – LOS F during the a.m. peak hour
Mt. Vernon Avenue/M Street – LOS F during the a.m. peak hour
Rancho Avenue/Agua Mansa Road – LOS F during both the a.m. and p.m. peak hours
Mt. Vernon Avenue/Washington Street (East) – LOS F during the a.m. peak hour
Barton Road/Washington Street – LOS F during both the a.m. and p.m. peak hours
Hunts Lane/Washington Street – LOS F during the a.m. peak hour
La Cadena/Washington Street – LOS F during both the a.m. and p.m. peak hours
La Cadena/I-215 Southbound Ramps – LOS F during both the a.m. and p.m. peak hours
La Cadena/I-215 Northbound Ramps – LOS F during both the a.m. and p.m. peak hours

LOS F values are considered deficient under the CMP, and these 19 intersections would operate in that range during one or both peak hours. This is an increase of 13 intersections from the future baseline scenario due to implementation of proposed land use policy.

Each study intersection projected to operate at LOS F during this scenario is on a major arterial or a freeway interchange, or is an unsignalized intersection with large delays for vehicles approaching from the minor/controlled roadway. The decline in service operations would result from long-term implementation of General Plan land use policy at some locations due to focused development where little exists today, such as the West Valley Specific Plan area near Hermosa Avenue and Valley Boulevard, and development in the Pellissier Ranch/La Loma Hills area. Other impacts would result from intensification of uses in downtown Colton.

Exhibit 4.16-7 (Proposed Intersection Level of Service) illustrates the projected peak-hour level of service values at the study intersections.

Study Roadway Segment Operations

Traffic operations were analyzed for future (2030) baseline conditions—without the proposed General Plan—for each of the study roadway segments. Existing daily volume counts from the EVTM output for this scenario were compiled and a volume to capacity ratio (V/C) was determined for each roadway segment. Those ratios were then compared against the applied level of service/capacity values.

Table 4.16-5 (Study Roadway Segment Operations – Future (2030) Proposed General Plan Scenario) indicates the LOS during this scenario and the existing conditions scenario for each of the study roadway segments. The upper limit of LOS E is defined as the capacity limit (a V/C value of 1.00). Operations at nine of the study roadway segments would deteriorate to or within LOS values of E or F during the analyzed scenario:

Colton Avenue, between Fairview Avenue and Mt. Vernon Avenue – LOS F
La Cadena Drive, between C Street and Valley Boulevard – From LOS C to F
Colton Avenue, between Mount Vernon Avenue and G Street and 10th Street– From LOS B to E
Mount Vernon Avenue, between the I-10 freeway and M Street – LOS F
Washington Street, between Mount Vernon Avenue and Meadow Lane – From LOS C to E
Washington Street, between Barton Road/Cooley Drive and Reche Canyon Road – From LOS D to E
Mount Vernon Avenue, between the I-215 freeway and the Grand Terrace City limits – LOS F
Reche Canyon Road, south of Washington Street – From LOS C to F
La Cadena Drive, south of I-215 Interchange – From LOS A to E

The resulting LOS value of F, calculated for five of the segments in the list above, denotes deficient conditions.

Exhibit 4.16-8 (Proposed Roadway Volumes) illustrates the projected daily traffic volumes at the study roadway segments for this scenario.

Table 4.16-5
Study Roadway Segment Operations – Future (2030)
Proposed General Plan Scenario

ID #	Name	Start	End	Roadway Type	Capacity (Daily Vehicles)	Future (2030) Proposed General Plan Conditions		
						VOLUME	V/C	LOS
A.	Laurel St.	Rancho Ave.	Pennsylvania Ave.	Collector	13,900	2,105	0.151	A
B.	La Cadena Dr.	Mt Vernon Ave.	Oak St/8th St.	Minor Arterial *	20,000	14,273	0.714	C
C.	Mt Vernon Ave.	Colton Ave.	La Cadena Dr.	Primary Arterial	36,700	17,116	0.466	A
D.	San Bernardino Ave.	Indigo Ave.	Pepper Ave.	Minor Arterial	20,000	9,508	0.475	A
E.	San Bernardino Ave.	Pepper Ave.	Meridian Ave.	Primary Arterial	36,700	9,482	0.258	A
F.	San Bernardino Ave.	Cypress St.	Rancho Ave.	Primary Arterial	36,700	8,128	0.221	A
G.	Olive St.	Rancho Ave.	Pennsylvania Ave.	Minor Arterial	20,000	4,823	0.241	A
H.	Olive St.	Pennsylvania Ave.	7th St.	Minor Arterial	20,000	5,282	0.264	A
I.	Olive St.	La Cadena Dr.	9th St.	Minor Arterial	20,000	2,948	0.147	A
J.	Olive St. [a]	Mt. Vernon Ave.	Holly Ave.	Minor Arterial	20,000	1,721	0.086	A
K.	Rancho Ave.	Olive St.	C St.	Primary Arterial	36,700	24,080	0.656	B
L.	La Cadena Dr.	Olive St.	C St.	Minor Arterial	20,000	12,120	0.606	B
M.	Colton Ave.	Fairview Ave.	Mt Vernon Ave.	Minor Arterial	20,000	25,964	1.298	F
N.	Mt Vernon Ave.	Colton Ave.	E St.	Primary Arterial	36,700	24,090	0.656	B
O.	Rancho Ave.	C St.	Valley Blvd.	Primary Arterial	36,700	23,729	0.647	B
P.	La Cadena Dr.	C St.	Valley Blvd.	Minor Arterial *	20,000	22,158	1.108	F
Q.	Colton Ave.	Mt Vernon Ave.	G St/10th St.	Minor Arterial *	20,000	19,584	0.979	E
R.	Fairway Dr.	Auto Center Dr.	Mt Vernon Ave.	Primary Arterial	24,200	18,601	0.769	C
S.	Valley Blvd.	Meridian Ave.	Pepper Ave.	Primary Arterial	36,700	11,838	0.323	A
T.	Valley Blvd.	Rancho Ave.	Cypress St.	Primary Arterial	36,700	16,044	0.437	A
U.	Valley Blvd.	Pennsylvania Ave.	Rancho Ave.	Primary Arterial	36,700	16,172	0.441	A
V.	Valley Blvd.	Mt Vernon Ave.	10th St.	Primary Arterial	36,700	7,513	0.205	A
W.	Rancho Ave.	I-10 Fwy.	N St.	Primary Arterial	36,700	30,976	0.844	D
X.	La Cadena Dr.	I-10 Fwy.	N St.	Primary Arterial	36,700	25,947	0.707	C
Y.	Pepper Ave.	I-10 Freeway	Slover Ave.	Minor Arterial *	20,000	7,936	0.397	A
Z.	Slover Ave.	Pepper Ave.	Eucalyptus Ave.	Secondary Arterial	24,200	5,469	0.226	A
AA.	Slover Ave.	Pepper Ave.	Eastern Terminus	Collector	13,900	1,948	0.140	A
BB.	N St.	Rancho Ave.	4th St.	Collector	13,900	1,683	0.121	A
CC.	N St.	7th St.	5th St.	Collector **	13,900	1,683	0.121	A
DD.	N St.	7th St.	La Cadena Dr.	Collector	13,900	1,683	0.121	A
EE.	N St.	10th St.	11th St.	Collector	13,900	2,011	0.145	A
FF.	M St.	Congress St.	Mt. Vernon Ave.	Collector	13,900	8,698	0.626	B
GG.	Mt Vernon Ave.	I-10	M St.	Minor Arterial *	20,000	36,860	1.843	F
HH.	Rancho Ave.	N St.	O St.	Primary Arterial	36,700	25,918	0.706	C
II.	Hunts Ln.	Cooley Ln.	Stewart St. – Harwick Dr.	Secondary Arterial	24,200	17,831	0.737	C
JJ.	Agua Mansa Rd.	west of Rancho Ave.		Primary Arterial	36,700	11,579	0.316	A
KK.	Mt Vernon Ave.	San Antonio Dr.	Centre Pointe Dr.	Primary Arterial - 6 Lanes	55,000	32,963	0.599	A
LL.	Rancho Ave.	Fogg St.	La Cadena Dr.	Primary Arterial	36,700	5,070	0.138	A
MM.	La Cadena Dr.	South of Rancho Ave.		Primary Arterial - 6 Lanes	55,000	39,972	0.727	C
NN.	Agua Mansa Rd.	East of Riverside Ave.		Primary Arterial	36,700	10,742	0.293	A
OO.	Riverside Ave.	South of Agua Mansa Rd.		Primary Arterial - 6 Lanes	55,000	34,411	0.626	B
PP.	Tropicana Ranch Rd. [a]	West of La Cadena Dr.		Collector	13,900	2,379	0.171	A
QQ.	Washington St.	Mediteranian	Western terminus	Minor Arterial	20,000	8,038	0.402	A
RR.	Washington St.	Mt. Vernon Ave. (west intx.)	Mediteranian	Primary Arterial	36,700	32,497	0.885	D
SS.	Washington St.	Mt. Vernon Ave. (east intx.)	Meadow Lane	Primary Arterial - 6 Lanes	55,000	54,957	0.999	E
TT.	Washington St.	Barton Rd./Cooley Dr.	Reche Canyon Rd.	Primary Arterial - 6 Lanes	55,000	53,366	0.970	E
UU.	Mt. Vernon Ave.	I-215 interchange	Grand Terrace City Limits	Minor Arterial *	20,000	22,822	1.141	F
VV.	Reche Canyon Rd.	South of Washington St.		Primary Arterial	36,700	37,719	1.028	F
WW.	La Cadena Dr.	North of I-215 interchange		Primary Arterial - 6 Lanes	55,000	33,599	0.611	B
XX.	La Cadena Dr.	South of I-215 interchange		Minor Arterial *	20,000	18,359	0.918	E

** This is a two-lane segment within a designated arterial roadway. As two-lane arterials are atypical, the two-lane secondary arterial capacity was utilized.*

*** The capacity of this four-lane segment was defined by the two-lane collector capacity, as the*

**** This is a two-lane arterial. The future roadway improvement was assumed to be a widening from 2 to 4 lanes, rather than 4 to 8 as is noted in the Measure I arterial projects list.*

[a] - A growth rate was applied to these segments based on growth at nearest model roadway segment.

IMPACT 4.16.C ***Impact with respect to air traffic patterns would be less than significant.***

Future development pursuant to the proposed General Plan Update would not affect air traffic patterns due to Colton's distance from Ontario International Airport. Impacts on air traffic patterns would be less than significant; no mitigation is required.

IMPACT 4.16.D ***Impact with respect to traffic hazards would be less than significant.***

One aim of the Mobility Element is to provide for safe traffic conditions citywide, for all mobility modes. Examples of traffic safety policies from the list above include:

Policy M - 1.2: View all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in Colton.

Policy M - 3.2: Implement traffic-calming measures in Colton's residential neighborhoods that are severely impacted by speeding, excessive vehicular volumes, truck traffic, and/or cut-through traffic. Use the City's adopted traffic-calming policies to apply appropriate solutions.

Policy M - 3.6: Restrict driveway entrances onto surrounding arterial, secondary and major streets when practical, and minimize through traffic on residential Collector streets

Policy M - 4.1: Widen the Fogg Street bridge under the Burlington Northern Railroad BNRR in south Colton to allow for adequate vehicle access, including emergency vehicles.

Future street improvements that are programmed to implement the updated circulation network plan will be designed in accordance with all applicable standards relating to vehicle traffic, bicycles, and pedestrian safety. Impacts will be less than significant.

IMPACT 4.16.E ***Impact with respect to emergency access would be less than significant.***

Inadequate emergency access can delay or prevent responders from arriving at an emergency location, thereby exacerbating an emergency situation leading to an increased potential loss of life and property. Future development will be subject to the provisions of the City's Fire Code with regard to providing adequate emergency

access. The General Plan update does not include policies that would change standards related to emergency access, nor will it interfere with policy implementation. No impact will occur.

IMPACT 4.16.F

Impact with respect to parking capacity would be less than significant.

Insufficient parking capacity can inhibit economic growth, and can result in overreliance on street parking, which can lead to increased traffic congestion and conflicts between adjacent properties. The Mobility Element supports provision of adequate parking in future developments through Policies 6-1 through 6-6 cited above. These policies, in conjunction with the parking supply and design standards requirements of the City's Zoning Code, will ensure that adequate parking is provided on a project-by-project basis. Impacts will be less than significant.

IMPACT 4.16.G

No adverse impact will result with respect to alternative transportation.

Alternative transportation includes travel modes that can move people to their destinations through means other than a private automobile or light duty truck. Bus transit and rail service, for example, provide an important travel alternative for those who cannot rely on the use of private automobiles, such as the elderly and the disabled. The General Plan will not interfere with any adopted plan or policy related to alternative transportation. In fact, the General Plan Update includes specific alternative transportation policies. These include Policies M-1.1 through M-1.5, Policies M-2.1 through M-2.14, and Policy M-3.8 that support the use of public transit and promote bicycling and walking. Also, the Complete Streets plan shown on Exhibit 4.16-6 highlights the City's commitment to provide for street design that can accommodate diverse travel modes. No adverse impact to alternative transportation plans, programs, or facilities will occur as a result of the updated plan.

Mitigation Measures

Intersection Improvements

Mitigation is required to address projected LOS F conditions at the study intersections identified in Table 4.16-4 and the roadway segments identified in Table 4.16-5. The recommended mitigation measures and their estimated effect on LOS values are summarized in Table 4.16-6 (a.m. peak) and Table 4.16-7 (p.m. peak). Collectively, these are referenced as Mitigation Measure 4.16-1 and then by the intersection location (for example, 4.16-1 #2).

Mitigation and funding will be achieved in two ways. For those improvements that are identified in the San Bernardino County Congestion Management Program

(CMP) Development Mitigation Nexus Study, development impact fees will be paid as established by law. For those facilities not included in the CMP, localized intersection impacts will be addressed in conjunction with individual development applications that directly affect intersection LOS, as identified by a project-specific traffic study prepared during the entitlement process. As deemed appropriate by City staff, fair-share contributions could be made for these improvements until funding is fully available for implementation of the future identified mitigation measure.

Final engineering studies would need to be completed for each physical improvement before implementation. A planning-level analysis was conducted for this analysis in order to provide a program-level review of potential mitigation measures. The general need for widening, and the extent of such required for each measure, would be determined as future development is entitled.

Interchange Improvements

The City does not have jurisdiction to implement identified improvements to freeway/arterial interchanges; these are the responsibility of Caltrans. As final improvement plans for interchanges have not been adopted by Caltrans, improvements over existing interchange configurations are the focus of impact mitigation recommended here.

Washington Street/Mount Vernon Avenue Interchange at Interstate 215: The interchange at Washington Street/Mount Vernon will need to be reconstructed as part of the ultimate widening of Interstate 215 to add four additional lanes (two lanes northbound and two lanes southbound), as called for in Caltrans District 8 improvement plans. When this interchange is replaced, it should continue to retain Washington Street as a continuous arterial east and west of the freeway. The reconstructed interchange should also include Mount Vernon Avenue as a continuous arterial north and south of the freeway. In addition, coordination of the traffic signals at the freeway ramp intersections with adjacent City-controlled signalized intersections should be addressed to reduce traffic congestion and improve traffic safety in the vicinity of the freeway interchange.

Interstate 10 Interchanges: SANBAG is currently studying the widening of Interstate 10 through the City of Colton to add High Occupancy Vehicle (HOV) lanes and High Occupancy Toll (HOT) lanes. The addition of travel lanes on I-10 will create the need to replace existing interchanges at Rancho Avenue, La Cadena/9th Street, and Mount Vernon Avenue/Sperry Drive. The replacement of interchanges in this corridor should incorporate the following features:

- Relocation of the westbound on-ramp to eliminate the fifth leg at the intersection of Mount Vernon at Valley Boulevard.

- Freeway ramps should be designed to improve direct access to E. Valley Boulevard which serves as a major retail corridor for Colton.

- Improvement of coordination of freeway ramp traffic signals with adjacent City-controlled signals to reduce traffic congestion and improve traffic safety.

Table 4.16-6
Recommended Study Intersection Mitigation Measures and Effects – AM Peak Hour

#	Study Intersections	Future (2030) Future Base Conditions		Future (2030) with Proposed General Plan Conditions		Future (2030) with Proposed General Plan Conditions - Mitigated		Mitigation Measure
		Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	
2	Wildrose Ave. / San Bernardino Ave. [a]	>100	**F**	>100	**F**	10.6	B	Install two-phase traffic signal.
10	Colton Ave. / F St. [a]	>100	**F**	>100	**F**	28.5	C	Install traffic signal with permissive phasing. Re-stripe to provide EB and WB left-turn pockets within the 44-foot roadway width. Parking prohibitions will be required near the intersection approaches.
12	Colton Ave & 10th St & G St	29.1	C	335.6	**F**	70.4	**E**	Add a northbound right-turn lane. Will likely require widening adjecent to this approach, due to geometric constraints.
14	Hermosa Ave. / Valley Blvd. [a]	15.5	C	>100	**F**	16.3	B	Install two-phase traffic signal.
15	Rancho Ave. / Valley Blvd.	73.2	**E**	90.8	**F**	45.1	D	Converted the east-west signal phasing from protected to permitted, reducing a signal phase from the cycle. Geometric and safety issues need to be considered.
19	Rancho Ave. / I-10 Westbound Ramps	59.2	**E**	>100	**F**	32.1	C	Add a second westbound right-turn lane on the freeway ramp. Widen the SB approach to provide two through lanes and a right-turn only lane onto the freeway ramp. [c]
20	La Cadena Dr. / I-10 Westbound On-Ramp [a]	>100	**F**	>100	**F**	1.9	A	Prohibit left-turns from the minor driveway at east leg of intersection due to alignment concerns. Widening not feasible with existing building locations. Install a traffic signal. [c]
22	Rancho Ave. / I-10 Eastbound Ramps	98.3	**F**	>100	**F**	46.9	D	Add a left-turn, right-turn lanes at freeway off-ramp. Ramp is on fill section and will need to be rebuilt. On Rancho Avenue, add an additional through lane in each direction. [c]
23	9th St. / I-10 Eastbound On-Ramp [a]	37.7	**E**	>100	**F**	13.6	B	Add a two-phase traffic signal. [c]
24	Mt. Vernon Ave. / I-10 Eastbound Ramps	>100	**F**	>100	**F**	71.2	**E**	Add a second southbound left-turn lane at the off-ramp approach, with related improvements to receiving lanes. Add a westbound right-turn overlap phase. [c]
26	Rancho Ave. / N St. [a]	26.7	D	51.7	**F**	14.3	B	Prohibit westbound left-turns during the peak hours.
28	Mt. Vernon Ave. / M St.	45.2	D	>100	**F**	18.6	B	Add additional north-south lanes to Mt. Vernon Avenue.
29	Rancho Ave. / Agua Mansa Rd. [b]	>100	**F**	>100	**F**	24.4	C	Install two-phase traffic signal . Widen eastbound approach, stripe eastbound, westbound approaches to provide left and through/right turn lanes.
31	Mt. Vernon Ave. / Washington St. (east)	>100	**F**	>100	**F**	31.2	C	Add a northbound right-turn lane. Geometric constraints must be overcome.
32	Barton Rd. / Washington St.	>100	**F**	>100	**F**	50.4	D	Add northbound and southbound right-turn overlap phases. Coordinate with related pedestrian movements.
34	Hunts Ln. / Washington St.	67.3	**E**	>100	**F**	44.0	D	In addition to planned intersection design, provide a third westbound left-turn lane, with northbound right-turn overlap phase (protected right-turn phase). Continue three receiving lanes for adequate distance before merge. Additional southbound through lane.
35	La Cadena Dr. / Washington St. [a]	>100	**F**	>100	**F**	10.3	B	Install a traffic signal with north/south protected left-turn phasing.
37	La Cadena Dr. / I-215 Southbound Ramps [a]	74.9	**F**	>100	**F**	54.1	D	Install two-phase traffic signal. [c]
38	La Cadena Dr. / I-215 Northbound Ramps [a]	>100	**F**	>100	**F**	19.9	C	Install two-phase traffic signal. Add a second through lane in each direction on La Cadena Drive. [c]

[a] Unsignalized intersection, partial stop control.

[b] All-way stop-control intersection

[c] Implementation will require coordination with and approval by Caltrans

Table 4.16-7
Recommended Study Intersection Mitigation Measures and Effects – PM Peak Hour

#	Study Intersections	Future (2030) Future Base Conditions		Future (2030) with Proposed General Plan Conditions		Future (2030) with Proposed General Plan Conditions - Mitigated		Mitigation Measure
		Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	
2	Wildrose Ave. / San Bernardino Ave. [a]	<100	**F**	>100	**F**	11.0	B	Install two-phase traffic signal.
10	Colton Ave. / F St. [a]	86.4	**F**	>100	**F**	18.2	B	Install traffic signal with permissive phasing. Re-stripe to provide EB and WB left-turn pockets within the 44-foot roadway width. Parking prohibitions will be required near the intersection approaches.
12	Colton Ave & 10th St & G St	27.1	C	335.6	**F**	70.8	**E**	Add a northbound right-turn lane. Will likely require widening adjecent to this approach, due to geometric constraints.
14	Hermosa Ave. / Valley Blvd. [a]	22.7	C	>100	**F**	12.7	B	Install two-phase traffic signal.
15	Rancho Ave. / Valley Blvd.	31.4	C	33.8	C	28.7	C	Converted the east-west signal phasing from protected to permitted, reducing a signal phase from the cycle. Geometric and safety issues need to be considered.
19	Rancho Ave. / I-10 Westbound Ramps	38.7	D	68.7	**E**	32.0	C	Add a second westbound right-turn lane on the freeway ramp. Widen the SB approach to provide two through lanes and a right-turn only lane onto the freeway ramp. [c]
20	La Cadena Dr. / I-10 Westbound On-Ramp [a]	70.9	**F**	45.0	**E**	2.0	A	Prohibit left-turns from the minor driveway at east leg of intersection due to alignment concerns. Widening not feasible with existing building locations. Install a traffic signal. [c]
22	Rancho Ave. / I-10 Eastbound Ramps	44.1	D	62.3	**E**	29.1	C	Add a left-turn, right-turn lanes at freeway off-ramp. Ramp is on fill section and will need to be rebuilt. On Rancho Avenue, add an additional through lane in each direction.
23	9th St. / I-10 Eastbound On-Ramp [a]	77.9	**F**	>100	**F**	16.4	B	Add a two-phase traffic signal. [c]
24	Mt. Vernon Ave. / I-10 Eastbound Ramps	80.8	**F**	>100	**F**	32.5	C	Add a second southbound left-turn lane at the off-ramp approach, with related improvements to receiving lanes. Add a westbound right-turn overlap phase. [c]
26	Rancho Ave. / N St. [a]	29.3	D	27.1	D	13.2	B	Prohibit westbound left-turns during the peak hours.
29	Rancho Ave. / Agua Mansa Rd. [b]	95.4	**F**	>100	**F**	21.3	C	Install two-phase traffic signal . Widen eastbound approach, stripe eastbound, westbound approaches to provide left and through/right turn lanes.
31	Mt. Vernon Ave. / Washington St. (east)	81.6	**F**	51.9	D	51.8	D	Add a northbound right-turn lane. Geometric constraints must be overcome.
32	Barton Rd. / Washington St.	74.7	**E**	86.4	**F**	33.4	C	Add northbound and southbound right-turn overlap phases. Coordinate with related pedestrian movements.
35	La Cadena Dr. / Washington St. [a]	>100	**F**	>100	**F**	11.7	B	Install a traffic signal with north/south protected left-turn phasing.
37	La Cadena Dr. / I-215 Southbound Ramps [a]	76.9	**F**	>100	**F**	48.4	D	Install two-phase traffic signal. [c]
38	La Cadena Dr. / I-215 Northbound Ramps [a]	>100	**F**	>100	**F**	13.6	B	Install two-phase traffic signal. Add a second through lane in each direction on La Cadena Drive. [c]

[a] Unsignalized intersection, partial stop control.

[b] All-way stop-control intersection

[c] Implementation will require coordination with and approval by Caltrans

Study Roadway Segments

Seven study roadway segments are projected to have deficient (LOS F) conditions. Mitigation measures for these locations are:

Mitigation Measure 4.16-2
Colton Avenue, between Fairview Avenue and Mt. Vernon Avenue
The City will increase the roadway capacity to a four-lane cross-section. This configuration would affect existing bicycle path and service road segments. Alternatively, the City will provide advanced corridor signal synchronization, and add additional traffic signals as warranted with future development. Funding sources will include developer mitigation fees, and available state and federal grants.

Mitigation Measure 4.16-3
La Cadena, between C Street and Valley Boulevard
As part of a broader citywide program, the City will provide advanced corridor signal synchronization and add new traffic signals to unsignalized intersections as warranted with future development. This condition will be monitored over time and implemented as warranted. Funding sources will include developer mitigation fees, and available state and federal grants.

Mitigation Measure 4.16-4
Mount Vernon Avenue, between the I-10 freeway and M Street
The City will increase roadway capacity to a four-lane cross-section. As this is a major capital improvement project that would affect the interchange ramp intersection with I-10, the bridge over railroad corridor/yard, and potentially the bridge over the Santa Ana River to the south of this segment, this is a long-term project that will require outside funding and coordination with the railroads, Caltrans, SANBAG, and possibly other agencies. The City will monitor conditions to determine when the improvements are warranted and schedule this improvement as part of a future Capital Improvement Plan. Funding sources will include developer mitigation fees, the railroads, and available state and federal grants.

Mitigation Measure 4.16-5
Mount Vernon Avenue, between I-215 and the Grand Terrace City limits
Provision of additional lanes, to a four-lane cross-section, may not be feasible due to challenging geography. Thus, the City will provide advanced corridor signal synchronization, linked into Grand Terrace and Colton traffic signals. Funding sources will include developer mitigation fees (in Colton and Grand Terrace), and available state and federal grants.

Mitigation Measure 4.16-6
Reche Canyon Road, south of Washington Street
The provision of additional lanes, to a six-lane cross-section in addition to planned corridor improvements, may not be feasible due to adjacent residential neighborhoods. Thus, as traffic signals become necessary with future residential

development, the City will provide advanced corridor signal synchronization. Funding sources will include SANBAG[1], developer mitigation fees, and available state and federal grants.

The physical or financial feasibility of implementing these improvements has not been investigated in detail due to the complexities inherent in the implementation of long corridor improvements (both in terms of infrastructure and potential new adjacent development) over an extended time period. Capacity enhancements would need to be implemented on these roadways within the General Plan timeframe in order to provide operations at non-deficient level of service values.

If widening is not physically or financially feasible within the General Plan timeframe, the City will pursue efforts within these corridors to implement alternative capacity enhancements, with the key strategy consisting of corridor traffic signal synchronization programs tied to Intelligent Transportation Systems (ITS) technologies. Traffic benefits appear in the form of less congestion and fewer delays and stops at the included roadway intersections. Improvements within Colton could build upon the first phases of the San Bernardino Valley Coordinated Traffic Signal System Plan.

Traffic signal corridor synchronization and adaptive traffic signal control will be utilized if widening or restriping and removal of other roadway aspects such as on-street parking, medians, or service/frontage roads is deemed infeasible. If traffic signal improvements are utilized to mitigate the impacts to the designated roadway segments rather than widening, a letter grade improvement in level of service would result. The system would also only work if closely spaced traffic signals are linked together over a long distance, and across adjacent jurisdictions such as the City of Grand Terrace. This could take place through regional traffic/signalization improvement programs.

Traffic Impacts Outside of Colton

Mitigation Measure 4.16-7

To implement Policy M-7.2 of the Mobility Element, the City of Colton shall attempt to enter into an agreement with the Cities of Riverside and/or Grand Terrace establishing a fair-share fee program for the purpose of funding necessary traffic improvements at any intersection immediately adjacent to the mutual boundaries of the Cities of Colton, Grand Terrace, and Riverside that is significantly impacted on a cumulative basis. Projects within each city shall be responsible for paying their fair share towards such improvements. In recognition that each city affects the other's roadway network, such fair share fee program shall cover improvements and intersections within all three cities. Such a fair share fee program shall be established after the commissioning of a

[1] San Bernardino Associated Governments. Congestion Management Plan, Appendix K (Nexus Study Attachment 1 - Arterial Project List). http://www.sanbag.ca.gov/planning/cmp/NexusStudyArterial2011Update.pdf [January 2, 2013]

traffic study and nexus study (jointly funded by the participating cities) to specifically identify the nature, location, timing, and cost of all improvements necessary in ensure that cumulative significant impacts are all adequately addressed and mitigated, and the fair share fee program shall require the implementation of identified improvements at the appropriate time.

Complementary Transit and Bicycle Improvements

Omnitrans BRT Line Implementation

Establishment of the proposed Omnitrans Bus Rapid Transit line through the City of Colton along San Bernardino Avenue, Pepper Avenue, Valley Boulevard, Colton Avenue, and Mount Vernon Avenue will provide new opportunities for local residents and employees to make local and regional trips via transit. For discretionary riders (those that own vehicles but choose to take transit for specific trips), new trips on the BRT service that are diverted from personal vehicles will help to reduce demand on the roadway system.

This new transit service, and other incremental transit service improvements into the future, will provide new trip mode choices and will offset some of the new demand for vehicle trips generated by the intensification of land uses over time within Colton and the surrounding areas.

Bicycle Network Implementation

Implementation of the planned bicycle facility network within Colton, with expanding linkages to regional facilities such as the Santa Ana River Trail, will also help to provide another mode choice for local and sub-regional trips. Trips made by bicycle will offset vehicle trips on the local roadway network.

Level of Significance with Mitigation Incorporated

Because complete funding for all of the mitigation requirements cannot be identified at this point—and because the analysis indicates that not all identified intersection impacts can be fully mitigated based on the information available today—implementation of General Plan land use policy, combined with future growth on the regional road network from sources outside of Colton, are expected to result in **unavoidable significant impacts** at the following **intersection locations**:

Colton Avenue/10th Street-G Street – LOS E during both the a.m. and p.m. peak hours
Mt. Vernon Avenue/I-10 Eastbound Ramps – LOS F during the a.m. peak hours

With regard to impacts on **roadway segments,** the residual impacts were not calculated. Because funding sources have not been identified at this time for road widening or signal synchronization, impacts will be **significant and unavoidable**.

All other impacts—air traffic, traffic safety, parking, and alternative transportation—will be less than significant.

This Page Intentionally Left Blank

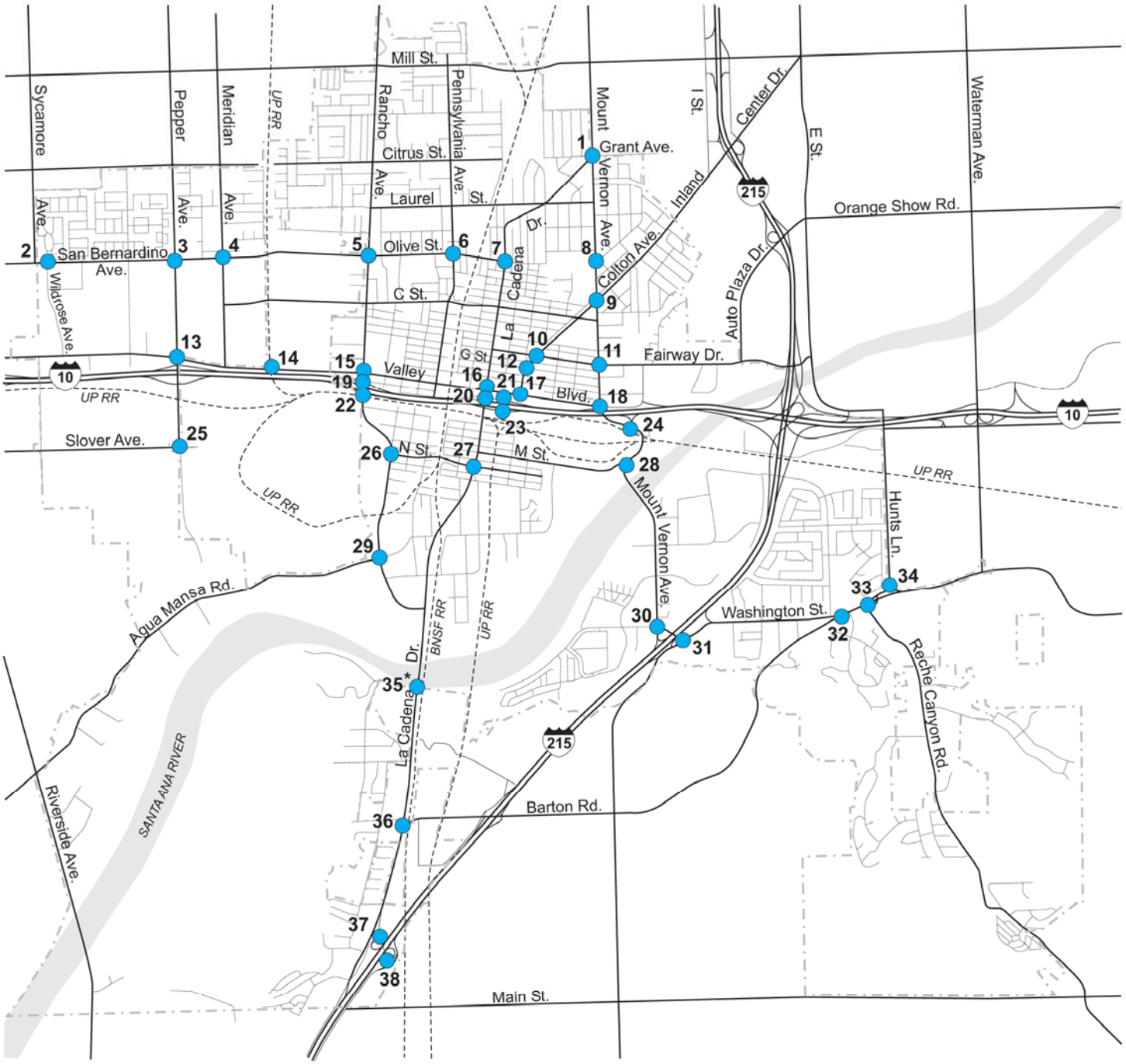


Exhibit 4.16-1
Studied Intersections

LEGEND

- City Boundary
- Railroad
- Study Intersection
- X Intersection Reference Number

Note:
* Future intersection of La Cadena Dr / Washington St.

N

This Page Intentionally Left Blank

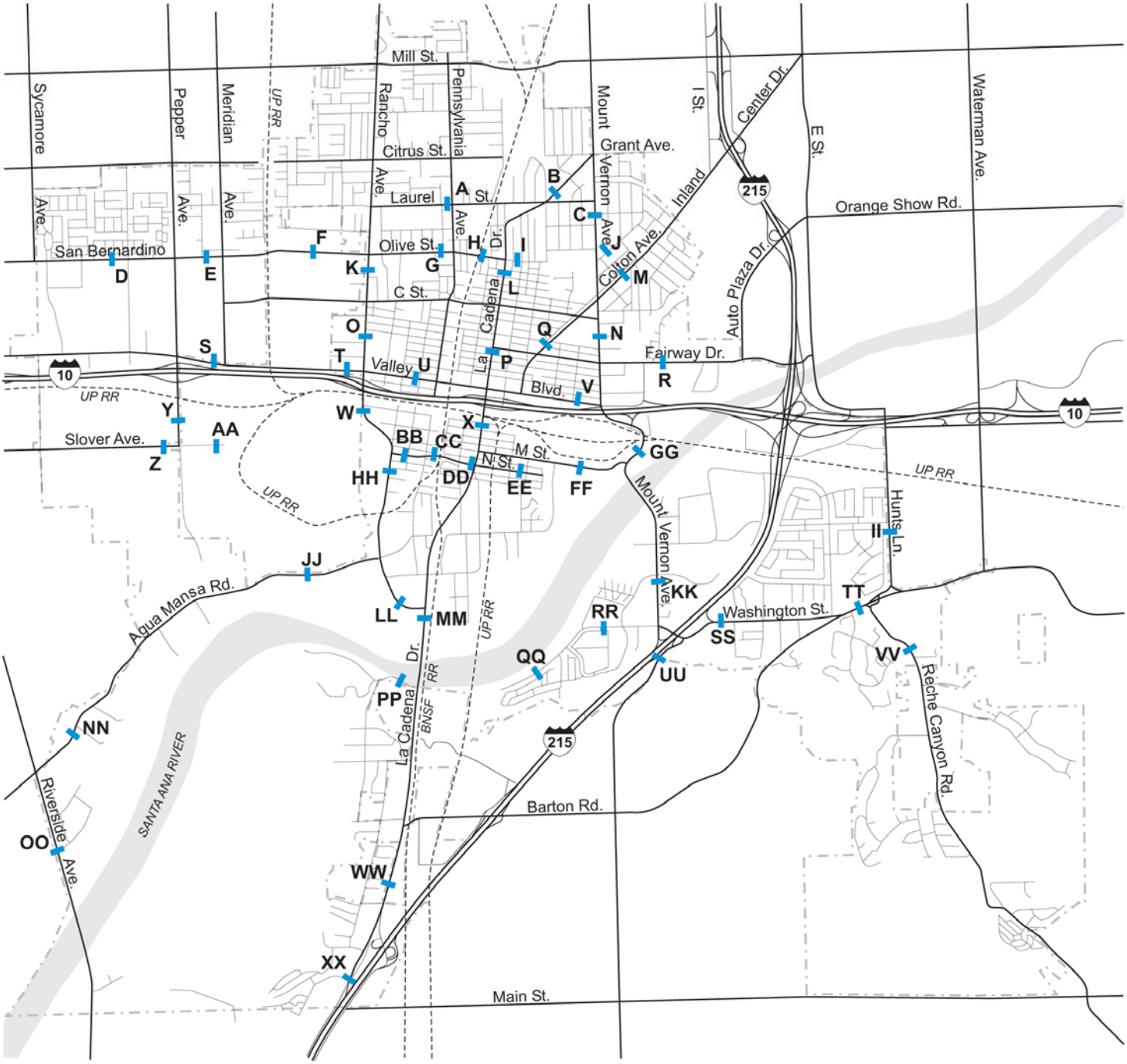


Exhibit 4.16-2

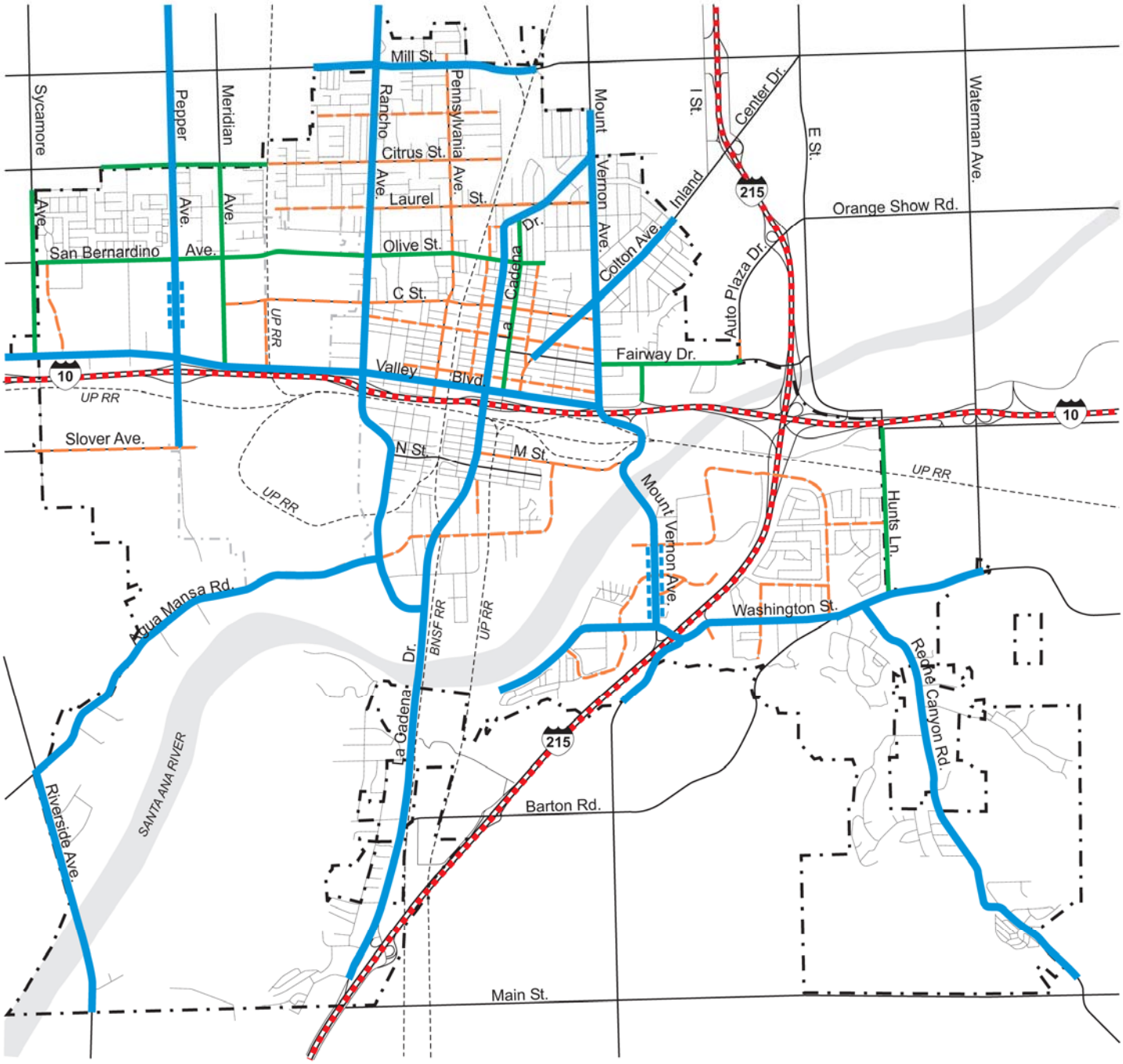
Studied Roadway Segments

LEGEND

- City Boundary
- Railroad
- Study Segments
- A — Study Segment Reference Letter

N

This Page Intentionally Left Blank



LEGEND

- City Boundary
- Railroad
- Freeway
- Six-Lane Major Arterial
- Major Arterial
- Secondary Arterial
- Collector

Exhibit 4.16-3

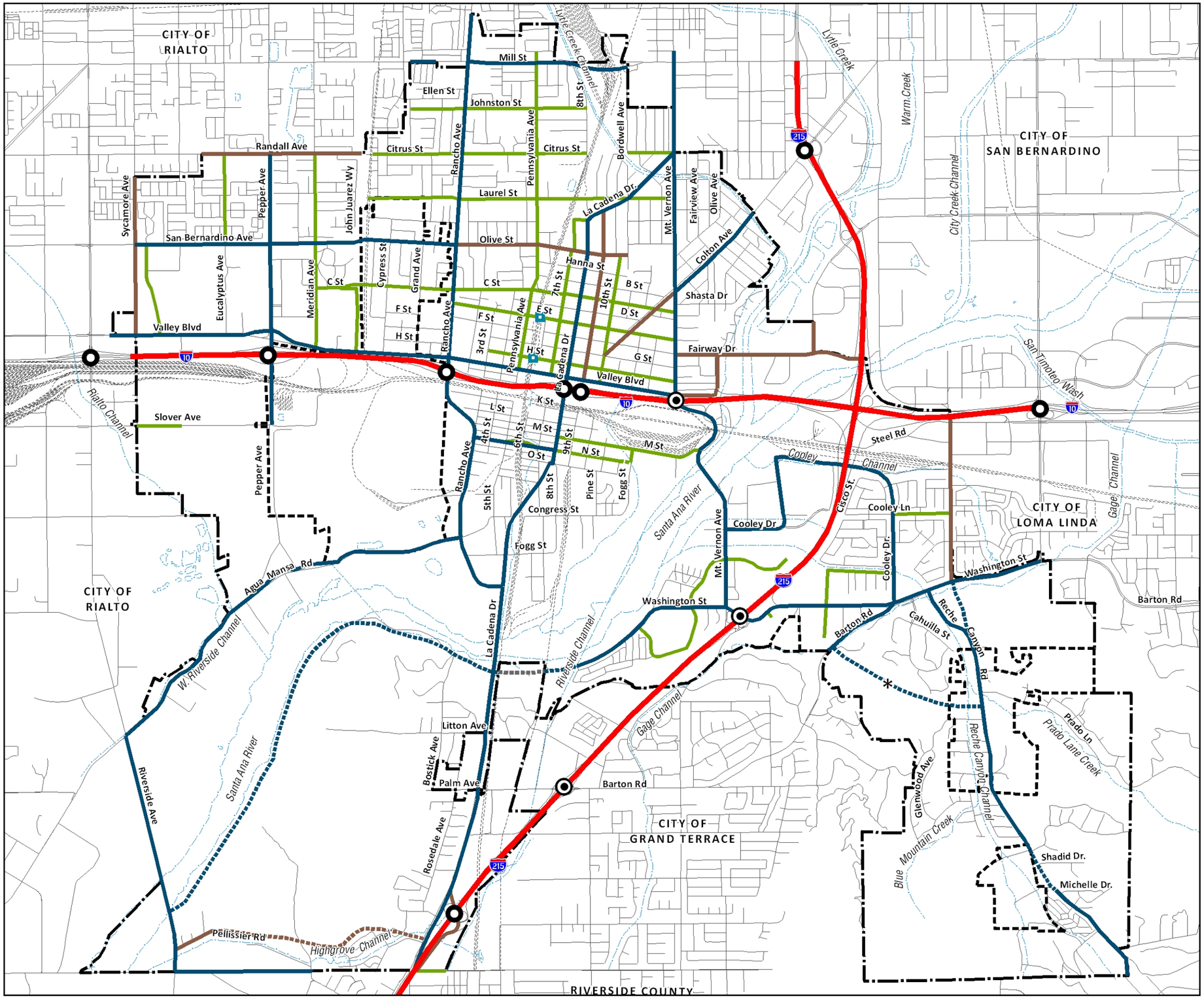
Existing Circulation Plan

N

This Page Intentionally Left Blank

Exhibit 4.16-4

Proposed Circulation Plan



Circulation Plan

- Freeway
- Major Arterial
- Planned Arterial
- Secondary Arterial
- Planned Secondary
- Collector Street
- Planned Collector
- Planned Roadway Located in Another City

* Conceptual roadway location. Final roadway location to be determined on proposed subdivision design.

Freeway Interchanges

- Interchanges
- Interchanges with Planned Improvements

Street Closure

- Street Closure (BSNF Quiet Zone Project)

Boundaries

- City Boundary
- Sphere of Influence
- Railroad Tracks
- Watercourse

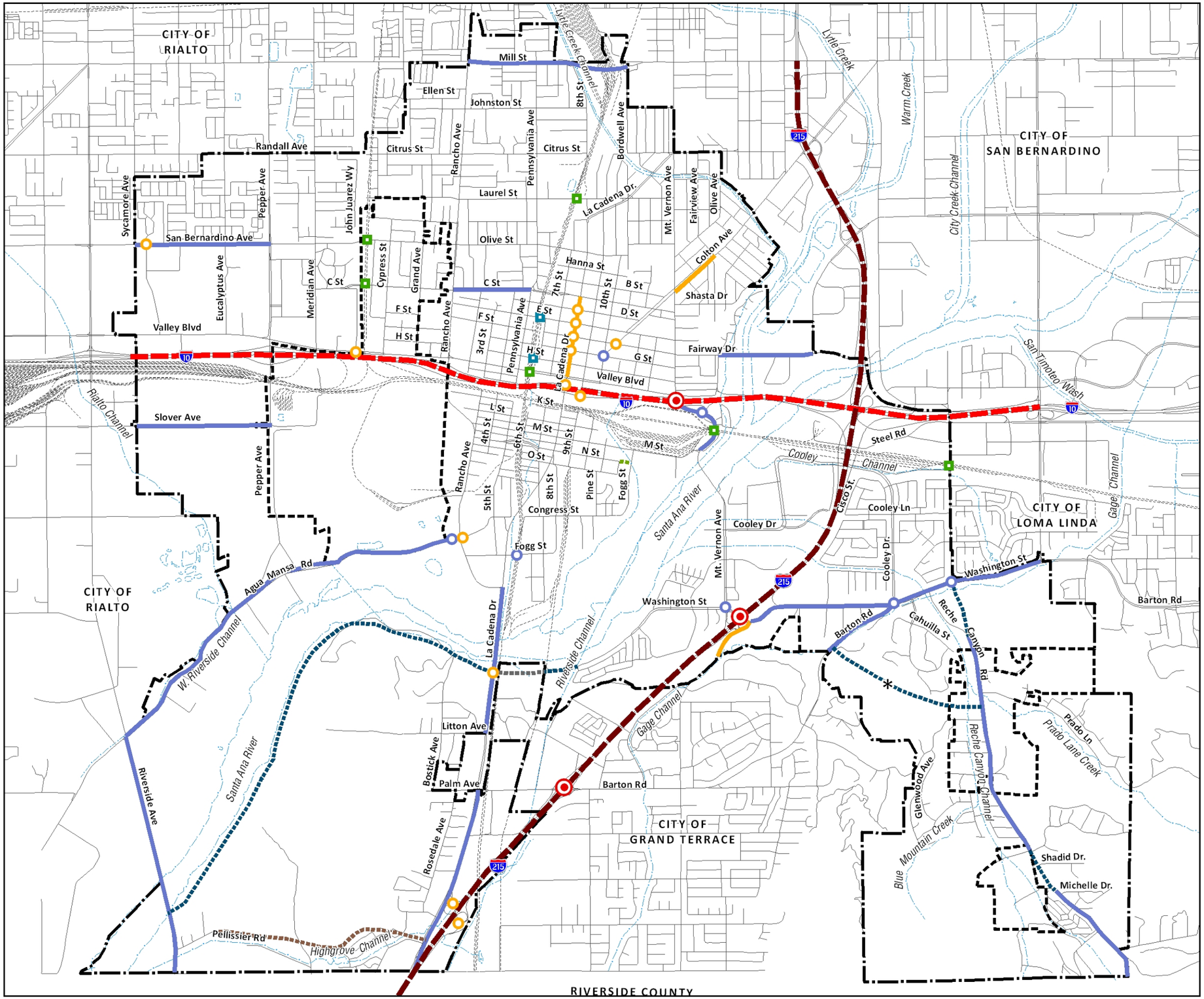
Date: January 5, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.16-5

Proposed Enhancements and Connections



Freeway Improvements

- New HOV or Express Toll Lanes in Each Direction
- New HOV and General Purpose Lanes in Each Direction
- Freeway Interchanges with Planned Improvements

New Roadway Extension or Realignment

- Planned Arterial
- Planned Secondary
- Planned Collector
- Planned Roadway Located in Another City

* Conceptual roadway location. Final roadway location to be determined on proposed subdivision design.

Planned/Proposed Street Segment Improvements

- Widen
- Advance Corridor Signal Synchronization

Planned/Proposed Intersection Improvements

- Turn Lane/Widen Intersection
- Add Traffic Signal

Street Closures and Grade Seperations

- Street Closure (BSNF Quiet Zone Project)
- Grade Seperation at Railroad

Boundaries

- City Boundary
- Sphere of Influence
- Railroad Tracks
- Watercourse

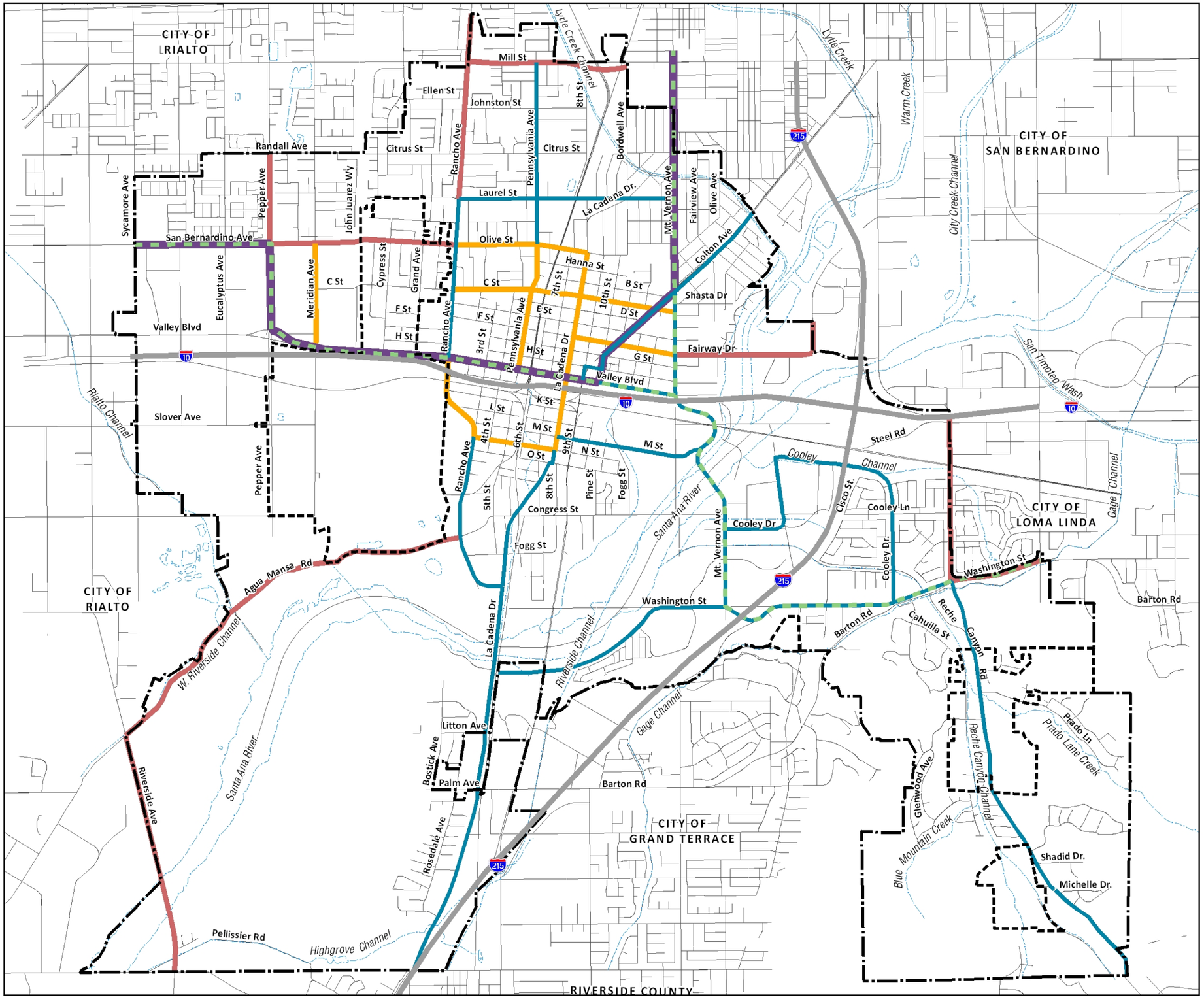
Date: October 16, 2012
Prepared by: Hogle-Ireland, Inc.
Source: KOA Corporation, 2012; SANBAG Development Mitigation Nexus Study, Nexus Study Attachment 1 (Arterial Project List).

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

Exhibit 4.16-6

Complete Streets



Date: October 20, 2012
Prepared by: Hogle-Ireland, Inc.
Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

0 2,000 4,000 6,000 8,000 Feet

This Page Intentionally Left Blank

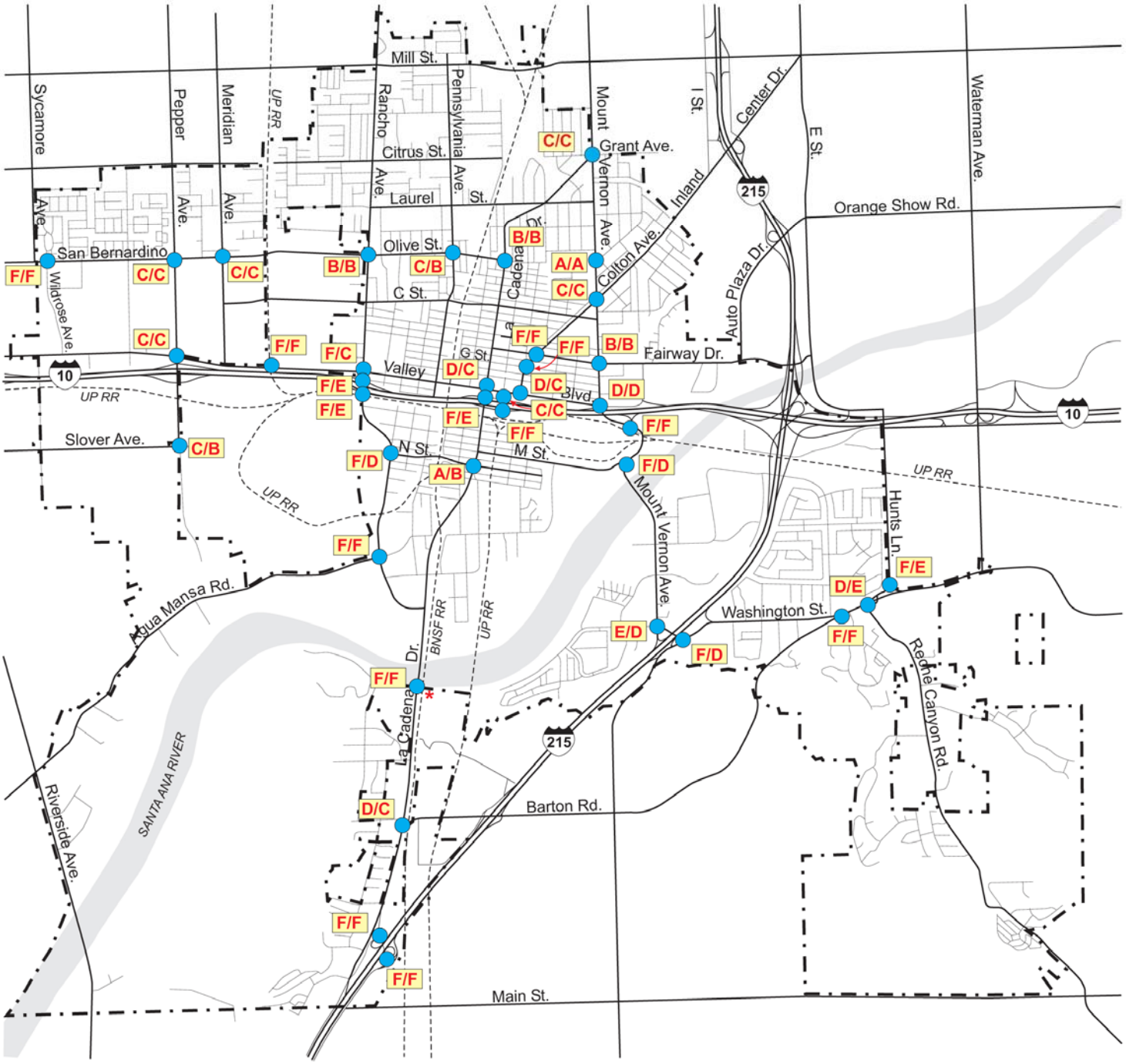


Exhibit 4.16-7

Proposed Intersection Level of Service

LEGEND

- City Boundary
- Railroad
- Study Intersection
- X/X Level of Service AM/PM

Note:
* Future intersection of La Cadena Dr / Washington St.

N

This Page Intentionally Left Blank

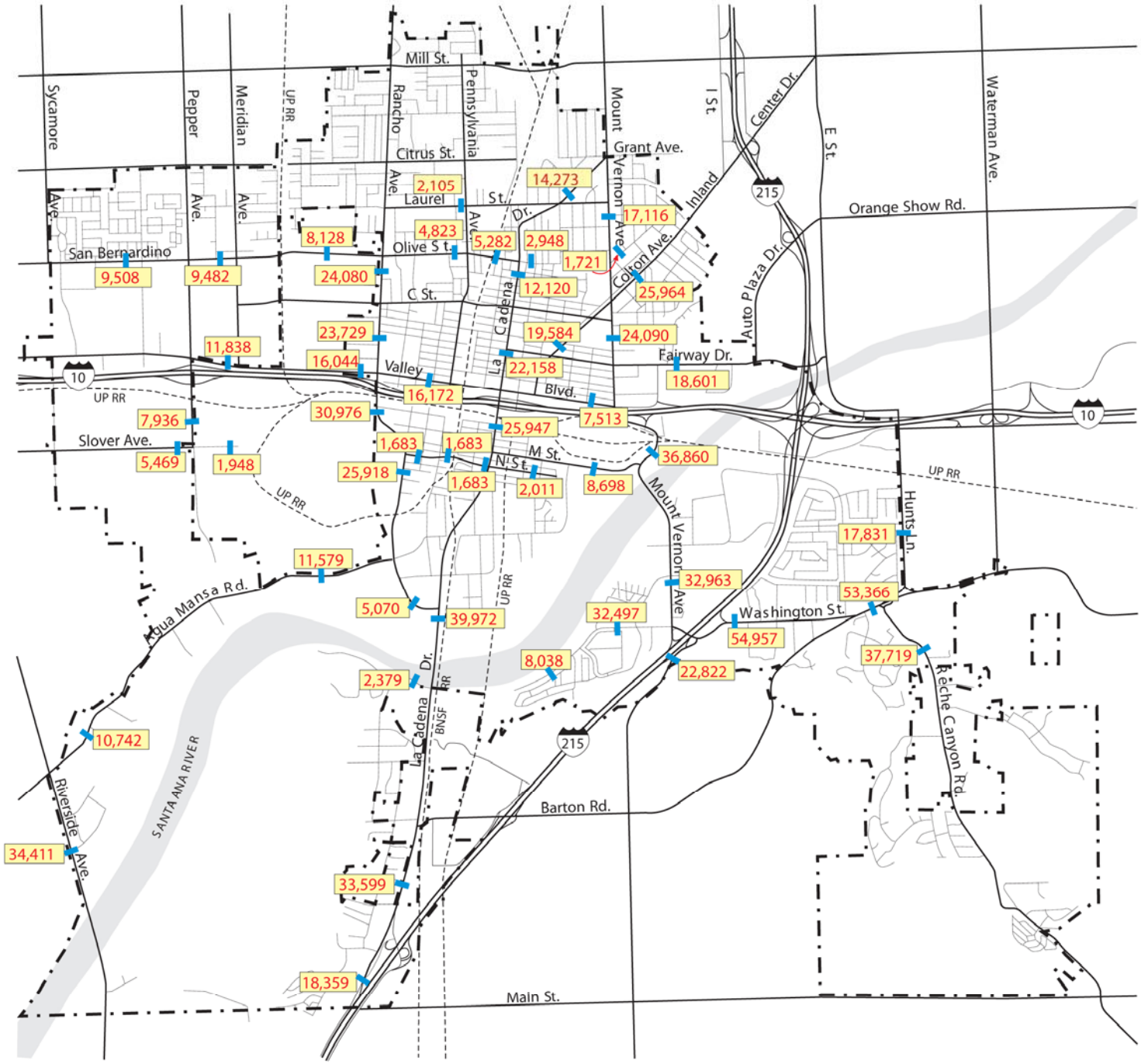


Exhibit 4.16-8

Proposed Roadway Volumes

LEGEND

- City Boundary
- Railroad
- Study Segments
- XXX ADT Volume

N

This Page Intentionally Left Blank

Utilities and Service Systems 4.17

This section examines the potential impacts involving expansions of utilities and service systems resulting from adoption and long-term implementation of the updated General Plan. This section examines the following systems:

- Water Supply
- Wastewater Collection and Treatment
- Storm Drainage
- Solid Waste Disposal and Diversion

Various sources of information were utilized in preparation of this section, including adopted plans and standards and personal communication with utilities and services providers. Key plans include the Colton Water Department Urban Water Management Plans (UWMP), the Colton Public Works Capital Improvement Program, and the California Department of Resources Recycling and Recovery (CalRecycle) waste stream profiles. Comments related to utilities and service systems were submitted by the San Bernardino County Public Works Department, the City of Riverside, and Mr. John Anaya during circulation of the Notice Preparation. These comments are addressed herein.

Existing Conditions

Water

Water supply services are provided to the planning area by four separate water agencies: City of Colton Water Department, West Valley Water District, Terrace Water District, and the Riverside Highland Water Company.

Colton Water Department

The Colton Water Department provides water service to the majority of the planning area (approximately 90 percent of the City of Colton), including domestic consumption, fire protection, and irrigation. Colton's water supply is comprised entirely of groundwater extracted from the San Bernardino Basin Area (Bunker Hill Basin portion), the Rialto-Colton Basin, and the Riverside Basin (Riverside North Basin portion). Colton does not currently import water in order to meet the demands of its service area.[1]

The Colton Water Department's existing potable water system consists of 15 wells, five main booster pumping plants, nine water storage reservoirs, two pressure reducing facilities, and over 120 miles of transmission and distribution pipelines. All water provided by the Water Department is pumped from the Rialto-Colton, Bunker Hill, and North Riverside groundwater basins. The Water Department also has emergency connections with the City of San Bernardino, the Riverside Highland Water Company, West Valley Water District, and the City of Riverside that can be activated, if necessary.[2]

According to the San Bernardino Valley Regional Urban Water Management Plan, Colton Water Department delivered 10,402 acre-feet (AF) in 2009 to residential,

commercial, and other uses. Total project water use in 2015 is approximately 12,840 AF and 11,555 AF, with an assumption of 10 percent savings with the implementation of water conservation measures. Table 4.17-1 (Estimated Water Deliveries) reflects actual and projected water deliveries by category between years 2009 and 2035.

Table 4.17-1
Estimated Water Deliveries

Year	Water Use (AFY)					
	Residential	Commercial Industrial	Landscape	Other	Totals	
					Without Conservation	With Conservation
2009	5,901	4,469	0	32	10,402	N/A
2015	7,133	5,367	66	274	12,840	11,555
2020	7,658	5,761	71	294	13,784	11,027
2025	8,100	5,761	71	294	14,226	11,381
2030	8,567	6,646	80	329	15,422	12,388
2035	9,062	6,818	84	348	16,312	13,050

Source: San Bernardino Valley Municipal Water District. *2010 San Bernardino Valley Regional Urban Water Management Plan*, 2011
Note: AFY = Acre-Feet per Year

Planned Water System Improvement Projects

The Colton Water Department 1998 Water Facilities Master Plan establishes capital improvements projects for well pumping plants, storage facilities, booster pumping plants, and pipelines through 2020. To date, the City has drilled six wells (four with pumping plants), performed remedial work on the DOMECQ No.1 Reservoir, and replaced approximately 32,057 linear feet (LF) of pipeline. This included completion of a 24-inch diameter waterline on North Eighth Street between Mill Street and Citrus Street and on Citrus Street between North Eight Street and Pennsylvania Avenue to improve capacity and meet maximum day demand and fire flow to the western portion of the City. Future projects include the drilling of six new wells and pumping plants (including the completion of Well 30 and Well 31 pumping plants) and construction of reservoirs in the Western, Central, and Reche Canyon III pressure zones, with additional remedial work throughout the City. Booster plant replacement and expansion projects are also planned, along with over 80,000 LF of new pipelines to be installed.[3]

Wastewater Treatment and Reclamation

Processing of sewage can be accomplished in numerous ways through mechanical, biological, and chemical treatment methods. Primary, secondary, and tertiary treatment standards reflect the degree by which the sewage has been treated. Primary treatment includes the removal of relatively large objects such as trash, rags, cans, and gravel. Secondary treatment involves the removal of biological solids such as fat, grease, human waste, soaps, and other organic materials. Tertiary treatment further clarifies wastewater utilizing chemical washes, biological decomposition, and disinfection. Tertiary treatment involves the removal of

nitrates, phosphorous, pathogens, and other microorganisms. Tertiary treated water can be used as reclaimed water for irrigation and other uses that can rely on non-potable water.

Wastewater discharges from the planning area are treated by two wastewater treatment plants. The City owns and operates the Colton Wastewater Reclamation Facility (CWRF), a secondary wastewater treatment plant located at 1201 South Rancho Avenue. The CWRF serves a population of approximately 65,687 from Colton, Grand Terrace, and unincorporated San Bernardino County. The facility treats an average daily flow of 5.6 million gallons per day (MGD). The CWRF is designed to treat a maximum of 10.4 MGD. Wastewater treatment requirements for the CWRF are established by the Santa Ana Regional Water Quality Control Board (RWQCB) pursuant to Order NO. R8-2005-0075 (NPDES No. CA 0105236).

Secondary treated wastewater from the CWRF is directed to the jointly owned Colton/San Bernardino rapid infiltration-extraction (RIX) facility for tertiary treatment and disinfection prior to being discharged into the Santa Ana River. The RIX facility is designed to treat 40 MGD of influent. Wastewater treatment requirements for the RIX facility are established by RWQCB Order No. R8-2006-0052 (NPDES No. CA8000304). Under specific wet weather conditions, the CWRF may bypass the RIX facility and discharge directly into the Santa Ana River, but only if the effluent discharge is diluted 20:1 when entering the river at the point of discharge. Currently, there is no infrastructure within the planning area to reuse tertiary water for irrigation or other recycled uses.

In addition to management and operation of the CWRF, the Colton Wastewater Department manages and maintains over 100 miles of sewer collection and distribution pipelines.

Planned Wastewater Treatment and Distribution Improvements

The City of Colton 2009 Sewer System Management Plan describes measures to provide effective management, operation, and maintenance of sanitary sewer systems. They will also detail spill response plans to establish standard procedures for proper and effective spill response and reporting.[4] The Management Plan references the City's most recent Wastewater System Master Plan that was prepared in 1997. This plan evaluates the capability of the City's wastewater collection system and pumping system to provide service through the year 2015. One of the findings contained in the Master Plan concluded that a significant portion of the City's sewer collection system infrastructure was constructed around 1910 and that an estimated $1.7 million per year over the next ninety years would be needed to assure system reliability. The City has increased line maintenance, CCTV activities, lift station maintenance, and other predictive and preventative maintenance steps to improve system reliability until funding is available for additional capital improvements.[5] Other recommended projects include collection pipelines rehabilitation and pumping station improvements. To date, the City has completed pump station and monitoring improvements projects as part of the Wastewater System Master Plan. The City is in the process of annexing the

Southwest 44 facilities; it, however, does not have any plans for other wastewater system improvements in the near future.[6] [7]

Storm Drainage

Drainage and flood control within the planning area are addressed by a system of County- and City-maintained facilities. The Colton Engineering Department is responsible for the maintenance and operation of most of the storm drains within its jurisdictional boundaries. The County is responsible for regional facilities designed to control urban stormwater runoff and natural drainage from Lytle Creek, Cajon Creek, Warm Creek, and the Santa Ana River. The County provides capital improvement funding for these facilities. Additional funding for storm drainage facilities and flood control improvement projects include host city fees from the Colton Landfill, development impact fees, and other federal and state grants.[8]

San Bernardino County Flood Control District

The San Bernardino County Flood Control District (SBCFCD) provides regional drainage and flood control infrastructure and maintenance to the planning area. Colton is located in the Southwest Portion Area within Flood Control District (FCD) Zone 2. FCD Zone 2 is approximately 318 square miles in area and includes portions of the cities of Colton, Fontana, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, and San Bernardino. The SBCFCD has developed master drainage plans (MDPs) known as Comprehensive Storm Drain Plans (CSDPs). The planning area is located within CSDP Project No. 3, CSPD Project No. 7, and the Reche Canyon MPD. CSDP No. 3 encompasses the majority of the planning area. The County further divides the project area into sub-areas that represent localized drainage conditions. The City is located within Project sub-area Nos. 3-5 through 3-11 and 3-14 to 3-18. CSDP No. 7 defines the drainage area of Lytle Creek, Cajon Creek, and the Santa Ana River. CSDP No. 7 encompasses portions of the planning area surrounding the Santa Ana River. The Reche Master Plan of Drainage encompasses the southeast portion of the planning area in the Box Springs Mountains area.[9] [10] [11]

The County Flood Control District maintains a variety of interim and fully improved channels, storm drains, levees, basins, and check dams within the planning area. Levees are discussed in Section 4.9 (Hydrology and Water Quality). The County operates the Lytle Cajon Channel, East Branch Lytle Creek Channel, and the Reche Canyon Channel. The County maintains four checkdams as part of the Warm Creek Basins system in the northeast portion of the planning area. Drainage in the planning area is also controlled through the County maintained Colton Storm Drain, Rancho Storm Drain, and High Grove Storm Drain.[12]

Planned Drainage Improvement Projects

The most important drainage improvement within the City is the Project 3-5 Area Drainage Plan implementation project. First established in the 1973 CSDP No. 3, implementation of the plan began in 1991 with establishment of drainage fees for all projects within the Project 3-5 plan area. Project 3-5 encompasses 2,045 areas within Colton, Rialto, and San Bernardino and unincorporated portions of the

County. Phase I of Project 3-5 within Colton has been installed, extending south along Meridian Avenue from Randall Basin (at the intersection of Meridian Street and Randall Avenue) to San Bernardino Avenue. Phase II is partially complete, extending south along Meridian Avenue to Valley Boulevard and then heading east towards Cypress Drive. Overall, approximately 6,000 LF of storm drain has been installed. Currently, this facility (a 108-inch reinforced concrete pipe) is dry and does not convey stormwater. The next portion of Phase II is to extend the storm drain south under I-10 and the Union Pacific Railroad right-of-way. Upon completion of Phase II, the storm drain will be able to handle 75 percent of the Project 3-5 watershed. Funding is currently not available to complete this portion of Project 3-5. The City's latest Capital Improvement Program (CIP) indicates that approximately 65 percent of the necessary funding is to be determined.[13] [14]

The City's Public Works Department's latest CIP identifies recently completed and planned infrastructure improvement projects, including storm drain projects. On January 29, 2009, the City recompleted improvements to Randall Basin by excavating approximately four feet of sediment to increase the area of the basin bottom by 1.07 acres, relocating the existing southern basin embankment, constructing a concrete outlet, constructing a spillway, installing a 48-inch reinforced concrete pipe (RCP) inlet structure, and installing a 66-inch RCP outlet structure. Although Randall Basin is located outside of the City, it is an integral part of Project 3-5 and helps protect residents in the northwest portion of the City from flooding. The Public Works Department completed repair of a 60-inch corrugated metal pipe (CMP) located on South La Cadena Drive near I-215 by lining the inside with concrete. The City has also completed improvements to Sperry Street at Valley Boulevard that will include installation of catch basins to reduce flooding in the area. According to the CIP, no other drainage improvement projects are planned through 2013.[15]

Solid Waste

Solid waste collection and disposal within the City are provided by Colton Disposal (a division of Republic Services). Residential, commercial, and recycling services are provided. Curbside residential services include pickup of non-recyclable, recyclable, and yard wastes. Commercial customers may be provided with a three cubic yard (CY) container or more to handle operational wastes. Colton Disposal also offers 15 CY and 30 CY containers for larger disposal needs, such as those associated with construction projects. Compactors and balers are also available for businesses using large quantities of cardboard, such as supermarkets and large retailers. Commercial solid waste is sorted by Colton Disposal at its processing facility where recyclables are removed from the waste stream prior to being landfilled.[16]

According the CalRecycle Diversion Programs System, the City reported a variety of diversion programs in its latest annual report (2010). Programs include ongoing and alternative programs selected by the City in its Source Reduction and Recycling Element (SRRE) or programs that were ongoing prior to adoption of the SRRE. The Diversion Programs System also identifies programs that the City has opted out of

and indicates the reason. Opted-out or ongoing programs include source reduction, recycling, composting, special wastes management, public education, policy incentives, and household hazardous wastes management. Additional information regarding these programs can be found on the CalRecycle Diversion Programs System website.[17]

Solid Waste Disposal and Diversion

The City of Colton disposed of 45,080 tons of solid waste in 2010. With a reported population of 52,103 and an employee base of 13,875, disposal rates equate to 4.7 pounds per resident per day and 17.8 pounds per employee per day, as shown in Table 4.17-2 (Solid Waste Disposal/Diversion Rates).

Diversion rates, the amount of solid waste diverted from landfills, for Colton between 1995 and 2006 varied between 30 percent and 60 percent.[18] [19] Beginning with reporting year 2007 jurisdiction annual reports, diversion rates are no longer determined. With the passage of SB 1016, the Per Capita Disposal Measurement System, only per capita disposal rates are measured. For 2007 and subsequent years, CalRecycle compares reported disposal tons to population to calculate per capita disposal expressed in pounds/person/day.

Table 4.17-2
Solid Waste Disposal/Diversion Rates

Year	Reporting Disposal Amount (Tons)	Disposal Rates (pounds/persons/per day)			
		Population		Employment	
		Target	Annual	Target	Annual
2007	54,485	7.7	5.8	22.1	16.3
2008	48,739		5.2		15.4
2009	36,947		3.9		13.5
2010	45,080		4.7		17.8

Source: CalRecycle. www.calrecycle.ca.gov/LGCentral/Reports/DiversionProgram/JurisdictionDiversionDetail.aspx [2012]

Servicing Landfills

Solid waste collected in the planning area is disposed of at several landfills throughout California. The California Department of Resources Recycling and Recovery (CalRecycle) maintains records of maximum capacity and usage of landfills, as shown in Table 4.17-3 (Landfills Serving Colton). Some wastes are also transported to the Commerce and Southeast Los Angeles refuse-to-energy facilities. The Colton Sanitary Landfill (located within the City) is the primary landfill serving the City. The landfill has a remaining capacity of 17 percent and its cease operation date is estimated for January 2017. Roughly 71 percent capacity remains within the landfills that serve the City.[20]

Table 4.17-3
Landfills Serving Colton

Landfill Facility Name	Capacity (Cubic Yards)			Max Daily Disposal (Tons per Day)	% of Colton Disposal
	Maximum Permitted	Remaining	%		
Azusa Land Reclamation Co. Landfill	Inactive			--	--
Badlands SLF	33,560,993	14,730,025	44	4,000	< 1
Bakersfield Metropolitan	53,000,000	34,994,127	66	4,500	< 1
California Street Landfill (Redlands)	10,000,000	6,800,000	68	6,800	5
Colton SLF	15,497,000	2,700,000	17	3,100	64
El Sobrante Landfill	184,930,000	145,530,000	79	16,054	4
Kettleman Hills	10,700,000	6,000,000	56	8,000	< 1
Lamb Canyon SFL	34,292,000	18,955,000	55	3,000	< 1
Mid-Valley SFL	101,300,000	67,520,000	67	7,500	8
Olinda Alpha SFL	74,900,000	38,578,383	52	8,000	8
Puente Hills Landfill	74,000,000	32,200,000	44	13,200	< 1
San Timoteo SFL	20,400,000	11,360,000	56	1,000	11
Simi Valley Landfill and Recycling Center	119,600,000	119,600,000	100	9,250	< 1
Victorville SLF	83,200,000	81,510,000	98	3,000	--
TOTAL	815,379,993	580,477,535	71	67,300	--

Source: CalRecycle. www.CalRecycle.ca.gov/SWFacilities/Directory/ [2012]
-- Data Not Available or Sanitary Landfill (SLF) Inactive

Planning and Regulatory Setting

A variety of national, state, and regional regulations govern planning requirements for water and wastewater facilities, as well as solid waste disposal. Key provisions are summarized below.

Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA), originally passed by Congress in 1974, protects public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources, including rivers, lakes, reservoirs, springs, and ground water wells. SDWA authorizes the United States Environmental Protection Agency (U.S. EPA) to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. U.S. EPA, states, and water systems then work together to make sure that these standards are met. There are a number of threats to drinking water. Improperly disposed of chemicals, animal wastes, pesticides, human

wastes, wastes injected deep underground, and naturally occurring substances can all contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk. Originally, SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments recognize source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water.

SB 610 and CEQA Guidelines Section 15155

SB 610 enacted Sections 10910-10915 of the State Water Code to require a local land use authority to consult with the local water purveyor to prepare or obtain a water supply assessment, prior to completing an environmental impact assessment for a specified "water demand" project, defined below. Section 15155 of the CEQA Guidelines was added to directly incorporate these water code provisions into the CEQA process.

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

If a public water system has fewer than 5,000 service connections, then ''project'' means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

Key provisions required to be addressed in a water supply assessment include a description of past and existing water supplies and rights and groundwater extraction information including identification of basins, adjudication rights, and overdrafting status. Should the water assessment determine that insufficient supplies will be available to serve the project the water purveyor must indicate how it will meet the demand of the new project. Should additional supplies be

unavailable to meet project demand then the approving agency must include that determination in its project findings.

SB 221

Similar to SB 610, SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses.

Water Conservation in Landscaping Act

Section 65591 et. al of the Government Code requires all local jurisdictions to adopt a water efficient landscape ordinance. The ordinance is to address water conservation through appropriate use and grouping of plants based on environmental conditions, water budgeting to maximize irrigation efficiency, storm water retention, and automatic irrigation systems. Failure to adopt a water efficiency ordinance requires a local jurisdiction to enforce the provisions of the State's model water efficiency ordinance. In 2009, the Department of Water Resources (DWR) updated the Model Water Efficient Landscape Ordinance pursuant to amendments to the 1991 Act. These amendments and the new model ordinance went into effect on January 1, 2010. The City of Colton has not adopted a water efficient landscape ordinance and therefore, is subject to the provisions of the State's model ordinance.

Urban Water Management Plans

Pursuant to Section 10610 et. al. of the California Water Code (Urban Water Management Planning Act), any water district servicing 3,000 or more customers or provides over 3,000 acre-feet of water per year is required to prepare an Urban Water Management Plan (UWMP). The analysis contained in a UWMP is designed to ensure the appropriate level of reliability in its service to meet the needs of its customers in normal, dry, and multiple-dry years. Normal and dry years refer to categories of projected water supply in times of regular rainfall and in times of drought. UWMPs must be updated every five years on years ending with zero and five. The Act describes the contents of a UWMP as follows:

- Description of service area including current climate and population and project populations estimates in five-year increments over 20 years
- Description of existing and planned water supply over the same 5-year increments including groundwater and surface water resources
- Water supply reliability and methods to compensate for shortages during dry years
- Opportunities for long-term and short-term water exchange or transfer
- Description of water use and demand estimates based on land use for past, current, and projected quantities

- Description of current and planned projects and programs designed to meet the service needs of the customer base
- Description of opportunities for use of desalinated water
- Preparation of a staged water shortage contingency plan for up to a 50 percent shortage over three years
- Information on use and opportunities for use of recycled water

The 2010 San Bernardino Valley Regional UWMP serves eight retail water purveyors, including the City of Colton Water Department, San Bernardino Municipal Water Department, and West Valley Water District. These three retail water purveyors service the majority of the planning area under the San Bernardino Valley Regional UWMP. The Riverside Highland Water Company and Terrace Water Company also service a portion of the planning area, but they are not a participant in the San Bernardino Valley Regional UWMP. The UWMP provides a summary of anticipated supplies and demands for the years 2010 to 2035.

Wastewater Discharge Requirements

Wastewater Discharge Requirements (WDRs) are issued to facilities discharging wastewater directly into receiving surface waters. Such facilities are required to be permitted whether individually or under a general permit. In the City of Colton, the Colton Wastewater Reclamation Facility and the Colton Wastewater Treatment Facility are both subject to individual WDRs. WDRs also establish wastewater treatment requirements. Treatment requirement orders regulate operations of the facility by limiting constituents in wastewater effluent, setting prohibitions on certain operations and activities, establishing specifications for facility design and maintenance, and provisions for reporting and monitoring.

Connections to Local Wastewater and Storm Drain Systems

Connections to the City's water and sewer system are generally regulated by Title 13 (Utilities) of the Municipal Code. Chapter 13.04 (Water Rates) establishes water service connection and user fees for the Colton Water Department. Chapter 13.08 (Wastewater System) establishes limits and prohibitions on discharges to the City's sewer system and establishes a permitting process for connection to the sewer system. Chapter 13.16 (Sewer Service Charges) establishes user fees to support the operation, maintenance, expansion, and upgrade of the wastewater collection and treatment system.

Title 14 (Storm Drains and Floodplain Management) regulates permitted and illicit connections to the City's storm drain system as part of the implementation of the City's National Pollution Discharge Elimination System (NPDES) permit. Additional information regarding water quality standards can be found in the Hydrology and Water Quality section above.

AB 939

The California Integrated Waste Management Act of 1989 regulates solid waste management and implements priorities in source reduction, recycling and composting, and environmentally safe transformation and land disposal. The

primary provisions of AB 939 required all cities and counties to divert a minimum of 50 percent of their solid waste from landfills and to adopt Integrated Waste Management Plans (IWMP). The Act also established permitting and enforcement provisions for the California Integrated Waste Management Board (CIWMB). As described above, since 1995 solid waste in Colton has been diverted at a rate of between 30 and 60 percent. Primary diversion measures include providing residential and commercial recycling services.

San Bernardino Countywide Integrated Waste Management Plan

Pursuant to the California Integrated Waste Management Act of 1989 (AB939), the County prepares the Countywide Integrated Waste Management Plan (CIWMP) in collaboration with its cities to ensure a coordinated effort at solid waste reduction and landfilling. The Plan addresses source reduction and recycling, household hazardous wastes, and non-disposal facilities such as transfer stations, material recovery facilities, and composting facilities.

The goals and policies that guide facilities siting and other features of the Countywide Siting Element are as follows:

- Comply with regulations and standards
- Minimize environmental impacts and nuisances
- Eliminate known disposal of Household Hazardous Wastes at landfills
- Ensure long term disposal capacity
- Maximize cost-effectiveness and convenience
- Promote community awareness
- Consider regional approaches that are mutually convenient and beneficial
- Prevent solid waste facilities within incompatible land use areas
- Protect existing facilities from encroachment of incompatible land uses
- Maintain an integrated waste management system based on the AB 939 waste management hierarchy

Since 1996, the County has worked to consolidate landfills as part of its strategic plan. The County has consolidated active landfills from 17 to six with an ultimate goal of operating only five facilities. Therefore, no future landfills are currently planned, although Landers, Colton, and San Timoteo landfills have been identified as candidates for potential expansion.

The CIWMP is designed to reach the state's 50 percent source reduction mandate by setting goals and policies profiling the County's current solid waste stream and strategies for continued waste reduction. Cities within the County are required to implement their own integrated solid waste management planning, implementation, monitoring, public information, budgeting and enforcement in coordination with the County.

Colton Source Reduction and Recycling Element

The SRRE is the City's primary planning mechanism for solid waste diversion. This document was prepared in accordance with AB 939 to identify strategies for

meeting the mandated 50 percent diversion rate. The source reduction component of the plan indentifies methods such as use of reusable items as opposed to disposable items to remove products from the waste stream. The four categories of source reduction activities are education/technical assistance, rate structure modifications, economic incentives, and regulatory measures. The recycling component of the plan identifies existing and proposed programs to increase recycling efforts. Additional items addressed in the plan include composting and special wastes.

Development Impact Fees

The City of Colton collects development impact fees pursuant to California Government Code for the expansion of utilities and service systems facilities through the following Municipal Code chapters:

Chapter 12.32	Public Improvement Fees
Chapter 12.34	Storm Drain Facilities Fees for Drainage Benefit Areas No. 1
Chapter 12.36	Storm Drain Facilities Fees for Drainage Benefit Areas No. 2

The Public Improvement Fees chapter requires minimum local improvements to include concrete curb, gutter, sidewalk, street lighting, driveway approaches, drainage structures, sewer and water mains, landscaping and street trees. The chapter also establishes a methodology for determining appropriate impact fees to fund such improvements.

Thresholds of Significance

A significant impact would occur if the General Plan Update would:

A. Exceed wastewater treatment requirements adopted by the Santa Ana Regional Water Quality Control Board.
B. Require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities that the construction of could cause significant environmental effects.
C. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities that the construction of could cause significant environmental effects.
D. Require new or expanded water supply entitlements due to lack of existing entitlements or resources.
E. Result in the determination by the wastewater treatment provider that it will have inadequate capacity to serve the planning area based on projected demand and the provider's existing commitments.
F. Be served by landfills with sufficient capacity to accommodate the project's disposal needs.
G. Fail to comply with federal, state, or local statues and regulations related to solid waste.

Environmental Impacts

IMPACT 4.17.A

Impacts related to the exceedance of wastewater treatment requirements of the Colton Wastewater Reclamation Facility will be less than significant based on existing City plans and regulatory requirements.

The General Plan Update will not directly result in the exceedance of RWQCB treatment standards because no development or land alteration activities are specifically authorized by the General Plan Update. Future development within the planning area guided by the policies of the General Plan Update could affect RWQCB treatment standards by increasing wastewater production. The secondary and tertiary treatment plants servicing the planning area currently process approximately 54 percent and 14 percent of the maximum permitted million gallons per day limit established by the RWQCB, respectively. The wastewater system master plan is currently designed to accommodate a service population of 95,976 that includes the planning area and the City of Grand Terrace. The most recent population projections compiled by SCAG estimate a total population of 84,700 for the service population (71,700 in Colton and 13,000 in Grand Terrace) in the year 2035. The proposed General Plan Update build-out projections will support a population of 72,536, consistent with the SCAG projections; therefore, the wastewater conveyance and treatment system is anticipated to be sufficient to provide for the projected population growth of the planning area.

The City's Municipal Code requires incremental expansion of wastewater treatment facilities based on new development through the collection of Public Improvement Fees. This ensures that adequate funding is available to meet future facilities needs, should expansion be necessary. Wastewater treatment requirements are administered by the RWQCB. The CWRF will be required to comply with these discharge requirements to ensure that effluent discharges are within acceptable water quality parameters. Based on the anticipated demand for wastewater services and existing regulations, impacts associated with wastewater treatment requirements will be less than significant.

IMPACT 4.17.B

Impacts related to the potential future construction of water and wastewater infrastructure will be less than significant with implementation of existing City standards.

The General Plan Update will not directly require the construction of any new water or wastewater treatment facilities because no development or land alteration activities are authorized. Future development within the planning area will require expanded water and wastewater facilities to meet the demand from anticipated population growth, including mainline or backbone elements and local connections. At this time, no immediate changes to the system are needed to meet the demands of immediate growth, as the master plans anticipate growth consistent with prior land use policy. To accommodate the level of long-term development allowed by the General Plan, the City plans to update water and wastewater master plans as

needed. This will be accomplished also for the purpose of establishing service fees and assessment charges for new development projects (nexus study).

Expansion of water and wastewater facilities will be contingent upon the rate of growth and deterioration of aging facilities. Thus, identifying the specific location of and timing for new facilities is speculative at this time. Construction of new or expanded water and wastewater treatment facilities could result in environmental impacts. Such impacts would be identified, along with measures to mitigate any significant impacts, as part of the CEQA compliance process for future project-specific planning actions.

IMPACT 4.17.C

Impacts related to the potential future expansion of storm drain facilities will be less than significant with implementation of existing City standards.

The General Plan Update will not directly require the construction of any new storm drain facilities because no development or land alteration activities are authorized. Future development within the planning area may require expanded storm drain facilities in currently undeveloped areas to properly intercept, retain, and convey increased runoff to prevent localized flooding or other drainage problems. The master drainage plans prepared by the County account for future development on vacant lands. However, as part of the development review process for major development projects, the City requires assessment of the adequacy of regional and localized drainage facilities, and requires developers to fund/provide any new facilities required (beyond those identified in the master drainage plans and City's CIP) to address project-specific impacts. Construction of any new or expanded storm drainage facilities could result in environmental impacts. Such impacts would be identified, along with measures to mitigate any significant impacts, as part of the project review and CEQA compliance process for future project-specific planning actions.

IMPACT 4.17.D

Implementation of the proposed General Plan Update will not require new or expanded water supply entitlements to be secured.

The General Plan Update will not directly result in the need for any new or expanded water supplies because it would not authorize any construction or land alteration activities. Over the long-term, population and employment growth will likely require expanded supplies in order to meet the increase in demand. Existing (2009) demand is estimated at approximately 10,402 AFY. Based on the current UWMP, demand is anticipated to increase to 13,010 AFY in 2015, decline to 12,608 AFY by 2020 (assuming increased conservation efforts), and then rise again slightly to 13,001 AFY by 2025, 13,799 in 2030, and 14,853 AFY in 2035. Using a per capita consumption rate of 221 gallons per day (the five-year average per the UWMP) and the 20 percent conservation factor included in the UWMP, the projected 2035 City population of 67,182 (excluding the unincorporated Sphere of Influence, which is not covered by the City of Colton data in the UWMP) would require

approximately 13,305 AFY in the year 2035. This is below the year 2035 projection in the UWMP.

The City Water Department anticipates pumping 14,853 AF in 2035, or more than enough needed to serve the projected population. Based on these estimates, there will be sufficient water to meet the long-term demand of the City.

The proposed General Plan Update does not contain policies or programs that would conflict with existing policies and standards designed to conserve water, such as the Water Conservation in Landscaping Act. The proposed General Plan Update includes policies supporting green building and sustainable building practices that will support water conservation efforts (see Goal LU-14). Based on existing water supplies and existing and proposed water conservation efforts, impacts related to the need for new or expanded water supplies will be less than significant.

Scoping Comment, Mr. John Anaya

Mr. Anaya expressed concern regarding the taste of Colton Water Department tap water during the project Scoping Meeting and requested information regarding regulations protecting water supply. Water supply quality is regulated by the Safe Drinking Water Act of 1974. The City Water Department is required to report water quality conditions annually and to comply with state and federal water quality standards.

IMPACT 4.17.E

Impacts related to insufficient wastewater treatment capacity will be less than significant with implementation of existing standards and regulations.

The proposed General Plan Update will not require expansion of existing wastewater treatment facilities because no development or other land altering activity is proposed. Future development accommodated under the General Plan Update could require expanded wastewater infrastructure in order to meet future needs when considered in light of existing demand. Localized environmental impacts associated with the future expansion of facilities are subject to project-level environmental review pursuant to CEQA. Impacts associated with a lack of wastewater treatment capacity include accelerated deterioration of existing facilities, the potential for health hazards due to wastewater backup, and discharges of untreated wastewater into the environment.

The City has prepared a Wastewater System Master Plan that identifies long-term programs designed to maintain and expand wastewater treatment facilities to accommodate existing and future growth. Incremental expansion of facilities in accordance with the Wastewater System Master Plan is achieved through collection of Public Improvement Fees. Facilities may be expanded by development project proponents as well to ensure that adequate facilities are available to serve new development needs. The General Plan does not include policies that will interfere with the implementation of the current or future CIP or the collection of Public

Improvement Fees. Pursuant to existing standards and regulations, impacts associated with a lack of wastewater treatment capacity will be less than significant.

Scoping Comment, San Bernardino Public Works

San Bernardino County Public Works requested a copy of the Draft Environmental Impact Report (DEIR) to review potential impacts to County Flood Control Facilities. The DEIR will be circulated to County Public Works during the required 45-day review period.

IMPACT 4.17.F 4.17.G

Impacts associated with solid waste regulations and adequacy of disposal sites will be less than significant pursuant to existing policies and regulations.

Based on current waste generation rates of 5.2 lbs of trash per resident per day and 15.4 pounds per employee per day, approximately 518 tons of solid waste would be generated annually throughout the planning area, based on a buildout population of 72,536 residents and an employee base of 42,731 local workers. The majority of the waste will likely be disposed of at the Colton Landfill in the near term, given its proximity and the reduced costs associated with this proximity. Long-term solid waste disposal destinations cannot be anticipated at this time. However, over 55 percent of exiting servicing landfill capacity remains and would likely be sufficient to support the disposal needs of the planning area over the long term.

The City will continue to implement a variety of solid waste reduction, recycling, and re-use measures to meet its obligation under AB 939. These efforts will be coordinated with waste management programs administered by the County of San Bernardino through its CWIMP; therefore, future landfill diversion rates may improve. The policies and programs of the General Plan Update will not interfere with implementation of existing solid waste disposal regulations. Under any circumstance, solid wastes must be disposed of in accordance with federal and state laws. Impacts related to solid waste disposal methods and regulations will be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

References

[1] San Bernardino Valley Municipal Water District. *2010 San Bernardino Valley Regional Urban Water Management Plan*, 2011
[2] Colton Water District. Water Home. www.ci.colton.ca.us/wwd.html [March 11, 2010]
[3] City of Colton. *Water Facilities Master Plan*. 1998
[4] City of Colton. Wastewater Division. *Sewer System Management Plan (SSMP).* June 2009
[5] City of Colton. Wastewater Division. *Sewer System Management Plan (SSMP).* June 2009
[6] City of Colton. *Wastewater System Master Plan, Final Report.* October 1997
[7] Itnyre, Mike. City of Colton. Wastewater Division. Personal Communication.
[8] City of Colton. Public Works Department. *Capital Improvement Program*. 2009/2013
[9] San Bernardino County. Flood Control District. *Comprehensive Storm Drain Plan Project No. 3. Volume II*. May 1973
[10] San Bernardino County. Flood Control District. *Comprehensive Storm Drain Plan Project No. 7. Volume I.* December 1982
[11] San Bernardino County. Flood Control District*. Reche Canyon Master Plan of Drainage.* March 2002
[12] San Bernardino County. Flood Control District. Flood Control System Number Index and General File Codes. January 2010
[13] San Bernardino County. Flood Control District. *Comprehensive Storm Drain Plan # 3, Project 3-5 Area Drainage Plan.* March 1991
[14] City of Colton. Public Works Department. 3-5 Phase II Work Plan. www.ci.colton.ca.us/Documents/workplans/pw/3-5_Final.pdf [March 17, 2010]
[15] City of Colton. Public Works Department. *Capital Improvements Program*, Fiscal Year 2009/2013.
[16] Colton Disposal. www.coltondisposal.net [May 8, 2012]
[17] California Department of Resources Recycling and Recovery. Jurisdiction Diversion Program List: Colton. www.calrecycle.ca.gov/LGCentral/Reports/DiversionProgram/jurhist.aspx [May 8, 2012]
[18] California Department of Resources Recycling and Recovery. Jurisdiction Diversion/Disposal Rate Post-2006 Summary: Colton. www.calrecycle.ca.gov/LGCentral/Tools/MARS/DRMCMain.asp [May 8, 2012]
[19] California Department of Resource Recycling and Recovery. Jurisdiction Profile for City of Colton. www.calrecycle.ca.gov/profiles/Juris/ [May 8, 2012]
[20] California Department of Resource Recycling and Recovery. California Waste Stream Profiles: Facilities www.calrecycle.ca.gov/profiles/facility/ [May 8, 2012]

Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

5	Alternatives

Alternatives 5.0

5.1 Purpose

Pursuant to Section 15126.6 of the CEQA Guidelines, this chapter discusses a range of reasonable alternatives to the proposed General Plan Update that would attain some or all of the main objectives of the General Plan Update while avoiding or substantially lessening one or more of the significant environmental effects that would occur with long-range implementation of the updated Land Use, Mobility, and Housing Elements. An examination of such alternatives provides for informed decision-making and public participation in the examination of the project's environmental merits and disadvantages.

5.2 Rationale for Alternative Selection

An EIR is not required to consider alternatives that are infeasible, unreasonable, or overly speculative. There is no standard set forth in the CEQA Guidelines for the number of alternatives that must be addressed. Instead, the CEQA Guidelines require that an EIR describe a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives is determined on a case-by-case basis depending on the unique characteristics of the project location, the project objectives, the environmental setting, and the potentially significant impacts that are associated with the Project. Accordingly, the specific criteria established by the CEQA Guidelines, and used in this Draft EIR, for the selection of a reasonable range of alternatives for the Project are whether it:

1. Accomplishes most or all of the General Plan Update's main objectives as listed in Section 3.0 (Project Description) that are to:

    a. Replace the current Land Use, Circulation, and Housing Elements with new elements that reflect the goals and aspirations of the community through 2030.
    b. Ensure the General Plan Update achieves compliance with all applicable state laws and regulations.
    c. Ensure development, use, and maintenance of public and private lands will always:
        i. respect Colton's heritage and historic resources,
        ii. protect Colton's traditional suburban development pattern and residential neighborhoods while accommodating new, more urban approaches to development,
        iii. provide opportunities for diverse businesses that generate revenue and employment, and
        iv. promote high-quality design.



d. Accommodate circulation and mobility options beyond the automobile. In all infrastructure and development planning decisions, the City looks to:
    i. provide for the integration of automobiles, transit, bicycles, and pedestrians within our established street network using the Complete Street system,
    ii. provide greater connectivity and reduce congestion on our street network, and
    iii. promote efficient and high quality transit use, including bus rapid transit routes and Metrolink stations in Colton, and
e. Accommodate freight train operations that serve businesses in the City while striving to protect residential neighborhoods from the impacts of rail operations.
f. Ensure that the City can meet its goals for the preservation and production of housing, provide capacity to meet the Regional Housing Needs Assessment allocation for the 2008-2014 planning period, and provide equal access to housing for all.

2. Avoids or substantially reduces one or more of the significant environmental effects associated with the General Plan Update.

3. Proposes alternative development patterns where such alternatives are reasonable based upon current development trends within the Planning Area.

4. Proposes alternative development patterns which are feasible within the market constraints in which the community exists.

5.3 Alternatives Considered

Alternative 1: "No Project" Alternative

According to Section 15126.6(e)(2) of the CEQA Guidelines, the evaluation of alternatives in an EIR shall include a "no project" scenario, defined as "...what is reasonably expected to occur in the foreseeable future if the General Plan Update were not approved, based on current plans and consistent with available infrastructure and community services." For the purpose of this EIR, this alternative assumes that the proposed General Plan Update would not be adopted and implemented. Instead, the planning area would continue to be developed according to the existing City policies. This alternative is considered to be feasible, since it is currently in effect as the City's legislatively adopted General Plan. However, if the City failed to adopt an updated Housing Element for the 2008-2014 planning period, the element could be found to be noncompliant with state law.

If the adopted policies were to remain in effect, no changes would be made in the policies regulating land use within the Planning Area. Tables 5.4-1 (Summary of Remaining Development Capacity for the Incorporated City) and 5.4-2 (Summary of Remaining Development Capacity for SOI) show the ultimate build-out

projections for the existing and proposed policies as outlined in the General Plan Update for the City of Colton and the Colton Sphere of Influence (SOI), respectively. Together, the City and the SOI comprise the planning area. The build-out projection for the Existing General Plan would remain the same. Impact comparison discussions for each environmental topic are presented in Section 5.5 below.

Table 5.3-1
Summary of Remaining Development Capacity for the Incorporated City

	Existing Conditions (2010)	Existing General Plan Potential Capacity	Existing General Plan Remaining Capacity
Dwelling Units	16,349	22,207	5,858
Population	51,797	70,360	18,563
Commercial and Industrial Space	11,107,700	24,709,953	13,602,253
Employees	17,922	91,938	74,016

Source: City of Colton and General Plan Update GIS data, California Department of Finance, Southern California Association of Governments.

Table 5.3-2
Summary of Remaining Development Capacity for SOI

	Existing Conditions (2010)	Existing General Plan Potential Capacity	Existing General Plan Remaining Capacity
Dwelling Units	1,355	1,424	69
Population	4,293	4,511	218
Commercial and Industrial Space	2,559,100	2,582,000	22,900
Employees	4,763	4,852	89

Source: City of Colton and General Plan Update GIS data, California Department of Finance, Southern California Association of Governments.

Alternative 2: Limit Residential Intensity in the Downtown Area to Reduce Traffic Impacts

As indicated in Section 4.16, potentially unavoidable significant traffic impacts could occur at several intersections within the planning area. In particular, the intersections of Colton Avenue/10th Street/G Street and Mount Vernon Avenue/Interstate-10 Ramps would be significantly impacted, with a projected LOS of F for both AM and PM peak hours without mitigation and LOS E for both AM and PM peak hours with mitigation.

One reasonable alternative to reduce traffic impacts at peak hours would be to reduce residential intensity nearby these intersections, which includes the downtown area of Colton. The proposed General Plan land use plan designates several properties in the downtown area with the Residential Overlay, which allows properties to develop up to 30 dwelling units per acre. As an alternative, the Residential Overlay would be revised to allow properties to develop up to 16 dwelling units per acre instead. This alternative would reduce the number of AM and PM peak hour trips generated by approximately 170 and 225, respectively.

Alternative 3: Increase Residential Intensity to Increase Population Capacity

This alternative would change land use designations in the former Pellissier Ranch Specific Plan area from Very Low Density Residential to Medium Density Residential for approximately 120 acres. This alternative would increase the total anticipated dwelling units within the current incorporated City boundaries from 21,204 to 22,548, thus increasing the anticipated population from 67,182 to 71,832. For purposes of this alternative and the analysis below, no specific 120-acre area is designated.

Alternative 4: Change Industrial Designated Properties to Residential to Increase Population Capacity

This alternative would change land use designations of Light Industrial designated properties in the South Colton community to Medium Density Residential for approximately 105 acres. This alternative would increase the total anticipated dwelling units within the current incorporated City boundaries from 21,204 to 22,548, thus increasing the anticipated population from 67,182 to 71,832. In addition, this alternative would decrease the total anticipated non-residential square feet from 23,291,600 to 22,376,840 and employment from 29,874 to 29,052. For purposes of this alternative and the analysis below, no specific 105 acres within the South Colton community are designated.

Alternative 5: Limit Residential Growth Capacity

As indicated in Section 4.14 and 4.15, potentially unavoidable significant impacts could occur due to the anticipated population growth and lack of capacity to provide additional parkland at five acres per 1,000 residents as well as the deterioration of existing facilities due to the lack of provision of sufficient parkland. Currently there are 105 acres of existing parkland for the 2,710 acres of existing residential acres. It could be assumed that the same amount of parkland can be provided at the same ratio to residential area, approximately 3.7%. There are approximately 820 acres of residential designated vacant land. Therefore, it can be assumed that approximately 31 acres of parkland can reasonably be provided by the development of this vacant land. At a ratio of five acres per 1,000 residents, the projected

remaining population capacity of the General Plan would have to be reduced by approximately 6,354 for a total of 58,890.

This alternative proposes to reduce the residential growth capacity of the proposed land use plan to 58,890 total people and 17,020 total dwelling units (13,646 people and approximately 3,944 dwelling units less than the proposed General Plan Update) to reduce the impacts on provision of sufficient parkland as well as deterioration of existing parks to less than significant levels.

Alternative 6: Alternative Location

The goals and policies of the Colton General Plan Update are specific to the geographic context of the Colton planning area. The City has no land use or other governmental authority outside of its jurisdictional limits and its Sphere of Influence, as designated by the San Bernardino County Local Agency Formation Commission. Application of the proposed General Plan policies to any other planning area is thus infeasible.

5.4 Alternatives Considered but Rejected

The five Alternatives were screened for consistency with the objectives of the General Plan Update and the ability to avoid one or more significant impacts, or substantially lessen the severity of adverse impacts, associated with the General Plan Update. Four Alternatives were found to meet *most* of the objectives of the Project. With six General Plan Update objectives, any Alternative meeting three or more of the objectives was considered to meet *most* of the objectives. The Alternatives that either did not meet most of the Project's objectives, or were incapable of reducing impacts, were not considered for further evaluation in the EIR. Table 5.4-1 (Objectives Screening) summarizes the screening results. A detailed discussion of the objectives screening is provided herein.

Table 5.4-1
Objectives Screening

No.	Alternative	Meets Objective?					
		a	b	c	d	e	f
1	No Project*	No	No	No	No	Yes	No
2	Limit Downtown Residential	Yes	No	Yes	Yes	Yes	No
3	Increase Residential Intensity	Yes	Yes	Yes	No	Yes	Yes
4	Industrial to Residential	Yes	Yes	Yes	No	Yes	Yes
5	Reduced Residential Capacity	No	No	No	Yes	Yes	No
6	Alternative Location	No	No	No	No	No	No

Source: Hogle-Ireland 2012

* Although Alternative 1 does not meet any of the Project Objectives, it must be analyzed pursuant to CEQA

Because the Alternative Location scenario does not meet any project objectives and as described above, it is infeasible and has been rejected. Alternative 5 would not reflect the goals and aspirations of the community, comply with state law, accommodate more urban approaches to development, nor provide for sufficient housing to meet the 2008-2014 RHNA and would thus not meet most of the objectives.

Also, as part of the process to develop the draft land use plan in the Land Use Element, the City Council and Planning Commission conducted numerous study sessions involving the public during 2008-2012. Land use concepts that were considered but rejected from further consideration were higher residential densities in the particular portions of the Downtown Colton and South Colton districts, as such policy could encourage removal of historic structures, disrupt the character and fabric of established neighborhoods, and require provision of upgraded infrastructure and services that the City may not be able to provide.

5.5 Evaluation of Impacts Among Selected Alternatives

Impact Comparison

Aesthetics

Continuation of the existing General Plan policies (Alternative 1) would not significantly alter the current General Plan policies, most of which have been replicated and strengthened in the proposed General Plan Update.

Alternative 2 would reduce the residential densities within the downtown area and would thus result in the preservation of current conditions. Redevelopment of aging properties might not be encouraged or accomplished.

Alternative 3 would increase residential intensities in the southern portion of the City and would thus result in a change in the character of the area and its visual impact. This area currently includes rugged hillside areas that would have to be graded substantially to support residential development; such grading would substantially alter the visual character.

Alternative 4 would allow new residential land uses to be developed within the South Colton neighborhood, which has a mix of industrial and residential uses. The shift to more residential development would change the visual character of the area.

Agricultural Resources

The planning area currently has three areas, totaling approximately 12.6 acres, which are designated by the California Department of Conservation as Important Farmland. The existing Specific Plan that addresses properties so designated would not be altered by any of the alternatives. Thus, impacts of all the alternatives

would remain the same as those associated with the proposed General Plan Update (less than significant).

Air Quality

Alternative 1 would keep existing land use designations, which would be consistent with the projections associated with the current 2007 AQMP. However, the population capacity of the existing General Plan would not provide for the anticipated growth per SCAG which the 2012 AQMP is based on. This is similar to the impacts of the proposed General Plan Update, but the existing General Plan provides for slightly greater population capacity compared to the proposed General Plan Update. Therefore, Alternative 1 would have slightly reduced impacts compared to the General Plan Update, but still remain significant and unavoidable.

Alternative 2, decreasing residential densities in the downtown area, would likely reduce the build-out population. Due to the decrease in population, it would result in an inconsistency with the existing 2007 and proposed 2012 AQMP, similar to but greater than the proposed General Plan Update.

Alternative 3 would allow for additional residential intensity, which would result in additional population capacity. The additional population capacity would result in consistency with the proposed 2012 AQMP to not interfere with its implementation and thus result in reduced, less than significant impacts compared to the significant impacts associated with the General Plan Update.

Alternative 4 would allow for residential land uses instead of industrial land uses in the South Colton neighborhood, which would increase the population capacity and decrease the non-residential and employment capacities. The additional population capacity would result in a consistency with the proposed 2012 AQMP to not interfere with its implementation and thus result in reduced, less than significant impacts compared to the proposed General Plan Update's significant impacts. In addition, the shift to residential instead of industrial land uses would reduce the likelihood of operational toxic air emissions impacting nearby residential or other sensitive land uses.

Biological Resources

Impacts to biological resources would be slightly increased under the current General Plan because the current General Plan does not include any notable safeguards unique to the City for biological resources. Although the proposed General Plan Update does not include any substantial protections for biological resources beyond existing regulations, the proposed land use plan does designate identified Habitat Conservation Plan area for the Delhi Sands Flower-loving Fly as Open Space, instead of Industrial designation of the current General Plan.

Alternatives 2, 3, and 4 would allow development in the same areas as is allowed by the proposed General Plan Update, although at varying intensities. Therefore, impacts to biological resources would likely be similar. In addition, these alternatives would also retain the Delhi Sands Flower-loving Fly area as open space.

Cultural Resources

Alternative 1 would preserve the existing land use plan as well as the existing Cultural Resources Preservation Element and its policies, as does the proposed General Plan Update. No substantial additional policies are proposed with the General Plan Update that would impact cultural resources. Thus, impacts of the current General Plan would be similar to those of the proposed General Plan Update.

Alternatives 2, 3, and 4 would allow development in the same areas as is allowed by the proposed General Plan Update, although at varying intensities. Therefore, impacts to cultural resources would likely be similar.

Geology and Soils

Alternative 1, 2, and 4 would not have significantly different impacts from the proposed General Plan Update because the same areas are proposed for development, although at varying intensities. Development pursuant to each alternative would generally rely on existing regulations and measures to address any potential impacts relative to geology and soils.

Alternative 3 proposes substantially greater residential intensities (maximum 16 dwelling units per acre) in an area designated by the proposed General Plan Update for low residential intensities (maximum 2 dwelling units per acre). In addition, the area of general change is an area with steep slopes, which under Alternative 3 may present increased landslide hazards compared to the proposed General Plan Update.

Greenhouse Gas Emissions and Climate Change

Alternative 1 could produce significant changes in greenhouse gas emissions, resulting in impacts on climate change, similar to the proposed General Plan Update. The proposed General Plan Update provides new policies on energy conservation that would limit greenhouse gases, as well as referencing implementation of current greenhouse gas reduction regulations. Alternative 1 would keep the existing land use designations, which the population capacity of the existing land use designations would not provide for the anticipated growth per SCAG, which would potentially interfere with the greenhouse gas reduction measures included in SCAG's RTP/SCS as well as CARB's Scoping Plan. This is similar to the impacts of the proposed General Plan Update. Therefore, Alternative 1 would have similar slightly reduced impacts compared to the General Plan Update.

Alternative 2, decreasing residential densities in the downtown area, would likely reduce the build-out population. Due to the decrease in population, it would result in an inconsistency with the 2012 SCAG RTP/SCS, similar to but greater than the proposed General Plan Update.

Alternative 3 would allow for additional residential intensity, which would result in additional population capacity. The additional population capacity would result in consistency with the 2012 SCAG RTP/SCS to not interfere with its implementation

and thus result in reduced, less than significant impacts compared to the proposed General Plan Update's significant impacts.

Alternative 4 would allow for residential land uses instead of industrial land uses in the South Colton neighborhood, which would increase the population capacity and decrease the non-residential and employment capacities. The additional population capacity would result in consistency with the 2012 SCAG RTP/SCS to not interfere with its implementation and thus result in reduced, less than significant impacts compared to the proposed General Plan Update's significant impacts.

Hazards and Hazardous Materials

Alternative 1 would retain the existing land use plan. The proposed General Plan Update has modified land use policy to improve conditions where residential uses interface directly with railroad traffic and industrial uses. In addition, the proposed General Plan Update includes policies regarding truck routing performance standards that Alternative 1 would not include. Therefore, Alternative 1 would have greater impacts due to location of residences to industrial uses, rail lines, and trucks potentially transporting hazardous materials.

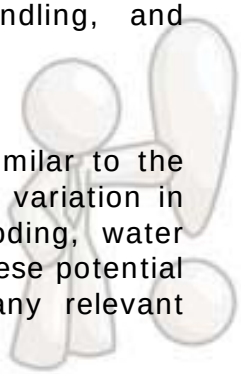
Alternative 2 would not have significantly different impacts from the proposed General Plan Update because the same areas are proposed for development that could be affected from existing non-wildfire hazards, although at varying intensities. Development pursuant to each alternative would generally rely on existing regulations and measures, as well as the policies in the current Safety Element, as well as the additional truck route policies noted previously to address any potential impacts from hazards or hazardous materials.

Alternative 3 proposes substantially greater residential intensities (maximum 16 dwelling units per acre) in an area designated by the proposed General Plan Update for low residential intensities (maximum 2 dwelling units per acre). In addition, the area of general change is an area with Very High rated Fire Hazard Severity Zone, which under Alternative 3 may present increased wildfire hazards compared to the proposed General Plan Update.

Alternative 4 would also propose development in similar areas as the proposed General Plan Update, but would reduce the amount of industrial development, thus reducing the potential for operational hazardous emissions, handling, and transporting that could impact the planning area.

Hydrology and Water Quality

All of the alternatives would generally allow development to occur similar to the proposed General Plan Update, although at varying intensities. This variation in intensity would not substantially alter the impacts from or to flooding, water quality, or on groundwater supplies. All relevant policies addressing these potential impacts in the existing Safety Element would remain, as would any relevant standard regulations.



Land Use and Planning

As mentioned in Biological Resources, Alternative 1 would retain the existing land use plan and would retain an area within the Delhi Sands Flower-loving Fly Habitat Conservation Plan for industrial development, whereas the proposed General Plan Update and Alternatives 2, 3, and 4 would designate this area as Open Space. Therefore, Alternative 1 would have greater impacts and Alternatives 2, 3, and 4 would have similar impacts related to Habitat Conservation Plans compared to the proposed General Plan Update. No other Natural Community Conservation Plans exist within the planning area; therefore, none of the alternatives would affect such plans.

None of the alternatives or the proposed General Plan Update would result in the division of an established community since they retain similar development patterns and road networks.

Mineral Resources

Various areas exist throughout the planning area where available data indicates there are known or potential significant mineral resources. Except for at the existing Slover Mountain mining site, existing zoning, property size, and surrounding development generally would preclude mineral extraction operations from occurring where known or potential mineral resources are identified. All of the alternatives, liked the proposed General Plan Update, accommodate development generally in the same areas. Each of the alternatives would thus similarly impact the availability or loss of known or potential mineral resources as the proposed General Plan Update.

Noise

Under Alternative 1, the existing General Plan would result in growth in traffic and traffic noise similar to the proposed General Plan Update, although likely at a greater level due to greater traffic volumes that would be anticipated from a greater residential and non-residential development capacity. However, the existing General Plan would not include the new roadways and roadway alignments that are included in the proposed General Plan Update. As analyzed in Section 4.12 (Noise), these new roadways and roadway alignments will result in potentially significant impacts to nearby residential land uses from long-term operational impacts, in addition to the short-term impacts for construction of the roadways. Although mitigation is anticipated to address these potentially significant impacts, the existing General Plan would not include these roadways and would thus have reduced noise impacts compared to the proposed General Plan Update on these sensitive receptors, despite the overall greater incremental increase in noise impacts.

Alternative 2 would result in a decreased development capacity and therefore incrementally reduced traffic and traffic noise impacts. This alternative would also include the added roadways and roadway realignments similar to the proposed General Plan Update.

Alternatives 3 and 4 would result in an increased development capacity and therefore incrementally increased traffic and traffic noise impacts. This alternative

would also include the added roadways and roadway realignments similar to the proposed General Plan Update.

Population and Housing

Similar to the proposed General Plan Update, each of the alternatives would accommodate population growth via land use policies that support residential development as demanded by the market. However, Alternatives 3 and 4 are designed to accommodate the projected population growth by SCAG, whereas Alternatives 1 and 2 and the proposed General Plan Update do not. By accommodating the projected growth, and not indirectly inducing growth outside of the City, Alternatives 3 and 4 would result in reduced impacts compared to the proposed General Plan Update. Although Alternative 1 would not provide the capacity to provide for the projected growth, it does provide for slightly greater capacity compared to the proposed General Plan Update, thus it would have a slightly reduced impact. Alternative 2 would have an even lower population capacity compared to the proposed General Plan Update, thus it would have an increased impact related to indirect induced population growth.

Like the proposed project, none of the alternatives would result in the displacement of housing units or people.

Public Services

None of the alternatives would result in significantly different impacts on public services since existing policies, as well as those proposed by the General Plan Update, require appropriate levels of service, including expansion of those levels, for the current and future residents and business community.

Recreation

Although impacts from each of the alternatives and the proposed General Plan Update on recreation facilities would be addressed through existing policies and fees, Alternative 2 proposes reduced dwelling units and Alternatives 1, 3, and 4 propose increased dwelling units. These alternatives would produce, respectively, reduced and potentially greater impacts on recreation facilities compared to the proposed General Plan Update.

Transportation and Traffic

Alternative 1, keeping the existing land use designations, would allow for greater residential and non-residential development within the planning area compared to the proposed General Plan Update, thus generally generating more trips and traffic congestion. However, Alternative 1 generally would allow for decreased intensities closest to the most severely impacted intersections of Colton Avenue/10th Street/G Street and Mount Vernon Avenue/Interstate-10 Ramps compared to the proposed General Plan Update, which was determined to have unavoidable significant impacts with mitigation. Therefore, Alternative 1 would likely have reduced impacts related to these intersections, although potentially still at significant levels. Alternative 1 would also not include policies added with the updated Mobility Element related to

establishing needed citywide connections and alternative modes of transportation. In this regard, impacts could be greater than those associated with the project.

Similarly, Alternative 2 specifically proposes decreased intensities closest to the most severely impacted intersections of Colton Avenue/10th Street/G Street and Mount Vernon Avenue/Interstate-10 Ramps compared to the proposed General Plan Update, which was determined to have unavoidable significant impacts. Therefore, Alternative 2 would likely have reduced impacts related to these intersections, although potentially still at significant levels. This alternative would also maintain all other policies proposed in the proposed General Plan Update.

Alternatives 3 and 4 would have increased levels of residential development compared to the proposed General Plan Update, at the expense of reduced nonresidential development. Generally, on an acreage basis, nonresidential uses produce more vehicle trips daily and during peak travel periods. Thus, these alternatives could reduce traffic volumes at the impacted locations. These alternatives would also maintain all other policies proposed in the proposed General Plan Update.

All other impacts related to air traffic patterns, traffic hazards, emergency access, and parking of each of the alternatives would be similar to those of the proposed General Plan Update (less than significant).

Utilities and Service Systems

Alternative 1 overall proposes greater potential development and would thus have a greater impact on utilities compared to the proposed General Plan Update.

Alternative 2 proposes decreased intensities and would thus have a reduced impact on utilities compared to the proposed General Plan Update.

Alternatives 3 and 4 would have increased levels of residential development but less nonresidential development; impact would be similar to that associated with the proposed General Plan Update.

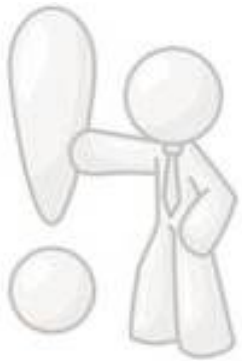


Table 5.5-1
Impact Comparison Summary Matrix

Impacts	Proposed General Plan Update	Alt 1	Alt 2	Alt 3	Alt 4
Aesthetics	NO/L	=	=	>	=
Agricultural Resources	NO/L	=	=	=	=
Air Quality	SU	<	>	<	<
Biological Resources	S/M	>	=	=	=
Cultural Resources	S/M	=	=	=	=
Geology and Soils	NO/L	=	=	>	=
GHG and Climate Change	SU	>	>	<	<
Hazards and Hazardous Materials	S/M	>	=	>	<
Hydrology and Water Quality	NO/L	=	=	=	=
Land Use and Planning	NO/L	>	=	=	=
Mineral Resources	NO/L	=	=	=	=
Noise	S/M	<	<	>	>
Population and Housing	NO/L	<	>	<	<
Public Services	NO/L	=	=	=	=
Recreation	S/M	>	<	>	>
Transportation and Traffic	SU	<	<	=	=
Utilities and Service Systems	NO/L	>	<	=	=

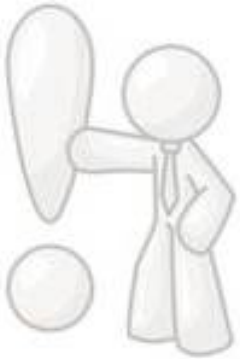
Key:
SU Significant and unavoidable Impacts
S/M Less than significant impacts with mitigation incorporated
NO/L No impact or less than significant impact
> Impacts are greater than proposed project
= Impacts are similar to proposed project
< Impacts are less than proposed project

5.6 Environmentally Superior Alternative

The primary environmental impacts will come as development occurs whether or not the General Plan Update is adopted and whether or not any of the alternatives is selected over the proposed General Plan Update. Alternative 1 reduces impacts in more categories compared to the proposed General Plan Update, including to those sections found to be significant (Air Quality, Greenhouse Gas Emissions, and Traffic) under the proposed General Plan Update. Impacts under these categories would still likely remain significant and unavoidable under Alternative 1. However, pursuant to Section 15126.6(e)(2) of the State CEQA Guidelines, when the

environmentally superior alternative is the *No Project* alternative, another environmentally superior alternative must be selected among the remaining alternatives. In addition, alternatives which reduce significant impacts to less than significant levels are deemed to be environmentally superior to those that just reduce significant impacts or reduce already less than significant impacts.

Based on these criteria, Alternative 4 is the environmentally superior alternative because it would reduce Air Quality and Greenhouse Gas Emissions impacts to less than significant levels. Alternative 4 would also reduce impacts with respect to Hazards and Hazardous Materials and Population and Housing, but result in greater impacts for Recreation and Utilities and Service Systems.



Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

6	Analysis of Long Term Effects

Analysis of Long Term Effects 6.0

CEQA requires the discussion of the cumulative impacts, growth-inducing impacts, and long-term impacts of proposed projects. The following sections address these issues as they relate to implementation of the General Plan Update.

Cumulative Impacts 6.1

Sections 15130(a) through 15130(e) of the State CEQA Guidelines require the contents of an EIR to include a discussion of cumulative impacts. Section 15355 of the State CEQA Guidelines defines a cumulative impact as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. Section 15130(b)(1) of the CEQA Guidelines identify two methods to determine the scope of projects for cumulative impact analysis:

> **List Method.** A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.
>
> **Projection Method.** A summary of projections contained in an adopted general plan or related planning document or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.

Because of the long-term scope of the proposed General Plan, the appropriate method for cumulative impact analysis is the projection method. This method is appropriate because the projections will serve as a guide to determine if the General Plan Update is consistent with the long-term population, employment, and household projections of the region. If the proposed General Plan Update is generally consistent with regional projections, then it will also generally be consistent with regional efforts to address environment problems such as air quality and traffic. Furthermore, preparing a list of cumulative development projects over a 20 to 30 year period the proposed General Plan Update will cover is not feasible.

In support of the Regional Transportation Plan (RTP), Sustainable Communities Strategy (SCS), and other regional planning efforts, SCAG developed a series of growth projections utilizing a comprehensive analysis of fertility, mortality, migration, labor force, housing units, and local policies such as land use plans. Population, housing and employment forecasts for Colton and neighboring communities, as well as the entire county, are summarized in Table 6.1-1 (SCAG 2008-2035 Growth Forecast).

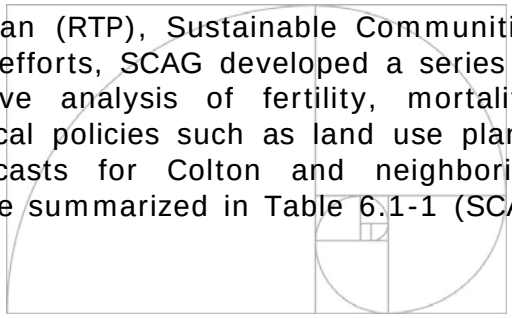


Table 6.1-1
SCAG 2008-2035 Growth Forecast

	Population			Households			Employment		
	2008	2035	%	2008	2035	%	2008	2035	%
Colton	52,100	71,700	+38%	15,000	21,100	+41%	24,000	29,600	+23%
Rialto	98,900	125,200	+27%	25,100	34,700	+38%	22,900	32,800	+43%
San Bernardino	209,900	261,400	+25%	59,300	76,800	+30%	101,300	145,300	+43%
San Bernardino County	2,016,000	2,750,000	+36%	606,000	847,000	+40%	701,000	1,059,000	+51%

Source: SCAG 2012 RTP/SCS

Aesthetics

As population and economic growth continue in the Colton planning area over the long-term, the new development that occurs will contribute to the continued expansion of an urban pattern throughout the San Bernardino Valley. This will add additional light sources, structures, and changes to the visual character of the area over time in context of existing and future neighborhoods, light/glare sources, and surrounding vistas. The proposed General Plan Update provides for a wide diversity of growth within the planning area. Much of the planning area is already developed, excluding large areas in the southwest and southeast portions. The area in the southwest portion is proposed primarily for industrial development, with lower-density residential separated by topography. The southeast portion includes the Reche Canyon Specific Plan area, which primarily provides for lower-density residential uses.

Most industrial development would likely consist of concrete tilt-up structures of varying sizes, mostly one story in height. Most residential development will occur as single-family homes and single- and two-story structures. In some targeted areas, higher intensity mixed-use development is supported and would likely result in multiple-story structures (generally no more than four stories).

Future development within the planning area will be subject to the policies of the proposed General Plan Update and existing development standards. This includes policies and programs that support preserving neighborhood character, quality design, and minimized lighting impacts. Although future growth in the planning area, as guided by the General Plan Update, will contribute to the gradual urbanization of the San Bernardino Valley, the proposed policies and programs will ensure that the contribution of the planning area is not considerable.

Agricultural Resources

Analysis of agricultural impacts in Section 4.2 of this EIR indicates that no impact would occur from conversion of the 11 acres of Farmland of Statewide Importance and 1.6 acres of Prime Farmland since existing operations would be allowed to continue under the proposed General Plan Update. Since there is no individual

impact, the proposed General Plan Update could not have a cumulatively considerable effect on agricultural resources.

Air Quality

The context for assessing cumulative air quality impacts is the South Coast Air Basin in terms of national and state criteria pollutant standards. The immediate vicinity of the project site is the context for localized levels of criteria pollutants and toxic emissions. As discussed in Section 4.3, the proposed plan would conflict with the proposed 2012 regional AQMP prepared by the SCAQMD, as it conflicts with the projected growth within the current incorporated city boundaries. Policies have been included to ensure that individual implementing projects would be consistent with the AQMP, emission thresholds, and SCAQMD rules. Proposed mixed use/higher-density development policies will implement an important regional strategy to encourage more compact urban/infill development, which helps reduce total vehicle trips and average trip distances. This will help reduce vehicle emissions. The City will continue to evaluate short-term, construction-related impacts and long-term impacts for discretionary land use projects, so that best available control measures can be applied, where warranted, to minimize the effects of individual development projects. Thresholds recommended by the SCAQMD will continue to be the preferred criteria for determining the level of impact significance at the project level of review.

The proposed plan would not authorize any particular project or any exemptions from or conflicts with the AQMP and would not result in any direct air quality impacts. However, due to the General Plan Update's inconsistency with projected population growth, the General Plan Update may result in directing population growth elsewhere in the region, which may interfere with the implementation of the AQMP to achieve attainment of the 24 hour $PM^{2.5}$ standard by 2014 and attainment of the 8-hour ozone standard by 2023. Therefore, long-term cumulative air quality impacts to the region could be considerable.

Biological Resources

The context for assessing cumulative impacts to biological resources includes sensitive species and their habitat throughout the San Bernardino Valley. Future development within the planning area and throughout the San Bernardino Valley will incrementally replace native habitats with urbanization. To address the long-term, cumulative loss of sensitive habitat and associated species in the San Bernardino Valley, the City will continue to implement existing federal and state regulations related to species and habitat protection and conservation. Considering the proposed General Plan consistency with the existing federal and state regulations, the project's contribution to the long-term loss of sensitive habitat and species will not be considerable. In particular, the General Plan provides for continued protection of habitat for the Delhi Sands Flower-Loving Fly through implementation of the Habitat Conservation Plan.

Cultural Resources

The context for assessing cumulative impacts to buried human remains is any native, subsurface soils in the planning area and the potential cultural relationship to the region and the state. The existing General Plan and municipal code include policies that provide an ongoing program to ensure proper identification, evaluation, and recovery and/or protection of potentially important historical, archaeological, and paleontological resources that may be disturbed during future development activities. Existing state law requires immediate County Coroner notification upon discovery of human remains and also notification of affected Native American tribes if the remains are suspected to be of Native American origin. Surrounding jurisdictions are subject to similar regulations, including coroner notification upon discovery of human remains. Although long-term development throughout Colton and the San Bernardino Valley has the potential to impact historic structures and subsurface archaeological and/or paleontological remains, the proposed General Plan will ensure that such resources are not substantially impacted within the planning area. The project's contribution to the future loss of cultural resources will not be considerable.

Geology and Soils

Future development within the planning area would increase the number of people exposed to earthquake-induced groundshaking and other seismically induced ground hazards, such as liquefaction. Future development could also occur in areas with unsuitable, unstable soils. The context for assessing cumulative geologic impacts is statewide, considering the majority of California is subject to some type of geologic hazard. The specific types and extent of geologic hazards and constraints are due to localized conditions that are routinely addressed at the project-level of analysis through the City's CEQA review procedures and administration of the adopted building codes and grading regulations. In particular, land use policy provides for setbacks from the trace of the San Andreas fault within the planning area. In surrounding jurisdictions, similar local regulations and building code requirements will minimize exposure of people and structures to geologic and seismic hazards. Cumulative geologic hazards impacts will be less than significant.

Greenhouse Gas Emissions

Climate change is inherently a discussion of cumulative impacts due to its global impacts. Development that occurs as a result of the implementation of the proposed General Plan Update will include activities that emit greenhouse gases over the short and long term. While one project could not be said to cause global climate change, individual projects contribute cumulatively to greenhouse gas emissions that result in climate change. Pursuant to proposed General Plan policies, CEQA, and SCAQMD regulations, individual development projects will be required to perform project-specific air quality analyses to determine potential impacts and mitigation measures to ensure individual projects would not result in short- or long-term climage change impacts. In addition, due to the General Plan's inconsistency with SCAG's population growth projection for Colton, the potential still remains for an interference with the implementation of SCAG's 2012 Regional

Transportation Plan/Sustainable Communities Strategy and CARB's Scoping Plan to achieve the required greenhouse gas reductions. Thus, long-term impacts with respect to climate change remain potentially significant and unavoidable.

Hazards and Hazardous Materials

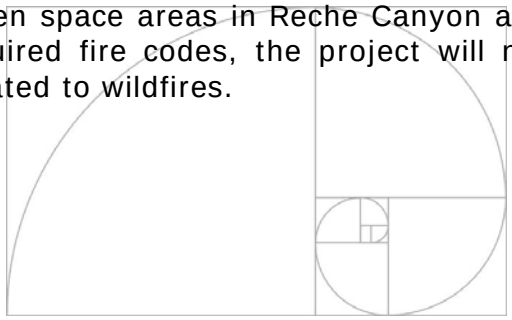
Hazardous Materials

The context for assessing cumulative hazardous materials impacts involves existing and potential development within the planning area and those surrounding areas that could result in the transport, use, or disposal of hazardous materials or wastes. Typical uses would include industrial activities, utility providers, and waste management services.

As development occurs within the planning area and surrounding jurisdictions, particularly in industrial land use designations, the use, transport, and disposal of hazardous materials and wastes will increase. Concurrently, as the population and employment base increase in the area, the potential for exposure of people to hazardous materials and wastes becomes greater. Regulation of hazardous substances and wastes, including manufacturing, storage, processing, transportation, and disposal activities, will continue to be governed mainly by federal and state agencies. The San Bernardino County Fire Department will continue to conduct inspections and review hazardous materials storage and containment provisions at local businesses. The proposed General Plan would not conflict with any such authorities or standard practices involving responses to hazardous materials releases. Proposed General Plan land use and circulation policies would not provide for any new or more dangerous types of hazardous materials or wastes to be generated, stored, or transported within the planning area or outside of the planning area. The proposed General Plan Update will not result in a considerable contribution to the regional increase in the use, transport, disposal, or exposure to hazardous materials or wastes.

Wildfires

Portions of the planning area and nearby mountains are subject to high to very-high fire hazards. The context for assessing wildfire hazards exists wherever the urban environment interfaces with wildlands. Cumulative wildfire impacts can occur as development in fire hazard areas increase, not only because the number of people and structures exposed to wildfires is increasing but also because increased density supports the spreading of wildfires. The proposed General Plan Update generally limits the exposure of potential development to wildfire hazards by maintaining lower residential densities and open space areas in Reche Canyon and the Loma Hills. With implementation of required fire codes, the project will not result in cumulatively considerable impacts related to wildfires.



Hydrology and Water Quality

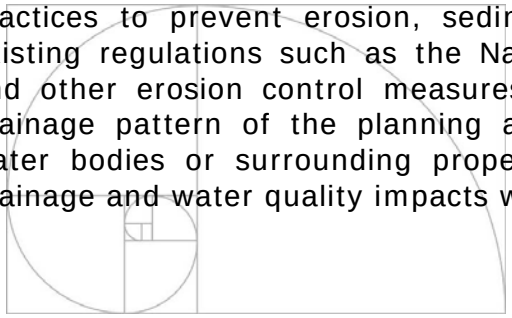
Groundwater Levels

The planning area is served by the City of Colton Water Department, West Valley Water District, Terrace Water District, and the Highland Water Company, although approximately 90 percent of the planning area is served by the City of Colton Water Department. The Colton Water Department sources its water entirely from groundwater from three separate basins. Future growth throughout the planning area and the region will increase the need for local and imported water supplies, contributing to cumulative strains on groundwater resources and the potential to substantially lower the water table. Expanding development typically hinders groundwater recharge as well because paving and other impervious surfaces prevent or redirect water from the soil, thereby reducing or eliminating percolation in areas.

The context for assessing impacts on groundwater resources is the three impacted groundwater basins and the pumping from them. As is indicated in Section 4.9 (Hydrology and Water Quality), each of the affected basins has been adjudicated to determine safe yield pumping limits to prevent over-drafting and substantial decrease in groundwater levels. As further indicated in Section 4.17 (Utilities and Service Systems), the proposed General Plan development capacity is anticipated to be within the anticipated water supply production pursuant to the Colton Water Department Urban Water Management Plan (UWMP) in accordance with the safe yield amounts. The proposed General Plan Update includes policies and programs designed to enhance groundwater recharge in the planning area, primarily through modified drainage practices. In addition, the Land Use Element includes policies to promote sustainable development practices. The proposed General Plan Update will not have a cumulatively considerable impact on groundwater resources.

Drainage and Water Quality

Future growth in the planning area and the region will include a variety of land use forms, street improvements, and impervious surfaces that could increase the volume of urban runoff that will need to be captured and discharged into the City's municipal storm drain system, the County's regional flood control facilities, and ultimately into the Pacific Ocean. Total Maximum Daily Loads (TMDLs) for Lytle Creek and Reach 4 of the Santa Ana River are in the process of being adopted; however, impairment has been noted by the EPA due to pathogens. The proposed General Plan Update supports low-impact development and appropriate drainage practices to prevent erosion, sedimentation, and flooding. This, coupled with existing regulations such as the National Discharge Elimination System (NPDES) and other erosion control measures, will ensure that long-term changes to the drainage pattern of the planning area do not substantially impact downstream water bodies or surrounding properties. The project's contribution to regional drainage and water quality impacts will not be considerable.



Flooding

The proposed General Plan Update does not allow the placement of homes within any flood zones. However, other structures could be placed within flood hazard areas extending from the Santa Ana River. The context for assessing flooding impacts is in those areas subject to 100-year floods in and around the planning area. This is particularly relevant if structures are constructed in the floodplain and 100-year flood waters are changed or redirected to areas where flooding previously did not exist.

The General Plan does not support the construction of structures within floodplains. The General Plan requires future development proposals within floodplains to be accompanied by appropriate flood control, grading design, and map revisions to remove the property from the flood hazard zone. The policies of the General Plan will also ensure that future development within floodplains do not impact downstream properties due to any modification to the floodplain. Future development as guided by the policies of the General Plan will not result in considerable cumulative flooding impacts to future homes or other structures.

Land Use and Planning

As discussed in Section 4.10, the proposed plan would not physically divide any established community within the planning area. Further, there are no new transportation corridors, major flood control facilities, or other elements of the proposed plan that could result in such impacts outside of the planning area. This project would not contribute to cumulative impacts involving physical division of established communities.

Currently, Colton and its unincorporated sphere of influence support a community of approximately 56,000 residents. SCAG projects an increase of approximately 20,000 residents by the year 2035, a 38 percent increase. This is a relatively similar increase in population when compared to surrounding communities and the County as a whole (see Table 6.1). Even still, future growth in Colton will affect the sub-regional land use and transportation patterns and intensities, thereby contributing to cumulative effects on regional infrastructure, jobs/housing balance, air quality, etc. Colton is a member city of SCAG, a Metropolitan Planning Organization (MPO) that prepares and administers regional growth management strategies and allocation of federal transportation funding for a six-county area, including Ventura, Los Angeles, San Bernardino, Riverside, Orange and Imperial Counties. As the designated MPO, SCAG is mandated by the federal government to prepare regional plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the state level.

Colton is also a member of the San Bernardino Association of Governments (SANBAG), a council of governments that represents the interests of San Bernardino County. SANBAG's planning activities involve a variety of transportation, land use, and environmental programs that address issues of county-wide significance.

Regional Comprehensive Plan and Guide

SCAG prepares and administers the Regional Comprehensive Plan (RCP).[1] The RCP directs regional growth to improve the standard of living, quality of life, and social, political, and cultural equity throughout the member counties. The RCP includes the following chapters:

- Air Quality
- Economy
- Energy
- Finance
- Land Use and Housing
- Open Space and Habitat
- Security and Emergency Preparedness
- Solid Waste
- Transportation

The Land Use and Housing chapter of the RCP includes a number of functions in directing regional growth. The Chapter's primary objectives are linking land use and transportation through implementation of Compass Blueprint principles (discussed herein). The following best practices are identified for local governments:

LU-5 Local government should provide for new housing, consistent with State Housing Element law, to accommodate their fair share forecast of regional growth

LU-5.1 Local governments should adopt and implement General Plan Housing Elements that accommodate housing needs identified through the Regional Housing Needs Assessment (RHNA) process. Affordable housing should be provided consistent with RHNA income category distributions adopted for each jurisdiction. To provide housing, especially affordable housing, should leverage existing State programs such as HCD's Workforce Incentive Program and density bonus law and create local incentives (e.g. housing trust funds, inclusionary zoning, tax-increment-financing districts in redevelopment areas and transit villages) and partnerships with non-governmental stakeholders.

LU-6 Local governments should leverage federal and State and local funds to implement Compass Blueprint



LU-6.1 All stakeholders should leverage state infrastructure bond financing, including the Development of Housing and Community Development's Transit Oriented Development program and should support legislation that will target infrastructure bond funds for regions with adopted growth visions such as the Compass Blueprint and for projects consistent with these visions

LU-6.2 Subregional organizations should leverage the federal transportation planning funds available at the subregional level, to complete projects that integrate land use and transportation planning and implement Compass Blueprint principles

LU-7 Local governments should consider shared regional priorities, as outlined in the Compass Blueprint, Regional Transportation Plan, and Regional Comprehensive Plan, in determining their own development goals and drafting local plans

LU-7.1 Local governments should take a comprehensive approach to updating their General Plans, keeping General Plans up-to-date and providing progress reports on updates and implementation, as required by law. Communities are required to submit the General Plan and General Plan element to SCAG under the IGR Program pursuant to Federal Executive Order No. 12372 and CEQA Section 15206.

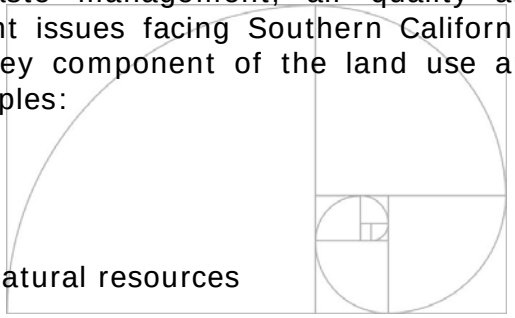
LU-7.2 Developers and local governments should integrate green building measures into project design and zoning such that those identified in the US Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program.

LU-7.3 Local governments and subregional organizations should develop ordinances and other programs, particularly in the older, more urbanized parts of the region, which will enable and assist in the cleanup and redevelopment of brownfield sites

LU-7.4 Local governments and subregional organizations should develop adaptive reuse ordinances and other programs that will enable the conversion of vacant or aging commercial, office, and some industrial properties to housing and mixed-use with housing

Compass Blueprint and 2% Strategy

The Compass Blueprint Growth Vision is a key element of the RCP, prepared by SCAG to provide an integrated response to current and future land use, transportation, housing, economic, solid waste management, air quality and transportation, and other growth management issues facing Southern California. The Compass Blueprint Growth Vision is a key component of the land use and housing chapter and is comprised of four principles:



- Mobility - Getting where we want to go
- Livability - Creating positive communities
- Prosperity - Long term health for the region
- Sustainability – Promoting Efficient Use of Natural resources

Implementation strategies to achieve this growth vision include:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

The Compass Blueprint 2% Strategy sets forth guidelines for organizing and targeting a portion of future growth within about two percent of the land area of the entire region to gain the most progress with respect to the four Growth Vision principles. The primary strategies for each of these principles are summarized below.

Mobility

- Putting new employment centers and new neighborhoods near major transit systems so that people can have transportation choices other than their cars.
- Designing safe, attractive transit centers and plazas that people enjoy using.
- Creating mini-communities around transit stations, with small businesses, urban housing and restaurants all within an easy walk

Livability

- Injecting new life into tired or under-used areas by creating vibrant new business districts, redeveloping old buildings and building new businesses or housing on vacant lots.
- Creating mini-communities, complete with a variety of uses such as shops, lofts and townhomes, and small businesses, along or near major transit hubs.
- Carefully preserving existing, stable, single-family neighborhoods and existing natural and green spaces. Designing communities that can be enjoyed on foot, with plenty of opportunities for "people-scaled" experiences.

Prosperity

- Taking steps to create local and state policies that encourage balanced growth and many different kinds of jobs and industry.
- Providing a range of housing types so that people of all income levels can live comfortably and safely.
- Supporting an integrated approach to land use and transportation decisions so that limited resources can be used most effectively.
- Treating communities equitably when it comes to environmental issues so that one area or group of people does not bear an unfair burden.

Sustainability

- Helping local governments navigate the new realities of environmental review and greenhouse gas legislation.
- Offering new services that encompass sustainable development practices and resource conservation.

- Focusing future growth in urban centers and existing cities to reduce vehicle miles traveled and preserve rural and other natural areas.

The proposed General Plan Update supports all of the Compass Blueprint 2% Strategies. Mobility is supported through a variety of policies that encourage use of existing and expanded transit facilities, designing development around pedestrian use and minimizing vehicle use. Livability is supported by a variety of policies that encourage redeveloping older, under-capacity properties, provision of park areas, and preservation of existing neighborhood character. Prosperity is supported by a variety of policies that require and encourage opportunities for a variety of commercial and industrial land uses and residential intensities. Sustainability is supported through a variety of policies that promote use of sustainable building practices, site planning, and energy and water conservation.

The 2% Strategy Opportunity Areas within the planning area are discussed below.

Downtown Colton

The primary opportunity area is Downtown Colton. Since Colton's incorporation in 1887, many changes have occurred on properties beyond the original downtown. However, Colton's downtown has remained the community center. The City aims to encourage a mix of civic, office, commercial, and residential uses in the geographic center of the City. This area will function as a Central Business District for Colton, re-establishing downtown as a community focal point. Delineating a business district can help focus efforts to revitalize and bring new energy into the area.

The intent of the business district will be to create opportunities for small-scale office and professional uses in a vibrant, walkable downtown setting. Residential uses will create the opportunity for activity in the area after business hours and will support the commercial uses along Valley Boulevard Gateway. In addition to civic uses, some of the most distinctive features of this area are the historic homes surrounding the Civic Center, many of which are located within the historic districts identified in the Cultural Resources Preservation Element. Development in Downtown Colton will respect and build upon the historic structures and character, and new development will complement this character.

La Cadena Drive

La Cadena Drive runs through the historic core of Colton between the downtown and Laurel Street. Historic homes and small office buildings along La Cadena Drive contribute to its unique character, as many of the homes have been converted to professional office uses. This transformation has created opportunities for small professional businesses to locate near the Civic Center in an attractive residential atmosphere. To encourage this trend, La Cadena Drive between Laurel Street and C Street has a General Plan designation of Mixed Use Neighborhood. The process of adaptive reuse of homes in this neighborhood will extend the life of these structures while retaining their historic and aesthetic features.

The Mixed Use Neighborhood designation will encourage and accommodate small professional offices and commercial uses within existing residential structures. The

La Cadena Drive corridor is envisioned as a pedestrian-friendly district, with office and civic uses and enhancements inviting to pedestrians, such as landscaping, street furniture, well-marked crosswalks, and wide sidewalks.

Valley Boulevard and Mount Vernon Avenue
Valley Boulevard is Colton's main east-west corridor, with excellent frontage along I-10 and freeway access at Rancho Avenue, 9th Street, and Mount Vernon Avenue. The Mount Vernon Avenue Corridor has direct access to I-10 via an off-ramp, and connects Colton and the City of San Bernardino to the north.

Many commercial and industrial buildings exhibit deferred maintenance, and design quality has not been a priority along both of these roads. These busy commercial corridors present opportunities for enhanced and new commercial development. The corridors have the potential to support regional-serving commercial uses given its freeway visibility and orientation. Underutilized and aging industrial properties should be encouraged to transition to uses that can increase tax revenues and attract regional customers.

In the Mount Vernon Avenue Corridor, the General Commercial designation applies only to locations where larger parcel sizes can support well-planned, cohesive shopping centers. The Neighborhood Commercial designation applies to all other commercial properties to maintain development at a smaller scale compatible with parcel size and adjacent residential neighborhoods. In addition, the Residential Overlay, which allows densities up to 30 units per acre, is applied near the San Bernardino Valley College and on properties just north of Laurel Street.

South Colton
South Colton embodies the culture and history of the City. Built concurrently with development of the local railroad industry, south Colton is a compact, historic residential neighborhood that shares streets and property lines with industrial businesses, railroad lines, and retail commercial uses along La Cadena Drive.

The area's many industrial businesses create employment opportunities, but their proximity to residences also creates conflicts such as truck traffic, noise issues, and dust and vibration impacts. The railroads that connect the region to the rest of the country are a significant regional and local economic asset, but this proximity poses quality of life issues for residents. The challenge is striking a balance in creating a residential neighborhood that is safe with limited impacts and promoting a positive business-friendly attitude toward industrial businesses.

In residential neighborhoods, specifically north of Congress Street, neighborhood protection, revitalization, and economic development will be a priority. The Low Density Residential designation has been applied to most of the area in recognition of the limitations posed by small lots, and also as a measure to preserve the intimate character of this historic neighborhood. This Plan encourages rehabilitation and beautification programs, and the addition of much needed local-serving commercial uses. Land use policy maintains established industrial businesses south of Congress Street, provided existing conflicts are appropriately addressed and no

new incompatible uses are introduced. Circulation policies address street improvements and street maintenance, strict enforcement of truck routes, safety for pedestrians, and increased safety measures at railroad crossings.

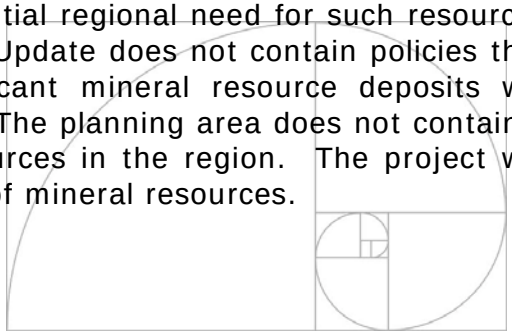
West Valley Specific Plan

The West Valley Specific Plan area represents a major opportunity area for comprehensive reuse and redevelopment. The City's goal is to create a distinct activity center with the look and feel of an "urban village." This concept is intended to provide an environment where people can both live and work; enjoy complementary residential, commercial, and recreational uses; access alternative modes of transportation; and feel pride in their distinctive community identity. Through the West Valley Specific Plan, land use policies will integrate urban village and mixed-use concepts to create living and shopping environments that are missing in Colton. Housing opportunities will be created for residents looking for either a single-family suburban character or housing within a more urban context. Development goals include creating economic development opportunities by attracting retail and office uses. Successful completion of high-quality mixed-use and residential projects will assist the City in accomplishing multiple housing, circulation, land use, and recreation objectives.

The area presents many opportunities for new land uses that will complement the Arrowhead Medical Center and take advantage of freeway access. Mixed-use development approaches may consist of either horizontal or vertical integration, providing for a blend of uses to create a great place to live, work, shop and play within a pedestrian-oriented community. Upon build-out, the area will accommodate almost 1,300 residential units at varying densities and over two million square feet of retail, office, and business park development, in addition to active and passive parks, and preserved habitat for the Delhi Sands Flower-Loving Fly.

Mineral Resources

Various areas exist throughout the planning area where available data indicate the presence of known or potential significant mineral resources. As addressed in Section 4.11 (Mineral Resources)—excluding the existing Slover Mountain mining site—existing zoning, property size, or surrounding development would generally preclude mineral extraction operations from occurring in most cases where known or potential mineral resources are identified. Principal 4 of the existing General Plan Open Space and Conservation Element is designed to protect significant mineral deposit sites until such time a substantial regional need for such resources is demonstrated. The proposed General Plan Update does not contain policies that conflict with this principal; therefore, significant mineral resource deposits will continue to be protected over the long-term. The planning area does not contain a significant portion of the known mineral resources in the region. The project will not contribute to a significant cumulative loss of mineral resources.



Noise

Implementation of the proposed General Plan Update would not generate new stationary noise sources outside of the planning area and would not, therefore, result in cumulatively considerable noise impacts involving stationary sources. Additional traffic volumes associated with future growth in the planning area would combine with regional traffic on major, inter-jurisdictional roads and highways leading to Colton that would contribute to cumulative effects involving roadway noise. The level of traffic noise attributable to Colton-based trips that will occur outside of the planning area will increase gradually, over a long period of time, and would not result in cumulatively considerable changes in roadway noise levels in the context of regional traffic growth.

Population and Housing

No permanent or temporary housing units would need to be or are proposed to be removed, relocated, or otherwise displaced to implement the proposed plan. This project could not contribute to cumulative impacts involving displacement of housing or persons. Based on the proposed General Plan land use plan and the intensity levels specified thereon, the ultimate population and employment capacity will decrease when compared to the existing General Plan, as shown in Table 6.1-2 (General Plan Potential Capacity Comparison).

Table 6.1-2
General Plan Potential Capacity Comparison

	Existing General Plan Potential Capacity	Proposed General Plan Potential Capacity	Variance
Dwelling Units	23,631	22,894	-737
Population	74,871	72,536	-2,335
Commercial and Industrial Space	27,291,953	26,100,900	-1,191,053
Employees	96,790	34,862	-61,928

Rates of growth will occur in response to a variety of regional and national socio-economic factors, including birth rates, migration from other states and other countries, land values, employment opportunities, interest rates, housing supply, demand and pricing, and broad regional and national economic conditions. Growth forecasts have been developed by SCAG and were summarized in Table 6.1-1. As previously mentioned, the projected population growth within the City limits of Colton from 2008 to 2035 is 38 percent. The proposed General Plan Update can accommodate a population of approximately 67,182 residents (72,536 residents including the unincorporated sphere of influence). Although individually the proposed General Plan Update would not induce substantial growth, considered cumulatively, by not accommodating projected growth within the city, the proposed General Plan Update would indirectly induce growth elsewhere within the region. Proposed General Plan land use policy can accommodate an employment level of 29,874 jobs, which would provide for the anticipated employment growth to 29,600

by 2035 projected by SCAG. While the General Plan Update will not directly or indirectly create growth, since it does not provide the capacity for projected long-term population growth and may indirectly guide population growth elsewhere in the region, thus potentially resulting in a cumulative significant indirectly induced population growth.

Public Services

The context for analyzing impacts related to public services is the relationship between local and regional population and urban growth and the concurrent need of individual service providers to expand facilities to meet the increasing demand. The existing General Plan Safety Element includes policies designed to ensure that appropriate levels of service are provided by requiring funding, facilities expansion, and service enhancements commensurate with long-term development in the planning area. Future facility expansions (such as fire stations, police substations, or school buildings) that will be necessary to meet the needs of the growing population and employment base within and outside the planning area generally do pose a substantial risk to the environment and will be subject to standard environmental review pursuant to State and local regulations. However, as was detailed in Section 4.14, potential impacts to meeting parks level of service goals remains significant. This would potentially result in impacts on nearby jurisdiction's parks resulting in a cumulatively significant impact. The General Plan Update will not result in a considerable contribution to cumulative impacts associated with the expansion of and need for public services, excluding parks which remains potentially cumulatively significant.

Recreation

Local and community recreation resources are provided for the benefit of the immediate vicinity and generally are not subject to cumulative impacts. The context for assessing cumulative impacts to parks and recreation resources are at the regional level, where multi-jurisdictional growth will put pressure on the availability and condition of parks and recreation facilities. Incremental residential growth in the planning area will increase the demand for local, community, and regional recreation resources. Regional facilities will be required to expand to meet growing demand as the planning area and the San Bernardino Valley grow. The proposed General Plan land use plan allocates 46 acres for parks and recreation uses. As was detailed in Sections 4.14 and 4.15, the proposed General Plan Update may not meet projected parkland goals and would thus potentially result in a significant deterioration of existing park facilities. Considered cumulatively, similar impacts could occur on other park facilities outside of the planning area due to the potential underserved population. The proposed General Plan Update will result in a cumulatively considerable impact to regional recreation facilities.

Transportation and Traffic

Cumulative circulation and Congestion Management Program impacts through the year 2020 and the year 2030 are analyzed in Section 4.11 and found to be potentially significant.

The context for analysis of cumulative traffic impacts is broad due to the complex network of streets and highways in the Colton planning area and Southern California as a whole. As such, this analysis focuses on arterial roadways that cross the planning area boundaries into the cities of Rialto, San Bernardino, Riverside, and Grand Terrace, and into unincorporated areas of San Bernardino and Riverside counties, as well as impacts to Interstate 10 and Interstate 215. This discussion does not consider cumulative effects involving air traffic, emergency access, or alternative transportation because no adverse impacts from the updated General Plan have been identified (see Section 4.16, Transportation and Traffic). The proposed Plan would not directly affect these transportation factors outside of the planning area.

Goods Movement

Large distribution facilities located in the central and southern portions of the planning area generate truck traffic within and outward of the planning area. The City has identified truck routes to efficiently move truck traffic from within the planning area to freeways without impacting sensitive land sues. Truck routes have been designated on the following roadways:

- Valley Boulevard
- Pepper Avenue
- Mount Vernon Avenue
- Colton Avenue
- Fairway Drive
- La Cadena Drive
- Washington Street

Traffic generated from within the planning area will increase over the long term. This will include truck traffic as vacant industrial and large commercial areas are developed. Should the circulation policies of the General Plan impede the regional movement of goods, a significant cumulative impact could occur. The proposed General Plan Update has appropriately designated all truck routes to maintain sufficient capacity over the long-term and therefore the General Plan Update will not impede the movement of goods via trucks.

Two railways—Union Pacific and Burlington Northern Santa Fe lines—traverse the planning area, carrying rail freight throughout the region, including goods from the Port of Los Angeles and the Port of Long Beach. Operation and maintenance of these railways is not under the jurisdiction of the City; however, the General Plan does not include any policies that would impede appropriate operation and maintenance of these railways. The proposed General Plan Update will not have a cumulatively considerable impact on rail freight operations.

SCAG Regional Transportation Plan

The Regional Transportation Plan (RTP) prepared by SCAG includes goals and performance measures that support long-term mobility within the region, and is designed to maintain and improve the transportation system through a balanced

approach that considers system preservation, system operation and management, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth. The goals of the RTP are as follows:

- Align the plan investments and policies with improving regional economic development and competitiveness
- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
- Actively encourage and create incentives for energy efficiency, where possible
- Encourage land use and growth patterns that facilitate transit and non-motorized transportation
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

The RTP includes baseline and future projects that will alleviate traffic congestion within the region of the planning area. These projects include construction of HOV lanes and mixed-flow lanes. Specifically, RTP already commits to the construction of mixed flow and HOV lanes on I-215 from the I-10 to I-210. The RTP also plans for the construction of HOV lanes on I-15 from Riverside County to I-215 by the year 2020, and on I-10 from Ford to Riverside County and I-215 from SR-210 to I-15 by the year 2030. Future mixed-flow projects include SR-210 from I-215 to I-10 by 2020, and I-215 from SR-30 and I-15 by 2030.

SANBAG Comprehensive Transportation Plan

Sub-regionally, the San Bernardino Association of Governments (SANBAG) establishes goals, policies, and performance indicators and alternative transportation scenarios based on local agency input and street and highway network modeling in its Comprehensive Transportation Plan (CTP). Measure I is a 0.5 cent sales tax approved by voters to support transportation improvements. The 2010-2040 Strategic Plan is the policy manual for delivery of Measure I programs by SANBAG and its member agencies. The Strategic Plan is prepared and administered by SANBAG. Funds have been allocated to regional transportation programs within or near the planning area that over the long-term, should improve traffic congestion throughout the region. These programs are summarized below.

Valley Freeway Program: Programs are in place to improve Interstate 10, Interstate 215, and Interstate 15, with the aim of enhancing long-term freeway capacity near the planning area. The widening of I-10 widening from I-15 to the Riverside County line would add one HOV lane in each direction. Expansion of I-15 from the Riverside County line to I-215 would add two HOV lanes in each direction. The I-215 expansion from SR-210 to I-15 project will add an additional lane in each

direction. Preliminary project scoping has begun for the I-10 and I-15 expansion programs, although the Strategic Plan does not identify the anticipated completion dates. No work on the I-215 expansion has begun, and the Strategic Plan does not identify when work is anticipated to begin or be completed.

Valley Freeway Interchange Program: Improvement of freeway interchanges would be funded through fair-share payments by developers into the SANBAG Development Mitigation Program and through state and federal public monies. Freeway interchange improvements are proposed in and near the planning area: Pepper Avenue at I-10 and Mount Vernon Avenue at I-10. The 2008 RTP Project Listing Report (page 172) also indicates that a new interchange is proposed at Pepper Avenue and SR-210; however this interchange project is not included in the Strategic Plan. Although the Strategic Plan does not identify specific completion times for these projects, it does identify priorities for the most critical improvements needed as funding becomes available. A ranking system was developed to prioritize all 33 proposed interchange improvements in the San Bernardino Valley through the year 2040.

Valley Major Street Program: Local jurisdictions may submit a Capital Project Needs Analysis (CPNA) for arterials in their jurisdiction that connect communities, serve major destinations, or provide freeway access in request of funding for improvements through the Measure I program. Within the planning area, portions of the following roadways have been slated for Major Street Program funding:

- Mill Street
- Olive Street/San Bernardino Avenue
- C Street
- Valley Boulevard
- Fairway Drive
- Washington Avenue
- Barton Road
- Riverside Avenue
- La Cadena Drive
- Mount Vernon Avenue
- Reche Canyon Road

Funding for local projects can cover a wide range of transportation related improvements, including rail-highway grade separation, roadway widening, intersection maneuverability improvements, and signal construction, upgrades and coordination. No specific timeframe for funding or implementation of these local improvements are included in the Strategic Plan.

Valley Metrolink and Passenger Rail Program: Eight percent of the Measure I revenue collected in the Valley Area is made available to the Rail Program. Eligible expenditures include the purchase of expansion commuter rail passenger cars and locomotives, construction of additional track capacity, construction of station expansion parking, and maintenance of railway tracks, signal systems, and road crossings. Funding will also be provided to construct and operate a new passenger

rail service between the cities of San Bernardino and Redlands. Nearby Metrolink stations include the Rialto Station and San Bernardino Station. The San Bernardino Station is also proposed to be located on the California High-Speed Rail line as part of the Los Angeles-San Diego segment. The Strategic Plan identifies the potential future improvement of the Rialto Station, although specific improvements have not been identified.

The 2007 Congestion Management Program (CMP) for San Bernardino County is a state-mandated program intended to address regional congestion by linking transportation, land use, and air quality decisions. The CMP establishes six goals, as follows:

- Goal 1: Maintain or enhance the performance of the multimodal transportation system, and minimize travel delay
- Goal 2: Assist in focusing available transportation funding on cost-effective responses to subregional and regional transportation needs
- Goal 3: Provide for technical consistency in multimodal transportation system analysis
- Goal 4: Help to coordinate development and implementation of subregional transportation strategies across jurisdictional boundaries
- Goal 5: Anticipate the impacts of proposed new development on the multimodal transportation system, provide consistent procedures to identify and evaluate the effectiveness of mitigation measures, and provide for adequate funding of mitigation.
- Goal 6: Promote air quality and improve mobility through implementation of land use and transportation alternatives or incentives that reduce both vehicle trips and miles traveled, and vehicle emissions

The CMP includes a deficiency plan that is designed to implement strategies that either fully mitigate congestion or provide measurable improvement to congestion and air quality. The CMP includes the following elements:

The System Level of Service Element defines the CMP roadway system, establishes traffic Level of Service (LOS) standards on the system and prescribes procedures for computing traffic levels of service. The baseline LOS standard is LOS E or the LOS established in 1992 (whichever is most distant from LOS A) for any roadway segment or intersection. If a segment or intersection has been assigned a LOS F because the segment or intersection LOS in 1992 was F, a 10 percent degradation in its volume-to-capacity ration (V/C) will cause the segment to be classified as deficient.

The purpose of the CMP roadway network is to monitor system performance and appropriately allocate transportation funding based on the most critical of congestion alleviation needs. The CMP designates a system of regionally significant roadways and establishes procedures to be used to calculate LOS. These CMP roadways are monitored to identify deficiencies in the system. Table 6.1-3 (CMP Facilities Existing Traffic Conditions) identifies the CMP roadways within the planning area and their existing conditions.

The Performance Element provides a basis on which to objectively assess the relative merits among available modal alternatives and a framework for selecting appropriate alternatives.

The Land Use/Transportation Element addresses the impacts of land use decisions made by local jurisdictions on regional transportation systems including the estimate of costs related to those impacts. The CMP defines roles for local jurisdictions to implement the goals and objectives of the plan. This element requires preparation of Traffic Impact Analysis (TIA) Reports for local projects that will affect CMP facilities. A TIA Report is required to be prepared if a project is modeled to add 250 or more two-way peak hour trips (1,000 or more two-way peak out trips for retails uses) or 50 or more peak hour trips to a state highway. These reports are reviewed by SANBAG and other local jurisdictions. This element also requires development of fair-share mitigation programs to address impacts to CMP facilities. Local jurisdictions are also required to participate in the development of the CMP capital improvement program to address cumulative impacts to CMP facilities over the long-term.

The Travel Demand Management Element includes strategies that are consistent with achieving air quality goals including reductions in trip making, trip length, and travel demand, as well as increasing the availability of modal alternatives.

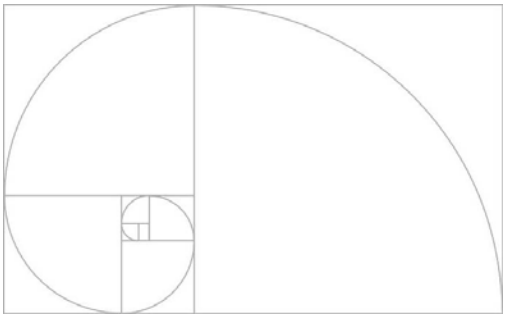
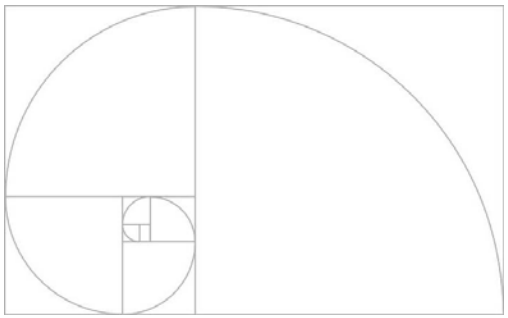


Table 6.1-3
CMP Facilities Existing Traffic Conditions

Roadway Segment	Start	End	Capacity	Volume	V/C	LOS
Agua Mansa Rd.	west of Rancho Ave.		20,000	5,991	0.300	A
Agua Mansa Rd.	East of Riverside Ave.		20,000	7,149	0.357	A
Hunts Ln.	Cooley Ln.	Stewart St. – Harwick Dr.	24,200	7,594	0.314	A
La Cadena Dr.	Mt Vernon Ave.	Oak St/8th St.	20,000	6,293	0.315	A
La Cadena Dr.	Olive St.	C St.	20,000	5,520	0.276	A
La Cadena Dr.	C St.	Valley Blvd.	20,000	8,133	0.407	A
La Cadena Dr.	I-10 Fwy.	N St.	36,700	14,655	0.399	A
La Cadena Dr.	South of Rancho Ave.		36,700	15,909	0.433	A
La Cadena Dr.	North of I-215 interchange		20,000	13,368	0.668	B
La Cadena Dr.	South of I-215 interchange		20,000	3,142	0.157	A
Mt Vernon Ave.	Colton Ave.	La Cadena Dr.	36,700	14,448	0.394	A
Mt Vernon Ave.	Colton Ave.	E St.	36,700	18,561	0.506	A
Mt Vernon Ave.	I-10	M St.	20,000	23,270	1.164	F
Mt Vernon Ave.	San Antonio Dr.	Centre Pointe Dr.	55,000	18,205	0.331	A
Mt. Vernon Ave.	I-215 interchange	Grand Terrace City Limits	20,000	12,481	0.624	B
Pepper Ave.	I-10 Freeway	Slover Ave.	20,000	1,795	0.090	A
Rancho Ave.	Olive St.	C St.	36,700	17,488	0.477	A
Rancho Ave.	C St.	Valley Blvd.	36,700	18,581	0.506	A
Rancho Ave.	I-10 Fwy.	N St.	36,700	16,245	0.443	A
Rancho Ave.	N St.	O St.	36,700	15,274	0.416	A
Rancho Ave.	Fogg St.	La Cadena Dr.	36,700	7,975	0.217	A
Reche Canyon Rd.	South of Washington St.		20,000	26,648	1.332	F
Riverside Ave.	South of Agua Mansa Rd.		36,700	20,094	0.548	A
San Bernardino Ave.	Indigo Ave.	Pepper Ave.	20,000	13,758	0.688	B
San Bernardino Ave.	Pepper Ave.	Meridian Ave.	20,000	11,927	0.596	A
San Bernardino Ave.	Cypress St.	Rancho Ave.	20,000	5,315	0.266	A

Roadway Segment	Start	End	Capacity	Volume	V/C	LOS
Valley Blvd.	Meridian Ave.	Pepper Ave.	36,700	15,028	0.409	A
Valley Blvd.	Rancho Ave.	Cypress St.	36,700	13,867	0.378	A
Valley Blvd.	Pennsylvania Ave.	Rancho Ave.	36,700	9,589	0.261	A
Valley Blvd.	Mt Vernon Ave.	10th St.	36,700	6,602	0.180	A
Washington St.	Mediteranian	Western terminus	20,000	600	0.030	A
Washington St.	Mt. Vernon Ave. (west intx.)	Mediteranian	36,700	5,512	0.150	A
Washington St.	Mt. Vernon Ave. (east intx.)	Meadow Lane	36,700	30,694	0.836	D
Washington St.	Barton Rd./Cooley Dr.	Reche Canyon Rd.	36,700	31,428	0.856	D

Source: KOA, City of Colton



The Monitoring Program and Transportation Modeling Element provides information on current levels of service, identifies system deficiencies, and determines local jurisdiction conformity with the CMP.

The Capital Improvement Element includes a seven-year plan using performance measures to improve the performance of the multimodal transportation system.

The Deficiency Plan identifies locations where LOS at intersections and on roadway segments (arterials and freeways) fail to attain the County's established LOS standards. A determination of "deficiency" is based on the 1992 baseline established when the first CMP was adopted and is made through the monitoring program.

The CMP requires preparation of a deficiency plan for any intersection or roadway segment that experiences traffic congestion in excess of the adopted Level of Service standard, pursuant to Government Code Section 65089.4. Depending on the nature of the traffic impact, a deficiency plan may account for multi-jurisdictional impacts if SANBAG determines that the problem is not produced from a single local agency. Deficiency plans must include the following:

- Identification of the cause of the deficiency
- The contributing factor of each local agency to the deficiency
- A list of improvements necessary to correct the deficiency
- A list of implementation measures (including cost estimates) to measurably improve performance and air quality related to the deficiency
- An action plan adopting final improvements and an implementation schedule specific to each contributing jurisdiction for improving current and future performance

The segments of Mt. Vernon Avenue between I-10 and M Street and Reche Canyon south of Washington Street that were operating at LOS F (according to the General Plan Update Traffic Study prepared by KOA) and are the only deficient system segment within the planning area identified in the CMP.

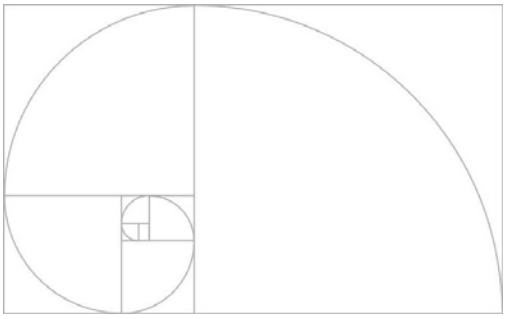
For purposes of cumulative traffic assessment, the CMP is utilized. The General Plan Update's projected traffic increases are assessed against the CMP for those CMP facilities affected by the project. The CMP is integrated into the 2012 RTP; therefore, the analysis serves the dual purpose of assessing traffic impacts in light of both planning programs.

As indicated in Table 4.16-5 (Study Roadway Segment Operations – Future (2030) Proposed General Plan Scenario), nine of the studied roadway segments would operate at LOS E or F with the proposed General Plan Update without mitigation, of which seven would have LOS F. Although mitigation is proposed to potentially address these deficiencies, the physical and financial feasibility has yet been indicated to assure that the mitigation could be accomplished and result in a less than significant cumulative impact.

Freeway congestion on I-10 and I-215 is a result of regional traffic growth, including destinations within the planning area. Although impacts of the General Plan Update on freeway segments was not analyzed in the traffic study, these freeway segments are likely to operate at LOS based on the existing and projected amount of traffic at maximum General Plan capacity and existing improvements to freeways. Improvements to these freeways along with freeway interchanges is not under the jurisdiction of the City of Colton, but rather addressed by CalTrans and SANBAG. Similar to roadway segments, these future improvements cannot be assured to provide sufficient capacity for the incremental long-term growth in traffic thus resulting in acceptable LOS for freeway segments. Due to this, impacts to freeway segments would potentially result in an unacceptable LOS and would be considered cumulatively significant.

Utilities and Service Systems

The context for assessing cumulative impacts to utilities and service systems varies depending on the service area and capacity of the utility which may vary from the planning area, San Bernardino County, or (in terms of water) even statewide. Long-term maintenance and potential expansion of water, wastewater, flood control, and solid waste disposal facilities will be required as the region continues to grow and existing infrastructure ages. All utility providers currently impose development impact fees, connection fees, and service fees designed to maintain and incrementally expand infrastructure to meet existing and growing demand. Future development in the project vicinity and throughout the region will be subject to such fees in accordance with applicable ordinances and service master plans. The proposed General Plan Update would not have a cumulatively considerable impact on these facilities because the General Plan Update includes policies that support water conservation, wastewater reuse, and recycling that will reduce impacts on regional utilities. These policies coupled with existing regulations will provide for cumulatively considerable impacts to utilities and service systems to be less than significant.

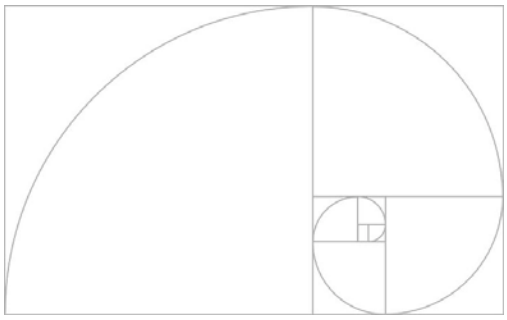


Growth Inducing Impacts 6.2

Growth-inducing effects include ways in which the proposed General Plan Update could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. A prime example is a major infrastructure project or road extension which provides urban service capacities to currently undeveloped areas, thus removing an obstacle to population growth.

The proposed General Plan Update is specifically intended to provide for the orderly growth of the planning area to achieve economic, environmental and quality of life benefits. Nothing in the General Plan Update proposes new infrastructure systems to facilitate growth of undeveloped areas that were not proposed in the existing General Plan. There are no proposed policies, regulations, or ordinances that are part of the project or implied by the General Plan Update Program that will encourage or enable significantly higher levels of growth than have been anticipated in regional forecasts by SCAG. Improvements to the road, storm drain, potable water, and sewer systems, including those listed in this EIR, are intended to achieve desired levels of service as growth occurs, rather than facilitate growth beyond what is planned for in the existing General Plan.

Projects permitted pursuant to land use policy will provide for additional housing for all income levels, create a better balance of residential and non-residential uses in the community, promote organized and pedestrian-friendly commercial development and protect natural resources. Implementation of the General Plan will result in a more inclusive community, maintain a balance between housing and employment and foster a stable economic base and diverse employment opportunities.



Energy Conservation 6.3

Introduction

This energy conservation analysis has been prepared pursuant to California Public Resources Code Section 21100(b)(3) and Appendix F of the CEQA Guidelines.

The purpose of this analysis is to assess the short- and long-term energy demand of the proposed project, identify proposed and required conservation measures, and assess the extent to which the proposed project would conserve energy. Project energy demand will not be wasteful, inefficient, or unnecessary if it does not increase energy demand over typical construction and operating requirements.

Appendix F of the State CEQA Guidelines states that the goal of assessing energy conservation in a project is to ensure the wise and efficient use of energy. Energy efficiency is achieved by decreasing energy consumption, decreasing reliance on fossil fuels, and increasing reliance on renewable energy sources. The guidelines for analysis of energy conservation provided in Appendix F of the State CEQA Guidelines are provided herein.

CEQA Appendix F: Energy Conservation

I. Introduction

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

(1) decreasing overall per capita energy consumption,
(2) decreasing reliance on fossil fuels such as coal, natural gas and oil, and
(3) increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3)). Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving the project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

II. EIR Contents

Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project. The following list of

energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances specific items may not apply or additional items may be needed. Where items listed below are applicable or relevant to the project, they should be considered in the EIR.

A. Project Description may include the following items:

1. *Energy consuming equipment and processes which will be used during construction, operation and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.*
2. *Total energy requirements of the project by fuel type and end use.*
3. *Energy conservation equipment and design features.*
4. *Identification of energy supplies that would serve the project.*
5. *Total estimated daily vehicle trips to be generated by the project and the additional energy consumed per trip by mode.*

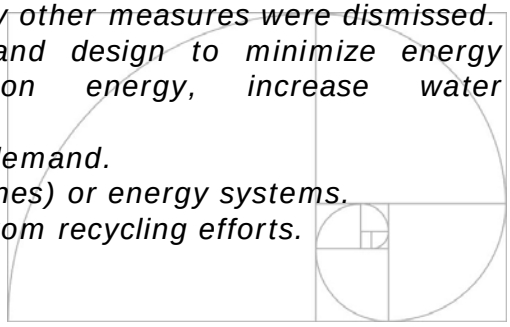
B. Environmental Setting may include existing energy supplies and energy use patterns in the region and locality.

C. Environmental Impacts may include:

1. *The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.*
2. *The effects of the project on local and regional energy supplies and on requirements for additional capacity.*
3. *The effects of the project on peak and base period demands for electricity and other forms of energy.*
4. *The degree to which the project complies with existing energy standards.*
5. *The effects of the project on energy resources.*
6. *The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.*

D. Mitigation Measures may include:

1. *Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.*
2. *The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid waste.*
3. *The potential for reducing peak energy demand.*
4. *Alternate fuels (particularly renewable ones) or energy systems.*
5. *Energy conservation which could result from recycling efforts.*



E. Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.

F. Unavoidable Adverse Effects may include wasteful, inefficient and unnecessary consumption of energy during the project construction, operation, maintenance and/or removal that cannot be feasibly mitigated.

G. Irreversible Commitment of Resources may include a discussion of how the project preempts future energy development or future energy conservation.

H. Short-Term Gains versus Long-Term Impacts can be compared by calculating the project's energy costs over the project's lifetime.

I. Growth Inducing Effects may include the estimated energy consumption of growth induced by the project.

Energy Demand

Short-term energy demand would result from development construction pursuant to implementation of the proposed General Plan Update. This would include energy demand from worker and vendor vehicle trips and construction equipment usage. Long-term energy demand would result from operation of various development types pursuant to implementation of the proposed General Plan Update. This would typically include energy demand from vehicle trips, electricity and natural gas usage, and water and wastewater conveyance. This section generally describes the energy needs of these activities.

Construction Activities

The proposed General Plan Update will not directly result in construction of any development or infrastructure; however, future development supported by the policies of the General Plan will result in short-term energy demand. Short-term energy demand will occur during site preparation, grading, building construction, paving, and painting activities associated with new development. Energy demand results from use of equipment, worker, vendor, and hauling trips.

Operational Activities

The proposed General Plan Update will not directly result in operation of any development or infrastructure; however, future development supported by the policies of the General Plan will result in long-term energy demand. Long-term energy demand will occur primarily from mobile sources, electricity and natural gas use, and water and wastewater.

Mobile Sources

Mobile source energy demand primarily is associated with individual vehicle energy demand and therefore gasoline and diesel fuel primarily as well as electricity increasingly for electric vehicles. Mobile source energy demand may also be associated with public transportation such as buses and trains associated with natural gas, diesel fuel, or electricity. Of all operational energy demands, the proposed General Plan Update seeks most to reduce the energy demand of mobile sources through improved land use and circulation network planning to reduce

reliance on individual vehicles and promote use of public transportation as well as non-motorized transportation such as walking and biking. By seeking to reduce the amount of individual vehicle usage, the proposed General Plan Update would achieve reductions in mobile source operational energy demand.

Electricity and Natural Gas Use

Electricity and natural gas would be required to provide energy to the proposed development of residential, commercial, industrial and other land uses provided for in the proposed General Plan Update. All new development and redevelopment would be subject to current CBC requirements for building energy efficiency. In addition, the proposed General Plan Update encourages energy conservation for development, including facilitating green building standards and LEED (or similar) certification. Other opportunities would also continue to be available to existing and new development to incorporate energy saving features or renewable energy sources into buildings.

Water and Wastewater

Electricity will indirectly be required to treat and convey water to and convey wastewater away from development that implements the proposed General Plan Update. Pursuant to the City's landscape irrigation requirements and the Water Conservation in Landscaping Act, outdoor water use will continue to be regulated for new development to plan landscaping accordingly and conserve water.

Energy Conservation

The project will be subject to state water efficiency regulations pursuant to the 2011 California Building Code (CBC) that will reduce long-term project energy demand. These requirements would reduce wasteful, inefficient, and unnecessary consumption of energy over the long-term.

California Building Code

Pursuant to the 2010 CBC CALGREEN requirements, the project will be subject to the following requirements:[2]

- 20 percent reduction in water demand (5.303.2)
- 20 percent reduction in wastewater discharges (5.303.4)

Reduce Water and Wastewater Demand (5.303.2 & 5.303.4)

The minimum 20 percent reduction in water demand and wastewater discharges would decrease indoor water demand. This would result in a concurrent reduction in energy demand to supply, treat, and convey water and wastewater.

Conclusion

The conservation of energy will result from implementation of the CBC, the City's landscape irrigation regulations, Regional Greenhouse Gas Inventory and Reduction Plan, and General Plan policies seeking to reduce individual vehicle use. With implementation of existing regulations and proposed policies, energy demand for

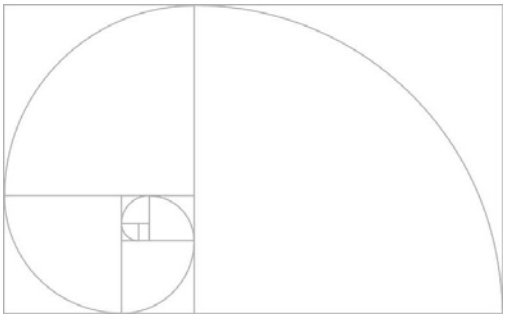
development that implements the proposed General Plan Update will not be wasteful, inefficient, or unnecessary.

Significant Irreversible Environmental Changes 6.4

The General Plan Update provides a policy and regulatory framework to guide future growth into both infill sites and undeveloped areas. Once land is developed with a certain type of land use, reversion to open space for conservation, resource management, or other purposes is highly unlikely.

An irreversible commitment of non-renewable natural resources is inherent in any development project, or in the case of the General Plan Update, numerous development projects over a long period of time. Such resources would include, but are not limited to, lumber and other related forest products; sand and gravel, native topsoil, a variety of metals used in the manufacture of building materials such as steel, copper piping and wiring, etc., along with hydrocarbon-based fuel sources that require extraction and chemical alteration and/or combustion of natural resources such as oil, natural gas, coal, and shale.

Implementation of the General Plan Update represents a long-term commitment to the consumption of energy for electricity, water and space heating, water supply and treatment, industrial processes, as well as fuels to power various modes of mechanized transportation. Impacts associated with long-term energy consumption will depend on the energy sources and methods of producing energy. Typical hydrocarbon-based sources produce higher volumes of various criteria air pollutants and greenhouse gasses than renewable energy sources such as wind and solar power or alternative fuel sources such as biodiesel and cellulosic ethanol. To the extent that hydrocarbon based fuel sources are replaced with less polluting, renewable sources; the irreversible commitment of non-renewable resources will be reduced.



Unavoidable Significant Environmental Impacts 6.5

The analyses of the various impact topics presented in Sections 4.1 to 4.17 conclude that the proposed plan will not result in any significant environmental impacts that cannot be avoided or reduced to less than significant through some mitigation strategy or compliance with an existing regulatory program with the exception of those impacts dealing with air quality, greenhouse gas emissions, and transportation and traffic.

Air Quality

The analysis demonstrates that the General Plan Update's change in land use would not be consistent with the existing projections included in the 2007 AQMP, and the General Plan Update's population capacity would be inconsistent with those used in the draft 2012 AQMP. This inconsistency to accommodate the long-term projected growth may result in an altered development pattern for the region that may interfere with the implementation of either the existing 2007 AQMP or draft 2012 AQMP. Therefore, the potential exists for the General Plan Update to result in the AQMP not achieving attainment of the 24 hour $PM^{2.5}$ standard by 2014 and attainment of the 8-hour ozone standard by 2023.

The inconsistency with population projections would potentially result in non-attainment and is considered significant and unavoidable.

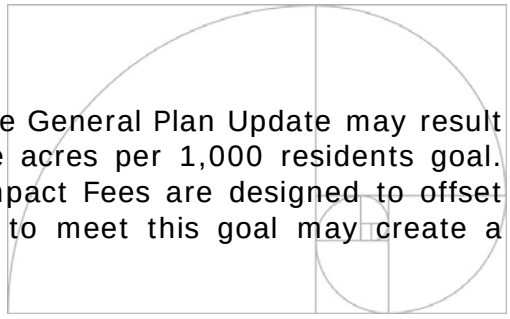
Greenhouse Gas Emissions

The analysis demonstrates that the General Plan Update's population capacity would be inconsistent with those used in SCAG's adopted 2012 RTP/SCS. This inconsistency to accommodate the long-term projected growth may result in an altered development pattern for the region that may interfere with the implementation of the RTP/SCS. Therefore, the potential exists for the General Plan Update to result in neither the RTP/SCS nor ARB's Scoping Plan achieving the required greenhouse gas reduction targets.

The inconsistency with population projections would potentially result in not achieving greenhouse gas reduction targets and is considered significant and unavoidable.

Public Services

The projected remaining population capacity of the General Plan Update may result in insufficient provision of parks based on a five acres per 1,000 residents goal. While existing Quimby fees and Development Impact Fees are designed to offset this impact, the potential lack of available land to meet this goal may create a significant and unavoidable impact.



Recreation

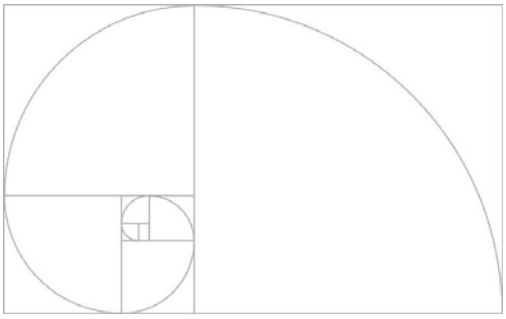
Due to the potential insufficient provision of parks, existing parks may be overutilized and may result in a deterioration that existing funding may not be adequate enough to address and ongoing maintenance may result in a significant and unavoidable impact.

Transportation and Traffic

Implementation of the proposed Land Use Plan and Mobility Element will potentially result in significant impacts to certain intersections, road segments, and freeway segments within the planning area and region. Identified mitigation measures and existing regional transportation improvements are anticipated to reduce impacts to a less than significant level. However, the physical and financial feasibility has yet to be determined to assure that the mitigation could be accomplished to reduce individual and cumulative impacts to less than significant levels.

Due to the lack of assurance to fund, design, and construct necessary roadway and intersection improvements at all locations, impacts from traffic congestion are considered significant and unavoidable.

[1] Southern California Association of Governments. Regional Comprehensive Plan. 2008
[2] California Building Standards Commission. California Building Code. January 2011



Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

7	Effects Found Not to be Significant

Effects Found Not To be Significant 7.0

CEQA Guidelines Section 15128 requires a statement indicating the reason that various possible significant effects are determined not to be significant and therefore are not discussed in the EIR. The Lead Agency, the City of Colton, determined that an EIR was clearly required for analysis of the General Plan update pursuant to Section 15063.a of the CEQA Guidelines and therefore all topics were considered in the EIR.

This page left intentionally blank

Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
References	9

8	Preparation Team

Lead Agency 8.1

City of Colton
650 N La Cadena Drive
Colton, California 92324
909-370-5099

Mark Tomich, Development Services Director

Consultants to the Lead Agency 8.2

Land Use and Planning, Air Quality and Climate Change, and Environmental Review

Hogle-Ireland, Inc.
1500 Iowa Avenue, Suite 110
Riverside, California 92507
951-787-9222

Laura Stetson, Senior Vice President
Christopher Brown, Project Manager Environmental Planning
Lisa Brownfield, Project Manager
Russell Brady, Associate Project Manager II
Adam Collier, Associate Project Manager II
Olivia Young, Assistant Project Manger I

Noise

Kunzman Associates
1111 Town and Country Road, Suite 34
Orange, California 92868
714-973-8383

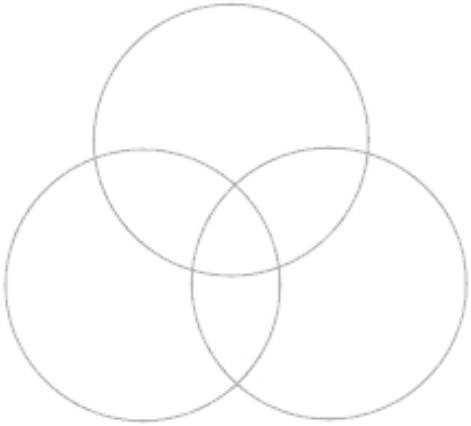
William Kunzman, PE, Principal
Carl Ballard, Principal Associate
Chris Pylant

Traffic and Transportation

KOA Corporation
1100 Corporate Center Drive, Suite 201
Monterey Park, California 91754
323-260-4703

Brian Marchetti
Joel Falter

This page left intentionally blank



Introduction	1
Executive Summary	2
Project Description	3
Environmental Impact Analysis	4
Alternatives	5
Analysis of Long Term Effects	6
Effects Found Not to be Significant	7
Preparation Team	8
Organizations and Persons Consulted	9

9	Organizations and Persons Consulted

Organizations and Persons Consulted 9.0

City of Colton Police Department

Bob Miller, Steve Ward, and B. Burrows

City of Colton Community Services Department

Bill Smith

City of Colton Public Works Department

Ames Jakher, Victor Ortiz, Reggie Torres, and Craig Neustaedter (Traffic Engineer, Consultant to the City)

City of Colton Wastewater Division

Mike Itnyre



This page left intentionally blank









www.hogleireland.com