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Housing Element Update Environmental Impact Report

Prepared for

CITY OF PALMDALE 50 1962 2012 FIFTIETH ANNIVERSARY

Prepared by

RBF CONSULTING A Baker Company

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ENVIRONMENTAL IMPACT REPORT

CITY OF PALMDALE HOUSING ELEMENT UPDATE

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1.0 Executive Summary

1.0 EXECUTIVE SUMMARY

1.1 PROJECT LOCATION

The City of Palmdale is located in the southwestern portion of the Antelope Valley in the Mohave Desert, within the northern portion of Los Angeles County. Palmdale is bounded by unincorporated areas of the County to the east, south, and west and the City of Lancaster to the north. The City is approximately 104-square miles with several pockets of unincorporated territory under county jurisdiction located within the City boundaries. Primary regional access to the City is provided by the Antelope Valley Freeway (SR-14), the major north-south highway connecting Palmdale to Los Angeles and Mohave. State Route 138 (SR-138) is the major east-west highway connecting Palmdale to the Inland Empire and SR-18 connecting Palmdale to Victorville via Interstate 15 to the east. The location of the proposed 2006-2014 Housing Element Update (herein referred to as the "project") is citywide.

1.2 PROJECT SUMMARY

State law recognizes the role local governments play in the availability, adequacy, and affordability of housing. Every jurisdiction in California is required to adopt a long-range General Plan to guide its physical development; the Housing Element is one of the seven mandated elements of the General Plan. Housing Element law mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for (and do not unduly constrain) housing production. Housing Element statutes also require the State Department of Housing and Community Development (HCD) to review local housing elements for compliance with state law and to report their findings to the local government.

California's housing element law requires that each city and county develop local housing programs to meet its "fair share" of existing and future housing needs for all income groups. The Southern California Association of Governments (SCAG) is responsible for developing and assigning these regional needs, via a Regional Housing Needs Assessment (RHNA), to southern California jurisdictions.

REGIONAL HOUSING NEEDS ASSESSMENT

California Housing Element law requires that each city and county develop local housing programs designed to meet its "fair share" of existing and future housing needs for all income groups, as determined by the jurisdiction's regional Council of Governments, when preparing the state-mandated Housing Element of its General Plan. This "fair share" allocation is intended to ensure each jurisdiction provides policies and programs to address existing and forecasted housing needs.

The City of Palmdale is a member government of SCAG, which finalized the RHNA allocation in 2007 quantifying the existing and projected growth needs for Palmdale. Specifically, the City's RHNA allocation for the period January 1, 2006 to June 30, 2014 is provided in Table 1-1,

RHNA Allocation (2006-2014). As indicated in Table 1-1, the City's fair share housing needs allocation is 17,910 new housing units for the 2006 to 2014 planning period.

Table 1-1
RHNA Allocation (2006-2014)

Income Category	Number of Units	Percentage
Very Low (50% or less of median)	4,481	25.0%
Low (51% to 80% of median)	2,822	15.8%
Moderate (80% to 120% of median)	3,024	16.9%
Above Moderate (>120% of median)	7,583	42.3%
Total	17,970	100%

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-37.

In order to determine the regional housing needs for the 2006-2014 planning period, the needs are adjusted by the actual number of units constructed from January 1, 2006 to the present. Table 1-2, *Adjusted RHNA Allocation (2006-2014)*, summarizes the units constructed as of December 31, 2011, according to income category. As indicated in Table 1-2, a total of 3,489 dwelling units have been constructed in the City during that time period. The units constructed since January 1, 2006 are credited towards the City's RHNA allocation. In consideration of the units constructed, the City's adjusted need for 2006-2014 is 14,421 housing units, with 6,920 units allocated for very low- and low-income households.

Table 1-2
Adjusted RHNA Allocation (2006-2014)

Income Level	RHNA Allocated Units	Completed Units	Remaining Units
Very Low (50% or less of median)	4,481	57	4,424
Low (51% to 80% of median)	2,822	326	2,496
Moderate (80% to 120% of median)	3,024	39	2,985
Above Moderate (>120% of median)	7,583	3,067	4,516
Total	17,910	3,489	14,421

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-38.

PROJECT CHARACTERISTICS

The Housing Element comprises one of the seven General Plan Elements mandated by the State of California, as expressed in Sections 65580 to 65589.8 of the California Government Code. California State Law requires that the Housing Element consist of "identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing."

As required by State Housing Law, the City of Palmdale must plan for its share of the region's new housing needs in four state-defined income categories by identifying an adequate supply of land zoned at appropriate densities to accommodate needs in each income category. The RHNA goals do not explicitly require the City to construct the identified housing need, but rather seek to ensure the City has, or plans to add policies, programs, and regulations that will accommodate new housing growth.

To address the City's needs for very low- and low-income housing, Palmdale must demonstrate that it has an adequate supply of land for higher density housing. Although zoning land for higher density development does not guarantee the construction of housing that is affordable to low- and moderate-income families, without such higher density zoning, the opportunity to provide housing for lower income households is limited.

The City of Palmdale 2006-2014 Housing Element identifies and analyzes existing and projected housing needs, and articulates the City's official policies for the preservation, conservation, improvement, and production of housing within the City. The Housing Element has been prepared in compliance with State Housing Element law. It examines the City's housing needs, as they exist today, and projects future housing needs. It sets forth statements of goals, objectives, and policies and includes a housing policy program that responds to current and future needs within the limitations posed by available resources. The housing policy program details a series of actions to achieve its goals and objectives. Upon adoption by the Palmdale City Council, the updated Housing Element would serve as a comprehensive statement of the City's housing policy and provide a specific program of actions for implementation.

In addition to goals, objectives, and policies, the proposed 2006-2014 Housing Element Update includes implementing actions that involve site-specific changes to land use designations and zoning, as well as an amendment to the Palmdale Transit Village Specific Plan in order to meet its RHNA allocation. This EIR focuses on the proposed programs presented in the City of Palmdale Housing Element 2006-2014, including the proposed General Plan Amendment, Zone Change, Zoning Ordinance Amendment, and Specific Plan Amendment, described further under *Sites Proposed for General Plan Amendment/Zone Changes*.

HOUSING PROGRAMS AND OBJECTIVES

The City's housing programs are intended to illustrate the City's commitment to the continued maintenance, improvement, and development of housing within the City. Section VIII, Goals, Objectives, Policies, and Programs, of the proposed Housing Element, describes specific actions to implement the City's housing programs. The Housing Element's policy program is intended to show the City's commitment to maintain, improve, and develop housing in the community through "good faith, diligent efforts," as required by State Housing Law (Government Code Section 65583(c)). While the program provides a comprehensive approach to address housing issues throughout the City, its emphasis is on providing adequate and affordable housing for Palmdale residents of all income levels, and to identify and accommodate segments of the City population with special housing needs.

Ability to Meet Regional Housing Needs Allocation

To enable the City to meet its share of the region's housing needs, the City has evaluated its capacity to meet the future needs, based on entitled development, existing development capacities, and vacant land resources. Housing Element Table H-40 outlines the seven residential zones in Palmdale (excluding Specific Plan areas) and their corresponding permitting densities. The availability of land suited to accommodate the various income levels is based upon the allowed density within these zones. Based upon the site inventory and analysis, the City has demonstrated that it has or will make available adequate sites with appropriate zoning and development standards and with services and facilities.

ADEQUATE SITES ANALYSIS

California Government Code Section 65883(a)(3) requires that housing elements include an inventory of land suitable for residential development, including vacant sites and sites having the potential for redevelopment, and an analysis of the zoning and infrastructure available to serve these sites. This inventory is used to identify sites that can be feasibly developed for housing within the planning period in order to meet the RHNA. Housing Element Section VI contains the required inventory of adequate sites for new housing that can be developed to meet the City's housing needs within the planning period. The findings of the inventory and analysis are summarized below.

As indicated in Table 1-2, a total of 3,489 dwelling units have been constructed in the City between 2006 and 2011. In consideration of the units constructed, the City's adjusted need for 2006-2014 is 14,421 dwelling units, with 6,920 units allocated for very low- and low-income households.

Units Under Construction. The City has one project currently under construction within the Palmdale Transit Village Specific Plan, which consists of 198 units for very low- and low-income and 79 dwellings for moderate-income. As building permits for these units were issued after December 31, 2011, the units were not included as completed units within Table 1-2.

Vacant Land. The proposed Housing Element Site Analysis section identifies 40 separate areas available for new housing at densities that would accommodate moderate- and above moderate-income dwelling units. These areas consist of 3,149 acres of vacant land (255 parcels) that are currently zoned for residential uses, and land within existing specific plans that are currently designated for residential uses. Based on the permitted densities, the vacant land would allow for construction of a minimum of 7,687 moderate- and above moderate-income dwelling units. Although the Site Analysis specifically identifies 3,149 vacant acres capable of accommodating a minimum of 7,687 moderate- and above moderate-income dwelling units, the City has determined that based upon current zoning, there is sufficient vacant land available citywide to accommodate a total of 30,223 units.

RHNA Summary. When considering the units under construction and vacant land currently zoned for residential uses, Palmdale has enough vacant land to accommodate its moderate- and above moderate-income need; refer to Table 1-3, *RHNA Needs Summary*. However, because the permitted densities are lower than the 30 dwelling units per acre required by State housing law for the construction of housing units affordable to lower-income households, the City would have a remaining RHNA need of 6,722 very low- and low-income dwellings.

Therefore, the City has a shortfall of vacant and underutilized residential land to accommodate its very low- and low-income growth needs.

Table 1-3
RHNA Needs Summary

Income Category	Adjusted RHNA Allocation (2006-2014)	Dwelling Units Under Construction	Residentially Zoned Vacant Land Capacity	Remaining RHNA Need	Dwelling Units with General Plan Amendment and Zone Change	Final RHNA Need
Very Low (50% or less of median)	4,424	198	0	6,722	7,658	-936
Low (51% to 80% of median)	2,496					
Moderate (80% to 120% of median)	2,985	79	7,687	-265	0	-265
Above Moderate (>120% of median)	4,516					
Total	14,421	277				

SITES PROPOSED FOR GENERAL PLAN AMENDMENT/ZONE CHANGES

Pursuant to AB 2348, jurisdictions with a shortfall of vacant and underutilized residential land to meet its RHNA needs must commit to a rezoning program to provide adequate sites to meet its housing growth needs. In order to provide sites for the remaining very low- and low-income units, Palmdale proposes to amend its General Plan, Zoning Ordinance, Zoning Map, and the Palmdale Transit Village Specific Plan, including changing the General Plan Land Use and Zoning designations for several properties.

Section VIII of the proposed Housing Element includes a number of implementation actions involving changes to the General Plan Land Use Map and/or the Zoning Ordinance that are necessary to accommodate the remaining very low- and low-income needs, thereby, ensuring continued compliance with State law. These implementation actions include site-specific changes to land use designations and zones, as well as introduction of new land use designations and changes to the Zoning Ordinance that apply citywide. The proposed changes would allow for construction of a minimum of 7,658 dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need; refer to Table 1-3. In addition to accommodating the adjusted RHNA allocation of 6,722 very low- and low-income units at the minimum permitted density, General Plan Amendment 11-03, Zone Change 11-01, and Specific Plan Amendment 11-01 would provide opportunity for an additional 5,595 dwelling units that could also accommodate very low and low-income units at a typical development density.

General Plan Amendment 11-03

General Plan Amendment (GPA) 11-03 would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with new Medium-High and High Density Residential land use designations. The General Plan Land Use Map would be

amended to identify the properties proposed for new Medium-High and High Density Residential land uses.

Zone Change 11-01

Zone Change (ZC) 11-01 would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) and R-4 (50) (High Density Residential, minimum of 50 dwelling units per acre) zones. ZC 11-01 is generally located within the central portion of the City, between Avenue Q on the north, Avenue R on the south, east of the alignment of 4th Street East on the west and 15th Street East to the east. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres. The new R-4 (50) zone would allow high-density residential development at a density of between 50 and 60 dwelling units per acre.

Zoning Ordinance Amendment 11-05

Zoning Ordinance Amendment (ZOA) 11-05 would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones. ZOA 11-05 could affect properties Citywide.

Specific Plan Amendment 11-01

Specific Plan Amendment (SPA) 11-01 would involve the properties within Neighborhood C of the Palmdale Transit Village Specific Plan (SP-18), generally located on the north and south sides of Avenue P-14, between 4th Street East and 6th Street East. SPA 11-01 would amend the permitted density within Neighborhood Zone C from 25-40 dwelling units per acre to 30-40 dwelling units per acre.

Table 1-4, *GPA 11-03, ZC 11-01, and SPA 11-01 Net Development Potential*, summarizes the residential development potential that would be accommodated assuming removal of existing land uses and new development of medium- and high-density residential uses at typical densities that would occur within the new R-4(30) and R-4(50) zones and within Neighborhood Zone C of the Palmdale Transit Village Specific Plan.

Sites Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of approximately 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Regarding the remaining 2,786 dwelling units, given the conceptual nature of their future development, the analysis in this document is limited to a programmatic-level review of potential environmental impacts. Additionally, the analysis refers to these 2,786 dwelling units as development on “residentially-zoned land” that would occur throughout the General Plan study area.

Table 1-4
GPA 11-03, ZC 11-01, and SPA 11-01 Net Development Potential

Land Use	Residential (dwelling units)	Non-Residential (square feet)
Existing (on-the-ground) Uses Potentially to be Removed		
Single-Family	-204	
Multiple-Family	-2,834	
Civic		-1,714
Public Facility		-30,000
Religious Assembly		-39,916
Subtotal	*-3,038*	*-71,630*
Potential New Development		
Single-Family	0	
Multiple-Family	13,253	
Civic		0
Public Facility		0
Religious Assembly		0
Subtotal	*13,253*	*0*
Net Development Potential		
Single-Family	-204	
Multiple-Family	+10,419	
Civic		-1,714
Public Facility		-30,000
Religious Assembly		-39,916
Total	+10,215	-71,630

Also, as concluded above, 13,253 dwelling units could be accommodated with implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01, and 3,038 dwelling units and 71,630 square feet of non-residential uses could potentially be removed. Regarding the remaining net development of 10,215 dwellings, although there is no immediate physical development associated with the project, the analysis in this document would evaluate the potential impacts, at a site-specific level, commensurate with the degree of specificity involved in the proposed GPA, ZC, and SPA. Additionally, the analysis refers to these 10,215 dwelling units as development on “rezoned land.”

Overall, implementation of the proposed project is anticipated to result in a net increase of 13,001 dwelling units throughout the City and the potential construction of 16,039 new units.

1.3 PROJECT GOALS/OBJECTIVES

The Housing Policy Program details the City’s goals, objectives, policies, and implementation actions in regards to the maintenance, improvement, preservation, and development of housing for all segments of the community. In developing the policy program, the City assessed its current and projected housing needs, evaluated performance in implementing existing policies

and programs, and analyzed current constraints and resources. The City has identified the following overarching goals/objectives of the Housing Element:

- Promote the construction of new housing affordable to all income groups;
- Preserve and improve the existing supply of affordable housing;
- Remove government constraints on housing;
- Promote equal housing for all persons;
- Adequately house households with special needs;
- Implement energy and water conservation measures;
- Enhance the vitality and safety of existing residential neighborhoods;
- Promote neighborhood versatility by encourage a mix of new housing alternatives to increase affordability and promote home ownership;
- Promote higher density residential uses in close proximity to existing transportation infrastructure, including the Palmdale Transportation Center;
- Provide for higher density residential uses close to support services for residents, such as commercial uses, schools, parks and open space; and
- Provide development standards and design guidelines that provide a safe environment for residents and will direct transit and pedestrian oriented development.

1.4 SUMMARY OF PROJECT ALTERNATIVES

ALTERNATIVE 1: NO PROJECT (EXISTING HOUSING ELEMENT) ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(3)(A) provides that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future." Under Alternative 1: No Project (Existing Housing Element) Alternative, the Housing Element Update and associated General Plan Land Use Element Update, Zoning, and Specific Plan amendments would not occur and the existing Housing Element (2001) and policies would remain in effect, with the exception of the Zoning Ordinance Amendment regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates. Various sections of the Zoning Ordinance would be amended to be consistent with State law, as described in Section 3.0, Project Description. Housing development within the City would continue as guided under the existing Housing Element (2001). Over the eight-year planning period, approximately 3,789 new residential units are anticipated to be built.

ALTERNATIVE 2: GEOGRAPHICALLY DISTRIBUTED ALTERNATIVE

Alternative 2 assumes adoption of the Housing Element programs and objectives, as proposed. Under Alternative 2, the City's moderate- and above moderate-income RHNA allocation of 7,687 dwelling units would be met through land currently zoned for residential uses and within existing specific plans that are currently designated for residential uses. In order to provide sites for the remaining 6,722 very low- and low-income units, Alternative 2 would amend the City's General Plan, Zoning Ordinance, and Zoning Map, including changing the General Plan Land Use and Zoning designations for approximately 360 acres, as described below.

Alternative 2 considers all existing vacant R-3 (Multiple Residential) parcels, in addition to some vacant commercial parcels located along arterial streets. This Alternative provides the widest geographical distribution of units, as vacant parcels are largely dispersed within the City.

The proposed changes would allow for construction of up to 10,800 dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need of 6,722 units.

General Plan Amendment. A General Plan Amendment (GPA) would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with a new Medium-High Density Residential land use designation. The General Plan Land Use Map would be amended to identify the properties proposed for the new Medium-High Density Residential land uses.

Zone Change. A Zone Change (ZC) would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) zone. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres.

Zoning Ordinance Amendment. A Zoning Ordinance Amendment (ZOA) would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones.

Alternative 2 Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Therefore, for analysis purposes the remaining 2,786 dwelling units are considered for potential environmental impacts.

Also, as concluded above, 10,800 new dwelling units could be accommodated with implementation of the proposed GPA and ZC. Overall, implementation of Alternative 2 is anticipated to result in an increase of 13,586 dwelling units throughout the City.

ALTERNATIVE 3: CORRIDOR ALTERNATIVE

Alternative 3 assumes adoption of the Housing Element programs and objectives, as proposed. Under Alternative 3, the City's moderate- and above moderate-income RHNA allocation of 7,687 dwelling units would be met through land currently zoned for residential uses and within existing specific plans that are currently designated for residential uses. In order to provide

sites for the remaining 6,722 very low- and low-income units, Alternative 3 would amend the City's General Plan, Zoning Ordinance, and Zoning Map, including changing the General Plan Land Use and Zoning designations for approximately 273 acres, as described below.

The parcels identified for rezone are located along existing arterial roadways and transit routes, and in close proximity to existing and future commercial development. Alternative 3 considers existing vacant parcels zoned R-3 that are of sufficient size to realistically permit development at the required density; R-3 zoned parcels that contain existing development, but were considered underutilized; R-3 zoned parcels that include existing development consistent with zoning of 30 du/ac; and existing commercial properties that would need to be rezoned. This scenario minimizes the potential for rezoning commercial land for future residential uses.

The proposed changes would allow for construction of up to 7,800 new dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need of 6,722 units. Potential construction of up to 7,800 new dwelling units could involve the removal of 2,625 dwelling units and 71,630 square feet of civic, public facility, and religious assembly uses.

General Plan Amendment. A General Plan Amendment (GPA) would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with a new Medium-High Density Residential land use designation. The General Plan Land Use Map would be amended to identify the properties proposed for the new Medium-High Density Residential land uses.

Zone Change. A Zone Change (ZC) would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) zone. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres.

Zoning Ordinance Amendment. A Zoning Ordinance Amendment (ZOA) would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones.

Alternative 3 Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Therefore, for analysis purposes the remaining 2,786 dwelling units are considered for potential environmental impacts.

Also, as concluded above, 7,800 dwelling units could be accommodated with implementation of the proposed GPA and ZC and 2,625 dwelling units and 71,630 square feet of non-residential uses could potentially be removed.

Overall, implementation of Alternative 2 is anticipated to result in a net increase of 7,961 dwelling units throughout the City and the potential construction of 10,586 new units.

1.5 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
LAND USE AND PLANNING		
Southern California Association of Governments		
The proposed project would not conflict with SCAG's Regional Planning Efforts.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
City of Palmdale General Plan		
The proposed project would not conflict with Palmdale General Plan Goals.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
City of Palmdale Zoning Ordinance		
The proposed project would not conflict with Palmdale Zoning Ordinance.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Proposed Palmdale Transit Village Specific Plan Amendment		
The proposed project would not conflict with Palmdale Transit Village Specific Plan, as Amended.	No mitigation is required.	Less Than Significant Impact.
Regional Housing Needs Assessment		
The proposed project would not conflict with the Regional Housing Needs Assessment.	No mitigation is required.	Less Than Significant Impact.
Air Installation Compatible Use Zone (AICUZ) Study		
The proposed project would not conflict with the Air Installation Compatible Use Zone (AICUZ) Study.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Development associated with Implementation of the proposed project and other related development would not result in cumulatively considerable land use impacts.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
TRANSPORTATION AND CIRCULATION		
Existing Project Conditions		
Project implementation would cause a significant increase in traffic for existing conditions when compared to the traffic capacity of the street system.	TR-1 *Implement Project-Specific Transportation Demand Management Program* – As development occurs within the rezone project area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to	Significant and unavoidable impact at the following roadway segment and intersection: • Palmdale Boulevard (SR-138) between Division Street and 5th Street

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/ pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc. TR-2 Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TR-3 Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/ Railroad crossing, preparation of a Project Study Report (PSR) is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. TR-4 Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East – Implement Mitigation Measure TR-1 to reduce daily and	East; and • 5th Street East/Palmdale Boulevard (SR-138).

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair contribution to restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road. TR-5 Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TR-6 Sierra Highway/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. Widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. TR-7 10th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and	

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	peak hour traffic generation by a minimum of ten (10) percent. TR-8 12th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, the City shall identify and implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection. TR-9 15th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection. TR-10 Palmdale Boulevard (SR-138) between Division Street and 5th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TR-11 5th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.	
Future Buildout With Project Conditions		
Potential development associated with the proposed project and General Plan buildout would result in significant traffic impacts.	TR-12 Implement Project-Specific Transportation Demand Management Program – As development occurs within the rezone project area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic	Significant and unavoidable impacts for the following roadway segments and intersection: • Palmdale Boulevard (SR-138) between Division Street and 5th Street East;

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc. (Same as Mitigation Measure TR-1). TR-13 <u>10th Street East between Avenue Q and Palmdale Boulevard (SR-138)</u> – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe 10th Street East between Avenue Q and Palmdale Boulevard (SR-138) from a 2-lane road to a 4-lane roadway. While most of the roadway is a 4-lane divided roadway, a portion near Palmdale Boulevard currently only provides one northbound lane. TR-14 <u>Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East</u> – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road. (Same as Mitigation Measure TR-4). TR-15 <u>11th Street East/Palmdale Boulevard (SR-138)</u> – Implement Mitigation	• Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East; • Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and • 5th Street East/Palmdale Boulevard (SR-138).

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 11th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desire, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection. TR-16 12th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection. (Same as Mitigation Measure TR-8). TR-17 15th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection. (Same as Mitigation Measure TR-9). TR-18 Palmdale Boulevard (SR-138) between Division Street and 5th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TR-19 Palmdale Boulevard (SR-138) between 5th Street East and 6th	

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TR-20 Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/ Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. TR-21 5th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, future development projects within the rezone project area shall make a fair share contribution to widen the northbound 5th Street East approach from one left-turn lane, one through lane, and one right-turn lane to consist of two left-turn lanes, one through lane, and one right-turn lane. The City shall implement protected traffic signal phasing for north-south movements.	
Existing With Project Conditions at CMP Facilities		
Project implementation would not cause a significant increase in traffic at a CMP facility under existing with project conditions, when compared to the traffic capacity of the CMP facility.	TR-22 Sierra Highway/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by approximately minimum of ten (10)	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	percent. Future development projects within the rezone project area shall make a fair share contribution to widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane and to widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. (Same as Mitigation Measure TR-6).	
Future Buildout With Project Conditions at CMP Facilities		
Project implementation would not cause a significant increase in traffic at a CMP facility under future with project conditions, when compared to the traffic capacity of the CMP facility.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Conflict With Policies, Plans, or Programs		
Project implementation would not result in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities as a result of a conflict with adopted policies, plans, or programs.	TR-23 Implement Transit System Improvements – As development occurs within the Traffic Impact Analysis study area, project applicants shall coordinate with the local transit agency and the City to identify transit-supportive infrastructure and the potential to contribute to transit system improvements, such as increased fixed route service frequency or implementation of a shuttle system linking the project area with the Palmdale Transportation Center and other key nodes of activity within the area such as the Civic Center, parks, and schools. Timing and implementation of improvements	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	and/or contributions shall be identified and verification provided to the City.	
Cumulative Impacts		
Development associated with implementation of the proposed project and other related development would result in cumulatively considerable transportation and circulation impacts.	Refer to Mitigation Measures TR-1 through TR-23.	Significant and unavoidable impacts for the following roadway segments and intersection: • Palmdale Boulevard (SR-138) between Division Street and 5th Street East; • Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East; • Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and • 5th Street East/Palmdale Boulevard (SR-138).
AIR QUALITY		
Short-Term Construction Air Emissions		
Short-term construction activities associated with the proposed project could result in air pollutant emission impacts or expose sensitive receptors to substantial pollutant concentrations.	AQ-1 During clearing, grading, earth-moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified by the AVAQMD, including but not limited to AVAQMD Rule 401, Visible Emissions, and Rule 403 Fugitive Dust: • On-site vehicle speed shall be limited to 15 miles per hour; • All on-site construction roads with vehicle traffic shall be watered periodically; • Streets adjacent to the Project's reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust; • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice	Significant and Unavoidable Impact.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	daily with complete coverage, preferably in the late morning and after work is done for the day; • All clearing, grading, earth-moving, or excavation activities shall cease during periods of high winds (i.e., greater than 35 miles per hour averaged over one hour) so as to prevent excessive amounts of dust; • All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust; • The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and • These control techniques shall be indicated on project grading plans. Compliance with this measure shall be subject to periodic site inspections by the City of Palmdale. AQ-2 All trucks hauling excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4), as amended, regarding the prevention of such material spilling onto public streets. AQ-3 During construction activities, excessive construction equipment and vehicle exhaust emissions shall be controlled by implementing the following procedures, as specified by the AVAQMD: • Properly and routinely maintain all construction equipment, as recommended by manufacturer manuals, to control exhaust emissions;	

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	• Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling engines; • Encourage ride sharing and use of transit transportation for construction employee commuting to the project sites; • Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment; and • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak-hour of vehicular traffic on adjacent roadways. AQ-4 The construction contractor shall adhere to AVAQMD District Rule 1113 (Architectural Coatings) to limit volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up and labeling requirements. AQ-5 All building demolition activities shall adhere to AVAQMD District Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities) and Regulation X (National Emissions Standards for Hazardous Air Pollutants). Additionally, the demolished material shall be transported off-site expeditiously after demolition of the structure.	
Long-Term (Operational) Air Emissions		
Potential development associated with the proposed project could result in significant impacts pertaining to operational air emissions.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
Consistency with Regional Plans		
Potential development associated with the proposed project would not be consistent with regional plans.	No additional mitigation has been identified.	Significant and Unavoidable Impact.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
Cumulative Impacts		
Potential development associated with implementation of the proposed project and other related development could impact existing regional air quality levels on a cumulative basis.	Refer to Mitigation Measures AQ-1 through AQ-5. No additional mitigation has been identified.	Significant and Unavoidable Impact.
GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE		
Greenhouse Gas Emissions		
Greenhouse gas emissions generated by the proposed project could have a significant impact on global climate change.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
Consistency with Applicable GHG Plans, Policies, or Regulations		
Implementation of the proposed project would not conflict with an applicable Greenhouse Gas Reduction Plan, policy, or regulation.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Cumulative Impacts		
Greenhouse Gas Emissions resulting from implementation of the proposed project and related development within the City could impact Greenhouse Gas levels on a cumulatively considerable basis.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
NOISE		
Short-Term Construction Noise		
Grading and construction within the area could result in significant temporary noise impacts to nearby noise sensitive receivers.	NOI-1 To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes the following measures, ongoing through demolition, grading, and/or construction: • Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of five dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. • Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and incorporate insulation barriers, or other measures to the extent feasible. NOI-2 Prior to the issuance of each grading permit, project applicants shall submit to the Community Development Department a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following: • A procedure and phone numbers for notifying the City Public Works Department staff and Palmdale Sheriff's Department (during regular construction hours and off-hours); • A sign posted on-site pertaining the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours); and • A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood	

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	notification, posted signs, etc.) are completed.	
Vibration Impacts		
Project implementation could result in significant vibration impacts to nearby sensitive receptors.	NOI-3 The City shall require future developments to implement the following measures to reduce the potential for human annoyance and architectural/structural damage resulting from elevated groundborne noise and vibration levels. • Pile driving within a 50-foot radius of occupied units or designated historic structures shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers). • The preexisting condition of all designated historic buildings within a 50-foot radius of proposed construction activities shall be evaluated during a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage shall be repaired back to its preexisting condition.	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.
Long-Term (Mobile) Noise Impacts		
Traffic generated by the proposed project could significantly contribute to existing traffic noise in the area or exceed the City's established standards.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Railroad Noise		
The proposed project would not expose people to severe noise levels associated with railroad noise.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Long-Term (Stationary) Noise Impacts		
The proposed project would not result in a significant increase in long-term stationary ambient noise levels.	No additional mitigation is required.	Less Than Significant Impact.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
Cumulative Impacts		
Potential development associated with implementation of the proposed project and other related development throughout the City could result in cumulatively considerable noise impacts from mobile (vehicular and railroad) and stationary noise sources.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
HAZARDS AND HAZARDOUS MATERIALS		
Construction-related accidental release of hazardous materials.		
Short-term construction activities associated with the anticipated residential development could create a significant hazard to the public or environment through accident conditions involving the release of hazardous materials into the environment.	HAZ-1 Prior to demolition and/or rehabilitation activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the Antelope Valley Air Quality Management District (AVAQMD) Rule 1403. HAZ-2 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified lead specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifics exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	abatement activities to the City Project Engineer. HAZ-3 A formal Phase I Environmental Site Assessment (ESA) shall be prepared on a project-by-project basis for any vacant, commercial, and industrial properties involving hazardous materials or waste. The Phase I ESA shall be prepared in accordance with ASTM Standard Practice E 1527-05 or the Standards and Practices for All Appropriate Inquiry (AAI), prior to any land acquisition, demolition, or construction activities. The Phase I ESA would identify specific Recognized Environmental Conditions (RECs), which may require further sampling/remedial activities by a qualified hazardous materials Environmental Professional with Phase II/site characterization experience prior to land acquisition, demolition, and/or construction. The Environmental Professional shall identify proper remedial activities, if necessary. HAZ-4 If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following: • Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area; • Notify the City's Project Engineer; • Secure the area as directed by the Project Engineer; and • Notify the implementing agency's Hazardous Waste/Materials Coordinator. The Hazardous Waste/Materials Coordinator shall advise the responsible party of further actions that shall be taken, if required.	

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
Operations-Related Accidental Release of Hazardous Materials		
Long-term operations of the anticipated residential development could create a significant hazard to the public or environment through accident conditions involving the release of hazardous materials.	Refer to Mitigation Measure HAZ-3.	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.
Cortese List Sites		
Future residential development within the City could be located on a site currently on the Cortese list, creating a significant hazard to the public or the environment.	Refer to Mitigation Measures HAZ-3 and HAZ-4.	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.
Hazardous Emissions or Materials Near Schools		
Project implementation could result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school.	Refer to Mitigation Measures HAZ-1 through HAZ-4.	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.
Airport Safety Hazard		
Project implementation would not result in a safety hazard associated with Plant 42 for people residing within the project area.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Cumulative Impacts		
Development associated with implementation of the proposed project and other related development could result in cumulative impacts associated with hazards and hazardous materials.	Refer to Mitigation Measures HAZ-1 through HAZ-4.	Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.
HYDROLOGY AND WATER QUALITY		
Short-Term Surface Water Quality		
Grading, excavation, and construction activities associated with the proposed project could impact water quality.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Long-Term Surface Water Quality		
Implementation of the proposed project could potentially result in increased run-off amounts and degraded water quality.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Drainage and Hydrology		
Implementation of the proposed project could alter drainage patterns and runoff volumes, in a manner that could exceed the drainage systems capacities or result in localized flooding.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Flood Hazards		
Implementation of the proposed project could place people and housing within a 100-year flood hazard area.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Flooding/Dam Inundation		
Implementation of the proposed project could expose people and housing to flooding associated with failure of a levee or a dam.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
Cumulative Impacts		
Development associated with implementation of the proposed project and other related development could cumulatively impact hydrology and water quality.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact With General Plan Policies Incorporated.
BIOLOGICAL RESOURCES		
Special Status Plant and Wildlife Species		
Project implementation could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status.	BIO-1 A site-specific Biological Resources Assessment shall be conducted for future development projects in known or suspected natural habitat areas by a qualified Biologist, prior to an application being deemed complete, to determine the potential presence/absence of candidate, sensitive, or special status species, as well as the presence/absence of habitat that would support these species. BIO-2 If deemed necessary by the site-specific Biological Resources Assessment, a Focused Survey of the proposed development site shall be conducted by a qualified Biologist, prior to any ground disturbance, for sensitive plant and wildlife species that are federally- or state-listed as endangered or threatened, having moderate to high potential for occurrence on the proposed development site. BIO-3 If deemed necessary by the Biological Resources Assessment, a pre-construction Burrowing Owl Survey shall be conducted to determine the presence/absence of the burrowing owl on the proposed development site, before any ground disturbance occurs. The Survey shall be conducted by a qualified Biologist according to the standard protocol established by CDFG and the Burrowing Owl Consortium (BOC). If burrowing owls are determined to be present on the development site, mitigation for potential impacts to owls shall follow the guidelines outlined by the BOC, including passive relocation during the non-breeding season.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	BIO-4 If deemed necessary by the Biological Resources Assessment, focused Trapping Surveys shall be conducted to determine the presence/absence of the Mohave ground squirrel on the proposed development site prior to any ground disturbance. The Surveys shall be conducted according to the guidelines established by CDFG. If Mohave ground squirrel is determined to be present onsite, a State Permit shall be obtained pursuant to CDFG Code Section 2081.	
Riparian Habitat/Sensitive Natural Community		
Project implementation could have a substantial adverse effect on riparian habitat or other sensitive natural community.	Refer to Mitigation Measure BIO-1.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.
Jurisdictional Waters and Wetlands		
Project implementation could have a substantial adverse effect on federally protected wetlands.	BIO-5 Prior to approval of a Tentative Tract or Parcel Map, a qualified wetland specialist shall conduct a wetland delineation of all jurisdictional waters within a site, in accordance with USACE methodology. If needed, the specialist shall also submit a request for a streambed alteration agreement from CDFG, and prepare/submit a request for a jurisdictional determination to the USACE or CDFG. For waters not under the jurisdiction of the USACE, but under the jurisdiction of the RWQCB, the specialist shall submit the delineation documents along with the USACE jurisdictional determination to the RWQCB and request an assessment of jurisdiction. If the areas are subject to USACE or RWQCB jurisdiction, then the regulatory requirements of these agencies shall be implemented.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.
Movement of Migratory Species		
Implementation of the proposed project could interfere with the movement of a native resident or migratory species.	Refer to Mitigation Measure BIO-1 in addition to the following: BIO-6 Impacts to migratory wildlife potentially impacted by future development shall be fully	Less Than Significant Impact with Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	evaluated, including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds. BIO-7 If deemed necessary by the Biological Resources Assessment, project construction activities (including disturbances to vegetation) shall take place outside of the breeding bird season (February 1 to September 1), in order to avoid take (including disturbances, which would cause abandonment of active nests containing eggs and/or young). If project construction activities cannot avoid the breeding season, nest surveys shall be conducted and active nests shall be avoided and provided with a minimum buffer, as determined by a biological monitor.	
Joshua Tree and Native Desert Vegetation Preservation Ordinance		
Implementation of the proposed project would not conflict with the Joshua Tree and Native Desert Vegetation Preservation Ordinance.	No additional mitigation is required.	Less Than Significant Impact.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to biological resources.	Refer to Mitigation Measures BIO-1 through BIO-7.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.
CULTURAL RESOURCES		
Historical Resources		
Project implementation would not cause a substantial adverse change in the significance of a historical resource.	No additional mitigation is required.	Less Than Significant Impact With General Plan Policies Incorporated.
Archaeological Resources		
Project implementation could cause a substantial adverse change in the significance of an archaeological resource.	CUL-1 In the event that archeological and/or paleontological resources are unearthed during excavation and grading activities of future residential development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery and shall retain a qualified archaeologist and/or paleontologist to evaluate the significance of the finding and appropriate course of action.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
	Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. Work within the area of discovery shall resume only after the resource has been appropriately mitigated.	
Paleontological Resources		
Project implementation could directly or indirectly destroy a unique paleontological resource.	Refer to Mitigation Measure CUL-1.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.
Human Remains		
Project implementation could disturb human remains, including those interred outside of formal cemeteries.	No additional mitigation is required.	Less Than Significant Impact.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to cultural resources.	Refer to Mitigation Measure CUL-1.	Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.
POLICE PROTECTION		
Police Protection Services		
Project implementation would not result in substantial adverse physical impacts associated with the provision of police protection services.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to police protection services.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact with General Plan Policies Incorporated.
SCHOOL FACILITIES		
School Facilities		
Project implementation would not result in substantial adverse physical impacts associated with the provision of school facilities and services.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to school facilities and services.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact with General Plan Policies Incorporated.
PARKS AND RECREATIONAL FACILITIES		
Parkland Demand		
Project implementation could result in substantial adverse physical impacts associated with the provision of new parkland.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.

Potential Impacts	Project Mitigation Measures	Level of Significance After Mitigation
Existing Recreational Facilities		
Project implementation could increase the use of existing recreational facilities, causing their physical deterioration.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to parks and recreational facilities.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact with General Plan Policies Incorporated.
WATER		
Water Supplies		
Sufficient water supplies may not be available to serve the project from existing entitlements and resources; new or expanded entitlements could be needed.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
Cumulative Impacts		
Development associated with implementation of the proposed project and other related development could cumulatively impact water supplies and systems.	No additional mitigation has been identified.	Significant and Unavoidable Impact.
WASTEWATER		
Wastewater Conveyance/Treatment Facilities		
Project implementation could require or result in the construction of new wastewater conveyance/treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Development associated with implementation of the proposed project and other related development could result in cumulatively considerable impacts involving wastewater.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact with General Plan Policies Incorporated.
SOLID WASTE		
Landfill Capacity		
The proposed project could be served by a landfill with insufficient permitted capacity to accommodate its solid waste disposal needs.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Compliance with Statutes and Regulations		
The proposed project could conflict with statutes and regulations related to solid waste.	No additional mitigation is required.	Less Than Significant Impact with General Plan Policies Incorporated.
Cumulative Impacts		
Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to the permitted capacities of the landfills serving the City.	No additional mitigation is required beyond compliance with the General Plan Policies outlined above.	Less Than Significant Impact with General Plan Policies Incorporated.

2.0 Introduction and Purpose

2.0 INTRODUCTION AND PURPOSE

2.1 PURPOSE OF THE EIR

The City of Palmdale (City) is the lead agency under the California Environmental Quality Act (CEQA), and has determined that an Environmental Impact Report (EIR) is required for the City of Palmdale Housing Element Update (State Clearinghouse No. 2012011007). This EIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.); *CEQA Guidelines* (California Code of Regulations [CCR], Title 14, Section 15000 et seq.); and the rules, regulations, and procedures for implementation of CEQA, as adopted by the City of Palmdale. The principal *CEQA Guidelines* sections governing content of this document are Sections 15120 through 15132 (Contents of Environmental Impact Reports) and Section 15168 (Program EIR).

The purpose of this EIR is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures to avoid or lessen potentially significant effects of the proposed Housing Element Update (herein referred to as the "project"). The proposed project consists of an update to the City's Land Use and Housing Elements, including a General Plan Amendment, Zone Change, Zoning Ordinance Amendment, and Specific Plan Amendment in order to accommodate units assigned to the City under the 2006-2014 Regional Housing Needs Allocation. For more detailed information regarding the proposed project, refer to Section 3.0, Project Description.

This EIR has been prepared as a Program EIR in accordance with Section 15168 of the *CEQA Guidelines*, which states the following:

(a) General. A Program EIR is an EIR, which may be prepared on a series of actions that can be characterized as one large project and are related either:

(1) Geographically,
(2) As logical parts in the chain of contemplated actions,
(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

(b) Advantages. Use of a Program EIR can provide the following advantages. The Program EIR can:

(1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action,
(2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,
(3) Avoid duplicative reconsideration of basic policy considerations,
(4) Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
(5) Allow reduction in paperwork.

(c) Use with Later Activities. Subsequent activities in the program must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared.

(1) If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration.
(2) If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.
(3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.
(4) Where the subsequent activities involve site-specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.
(5) A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

CEQA Guidelines Section 15168 describes the proper process for Program EIRs, as follows (emphasis added):

> *Use of the Program EIR also enables the Lead Agency to characterize the overall program as the project being approved at that time. Following this approach when individual activities within the program are proposed, the agency would be required to examine the individual activities within the program to determine whether their effects were fully analyzed in the Program EIR. If the activities would have no effects beyond those analyzed in the Program EIR, the agency could assert that the activities are merely part of the program, which had been approved earlier, and no further CEQA compliance would be required. This approach offers many possibilities for agencies to reduce their costs of CEQA compliance and still achieve high levels of environmental protection.*

In accordance with Section 15121 of the *CEQA Guidelines*, the main purposes of this EIR are to:

- Provide decision-makers and the public with specific information regarding the environmental effects associated with the proposed project;
- Identify ways to minimize the significant effects of the project; and
- Describe reasonable alternatives to the project.

Mitigation measures are provided that may be adopted as conditions of approval to avoid or minimize the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring program for the proposed project.

The City of Palmdale (which has the principal responsibility of processing and approving the project) and other public (i.e., responsible and trustee) agencies that may use this EIR in the decision-making or permit process will consider the information in this EIR, along with other information that may be presented during the CEQA process. Environmental impacts are not always able to be mitigated to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with Section 15093(b) of the *CEQA Guidelines*, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per Section 15093 of the *CEQA Guidelines*, a "statement of overriding considerations."

This document analyzes the environmental effects of the project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the *CEQA Guidelines*. The analysis considers the activities associated with the project to determine the short-term and long-term effects associated with their implementation. This EIR discusses both the direct and indirect impacts of this project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

2.2 EIR SCOPING PROCESS

In compliance with the *CEQA Guidelines*, the City has taken steps to maximize opportunities to participate in the environmental process. During the preparation of the Draft EIR, efforts were undertaken to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments and inform the public of the proposed project. This included the distribution of an Initial Study and Notice of Preparation (NOP). A scoping meeting was held at the Development Services Building of the City of Palmdale on January 20, 2012.

2.2.1 INITIAL STUDY

In accordance with Section 15063(a) of the *CEQA Guidelines*, the City undertook the preparation of an Initial Study. The Initial Study determined that a number of environmental issue areas may be impacted by implementation of the proposed project. As a result, the Initial Study determined that the EIR should address the proposed project's potentially significant impacts on the following environmental issue areas:

- Air;
- Biological Resources;
- Cultural Resources;
- Greenhouse Gas Emissions;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Population and Housing;
- Public Services;
- Recreation;

- Transportation and Traffic; and
- Utilities and Service Systems.

Based on the Initial Study, issues for which no significant impacts are anticipated to occur are described in detail in the Initial Study (Appendix A) and addressed in Section 8.0, Effects Found Not To Be Significant, in this EIR.

2.2.2 NOTICE OF PREPARATION

Pursuant to the provision of Section 15082 of the *CEQA Guidelines*, the City circulated a NOP to public agencies, special districts, and members of the public requesting such notice for a 30-day period commencing on January 9, 2012 and concluding on February 7, 2012. The purpose of the NOP was to formally convey that the City is preparing a Draft EIR for the proposed project and that, as Lead Agency, it was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The Initial Study was circulated with the NOP. The NOP, Initial Study, and responses to the NOP are provided, respectively, in Appendix A, Initial Study/Notice of Preparation, and Appendix B, NOP Comments.

2.2.3 NOP SCOPING RESULTS

The NOP comments included, but were not limited to, the following issues of controversy/issues to be resolved:

- Potential impacts to cultural resources, including Native American resources (refer to Section 5.9, Cultural Resources);

- Cumulative impacts on the Congestion Management Program (CMP) roadway system (refer to Section 5.2, Transportation/Circulation);

- Concerns regarding erosion, watershed management, biological resources, and cultural resources (refer to Section 5.7, Hydrology and Water Quality; Section 5.8, Biological Resources; and Section 5.9, Cultural Resources);

- Concerns regarding water quality and potential impacts to waters of the state (refer to Section 5.7, Hydrology and Water Quality);

- Concerns regarding safety of residential uses adjacent to the railway and traffic safety associated with at-grade highway-rail crossings (refer to Section 5.2, Transportation/Circulation and Section 5.6, Hazards and Hazardous Materials);

- Concerns regarding potential impacts to biological resources (refer to Section 5.8, Biological Resources); and

- Concerns regarding noise, air quality, parks and open space, schools, water supply, land use compatibility, and public safety (refer to Section 5.1, Land Use and Planning; Section 5.3, Air Quality; Section 5.4, Noise; Section 5.10, Police Protection; Section 5.11, Schools; Section 5.12, Parks and Recreational Facilities; and Section 5.13, Water.

2.3 COMPLIANCE WITH CEQA

2.3.1 PUBLIC REVIEW OF DRAFT EIR

The Draft EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. In accordance with the provision of Sections 15085(a) and 15087(a)(1) of the *CEQA Guidelines*, the City of Palmdale, serving as the Lead Agency: 1) publishes a notice of availability of a Draft EIR in newspapers of general circulation, which states that the Draft EIR will be available for review at City of Palmdale City Hall located at 38250 Sierra Highway; and 2) prepares and transmits a Notice of Completion (NOC) to the State Clearinghouse. Proof of publication is available at the City of Palmdale.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the individual identified on the document's NOC prior to the end of the public review period. During the public review period, the Palmdale Planning Commission will hold a regularly scheduled public meeting regarding the Draft EIR. The public will be afforded the opportunity to orally comment on the Draft EIR at the public meeting. Such comments shall be recorded and shall have the same standing and response requirements as written comments provided during the public review period. Upon the close of the public review period, the Lead Agency will then proceed to evaluate and prepare responses to all relevant oral and written comments received from both citizens and public agencies during the public review period.

2.3.2 FINAL EIR

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR, responses to comments addressing concerns raised by responsible agencies or reviewing parties, and the mitigation monitoring program. After the Final EIR is completed and at least 10 days prior to its certification, a copy of the responses to comments made by public agencies on the Draft EIR will be provided to the respective agencies.

2.4 INTENDED USES OF THIS EIR

The City of Palmdale, as the Lead Agency for this proposed project, will use this Program EIR in consideration of the proposed Housing Element Update. This document will provide environmental information to several other agencies affected by the proposed project, or which are likely to have an interest in the proposed project. Various State and Federal agencies exercise control over certain aspects of the study area. The various public, private, and political agencies and jurisdictions with particular interest in the proposed project include, but are not limited to the following:

- Antelope Valley Air Quality Management District;
- Antelope Valley Transportation Authority;
- Antelope Valley Union High School District;
- California Air Resources Board (CARB);
- California Department of Conservation;
- California Department of Fish and Game;
- California Department of Transportation (Caltrans);

- California Department of Toxic Substances Control (DTSC);
- California Environmental Protection Agency (CalEPA);
- California Office of Emergency Services;
- California Public Utilities Commission;
- California Regional Water Quality Control Board (CRWQCB);
- California Reclamation Board (CRB);
- City of Lancaster;
- County of Los Angeles;
- County Sanitation Districts of Los Angeles County;
- Keppel Union School District;
- Los Angeles County Fire Department;
- Los Angeles County Sheriffs Department;
- Metropolitan Transportation Authority;
- Native American Heritage Commission;
- Palmdale School District;
- Palmdale Water District;
- Southern California Association of Governments (SCAG);
- U.S. Environmental Protection Agency (U.S. EPA); and
- Westside Union School District.

2.5 FORMAT OF THE EIR

The Draft EIR is organized into 11 sections, plus eight appendices, as follows.

Section 1.0, Executive Summary, provides a brief project description and summary of the environmental impacts and mitigation measures.

Section 2.0, Introduction and Purpose, provides CEQA compliance information.

Section 3.0, Project Description, describes the proposed project in detail indicating project location, background and history, and project characteristics, phasing and objectives, as well as associated discretionary actions required.

Section 4.0, Basis for Cumulative Analysis, describes the approach and methodology for the cumulative analysis.

Section 5.0, Environmental Analysis, contains a detailed environmental analysis of the existing conditions, project impacts (including direct and indirect, short-term and long-term, and cumulative), recommended mitigation measures, and unavoidable adverse impacts.

Section 6.0, Alternatives, describes a reasonable range of alternatives to the proposed project or to the location of the project that could feasibly attain the basic project objectives.

Section 7.0, Other CEQA Considerations, discusses the long-term affects associated with the proposed project, including the potential growth associated with the proposed action and energy conservation.

Section 8.0, Effects Found Not To Be Significant, explains potential impacts that have been determined not to be significant.

Section 9.0, Significant Environmental Effects Which Cannot be Avoided if the Proposed Action is Implemented, discusses significant environmental changes that would be involved with the proposed project, should it be implemented.

Section 10.0, References, identifies all Federal, State or local agencies, other organizations, and individuals consulted in the preparation of the EIR.

Appendices contain the technical documentation for the proposed project.

2.6 INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited in accordance with Section 15148 of the *CEQA Guidelines*, which encourages "incorporation by reference" as a means of reducing redundancy and length of environmental reports. The following documents, which are available for public review at the City of Palmdale Planning Department, located at 38250 Sierra Highway, Palmdale, California, are hereby incorporated by reference into this EIR. Information contained within these documents has been utilized within this EIR. A brief synopsis of the scope and content of these documents are provided below.

City of Palmdale General Plan (1993) (General Plan). The General Plan was adopted by the Palmdale City Council (Resolution No. 93-10) on January 25, 1993. The purpose of the General Plan is to provide a general, comprehensive and long-range guide for community decision-making. The elements of the General Plan are:

- Land Use;
- Circulation;
- Environmental Resources;
- Public Services;
- Safety;
- Noise;
- Housing;
- Parks, Recreation, and Trails; and
- Community Design.

The General Plan is cited in several sections of this EIR in regards to land use designations and development standards and relevant goals, objectives, and policies relative to the proposed project.

Final Program Environmental Impact Report for the City of Palmdale General Plan (SCH No. 87120908) (Michael Brandman Associates, February 1, 1993) (*GPEIR*). The Final GPEIR serves as a first tier environmental document for purposes of this Draft EIR. The Final GPEIR determined the even with the implementation of mitigation measures, significant unavoidable impacts would remain for biological resources, earthquake hazards, and air quality associated with buildout of the General Plan.

City of Palmdale State of the City Report (Impact Sciences, Inc., June 2009). The State of City Report provides an analysis of the City's General Plan and GPEIR in terms of the growth that has occurred within the City between 1993 (when the General Plan/GPEIR were prepared) and 2009.

City of Palmdale Municipal Code. The Municipal Code consists of all the regulatory and penal ordinances and administrative ordinances of the City of Palmdale. It is the method the City uses to implement control of land uses, in accordance with General Plan goals and policies. The City of Palmdale Zoning Ordinance identifies land uses permitted and prohibited according to the zoning category of particular parcels. The provisions and standards contained in the Code are cited in several sections of this EIR.

Air Installation Compatible Use Zone Study, Air Force Plant 42, Palmdale, California, 2011. The Air Installation Compatible Use Zone (AICUZ) Study is an update of the 2002 US Air Force Plant 42 (Plant 42) California Air Installation Compatible Use Zone (AICUZ) Study. The update presents and documents changes to the AICUZ amendment for the period 2002-2012 and is based on the 2010 aircraft operations condition, to include anticipated future operations and aircraft maintenance activity. The information is provided to assist local communities and serve as a tool for future planning and zoning activities. The AICUZ Study describes aircraft operations, the effects of aircraft operations, land use analysis, and implementation. The land use analysis addresses land use compatibility for Plant 42 with areas subject to aircraft noise and accident potential (i.e., Palmdale, Lancaster and Los Angeles County). The AICUZ study is cited in the EIR regarding the applicable policies and recommendations regarding land use compatibility.

Palmdale Transit Village Specific Plan/General Plan Amendment and Zone Change Final Environmental Impact Report, (SCH No. 2006081052) (July 2007). This EIR, which was certified by the Palmdale City Council (Resolution No. CC 2007-174) on July 2, 2007, was prepared to analyze the potential impacts from development of the Palmdale Transit Village Specific Plan (Transit Village Specific Plan). The Transit Village Specific Plan proposed to develop a mixed-use transit oriented development in the vicinity of the Palmdale Transportation Center. The EIR concluded significant and unavoidable impacts to air quality (short and long-term) and traffic and circulation. All other impacts were found to be less than significant through the mitigation measures imposed under the EIR.

3.0 Project Description

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

The City of Palmdale is located in the southwestern portion of the Antelope Valley in the Mohave Desert, within the northern portion of Los Angeles County; refer to Exhibit 3-1, *Regional Location*. Palmdale is bounded by unincorporated areas of the County to the east, south, and west and the City of Lancaster to the north. The City is approximately 104-square miles with several pockets of unincorporated territory under county jurisdiction located within the City boundaries. Primary regional access to the City is provided by the Antelope Valley Freeway (SR-14), the major north-south highway connecting Palmdale to Los Angeles and Mohave. State Route 138 (SR-138) is the major east-west highway connecting Palmdale to the Inland Empire and SR-18 connecting Palmdale to Victorville via Interstate 15 to the east. The location of the proposed 2006-2014 Housing Element Update (herein referred to as the "project") is citywide; refer to Exhibit 3-2, *City of Palmdale Boundary*.

3.2 BACKGROUND

State law recognizes the role local governments play in the availability, adequacy, and affordability of housing. Every jurisdiction in California is required to adopt a long-range General Plan to guide its physical development; the Housing Element is one of the seven mandated elements of the General Plan. Housing Element law mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for (and do not unduly constrain) housing production. Housing Element statutes also require the State Department of Housing and Community Development (HCD) to review local housing elements for compliance with state law and to report their findings to the local government.

California's housing element law requires that each city and county develop local housing programs to meet its "fair share" of existing and future housing needs for all income groups. The Southern California Association of Governments (SCAG) is responsible for developing and assigning these regional needs, via a Regional Housing Needs Assessment (RHNA), to southern California jurisdictions.

ADOPTED 1998 TO 2005 HOUSING ELEMENT

The City's current Housing Element was adopted in April 2001. The existing Housing Element identifies and analyzes the community's housing needs and provides a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing for the 1998 to 2005 planning period. The City's RHNA for the 1998 to 2005 planning period totaled 9,878 units, with 3,495 units being very low- and low-income.

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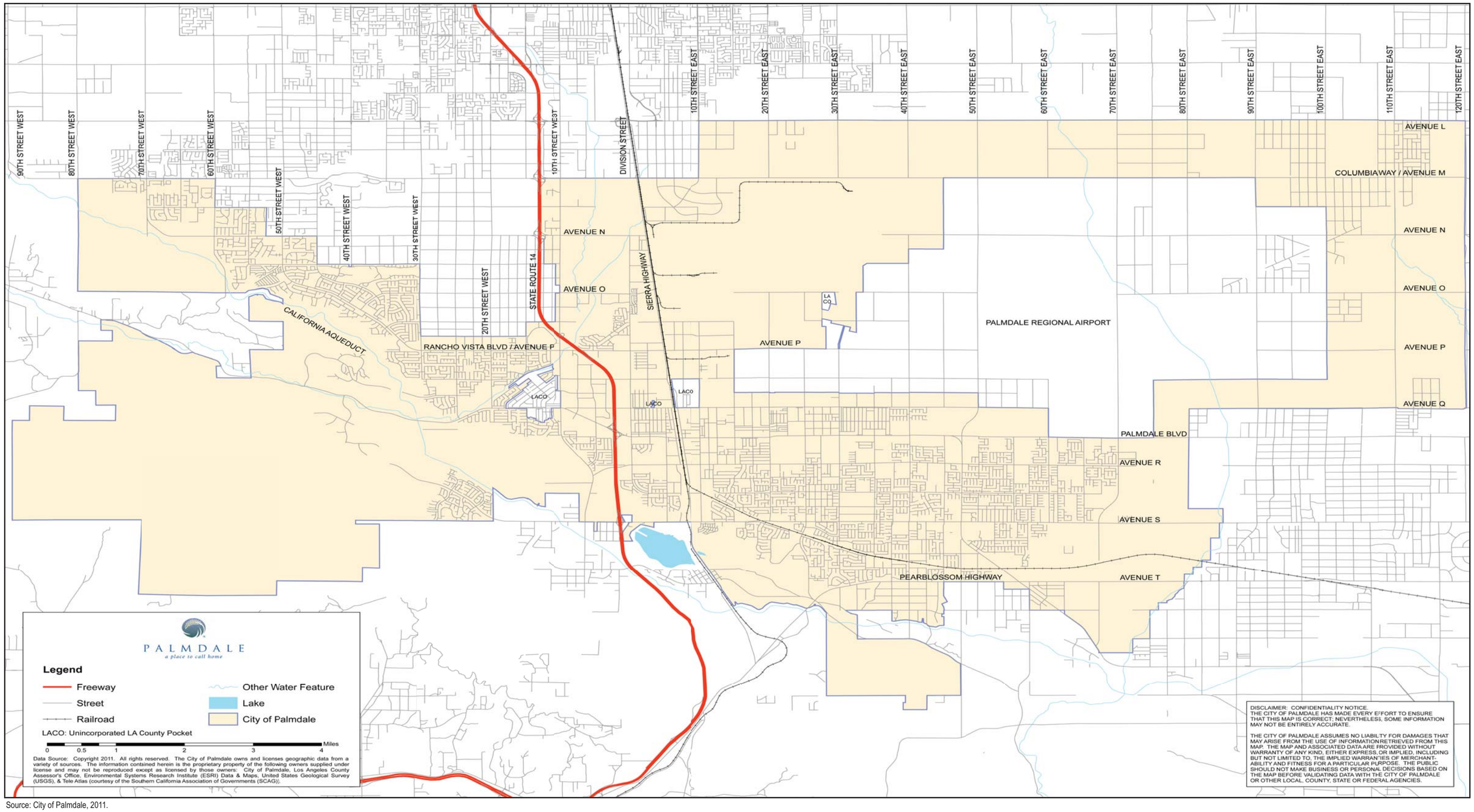
Regional Location

Exhibit 3-1



Source: City of Palmdale, 2011.

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CITY OF PALMDALE
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City of Palmdale Boundary

Exhibit 3-2

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Table 3-1, *Quantified Accomplishments for 1998-2005*, summarizes the quantified objectives for new housing production and other programs for the 1998 to 2005 Housing Element.

Table 3-1
Quantified Accomplishments for 1998-2005

Housing Type	Very Low	Low	Moderate	Above Moderate	Total
RHNA Goals 1998-2005	1,924	1,521	2,4871	3,895	9,878
Accomplishments 1998-2005					
New Construction	231	219	590	6,384	7,424
New Construction Senior					0
Preservation (At-Risk Units)					0
Single-Family Rehabilitation Loans	16	14			30
First-Time Homebuyer Loans	4	7			11
Mobile Home Down payment	21	92			113
Mobile Home Grant	52	16			68
Replacement Housing					
Neighborhood Improvement	666				666
Emergency Housing Grants	209				209

Source: *City of Palmdale Draft Housing Element 2006 – 2014,* Table H-1.

As indicated in Table 3-1, the City fulfilled nearly 75 percent of its overall RHNA allocation. However, limited new multifamily rental housing was constructed and one subsidized housing project affordable to very low-income families was constructed. No affordable senior housing was constructed; however, the City acquired land to build 295 units of senior housing affordable to households of moderate-, low-, and very low-income. Additionally, City programs coordinated the work of multiple agencies to identify deteriorated conditions, providing grants to repair or replace roofs, fences, landscaping, garage doors, stucco, and trim. The City also repaired or installed sidewalks, curbs, streetlights, and other infrastructure upgrades.

The following programs identified in the 1998 to 2005 Housing Element were implemented by the City:

- Three neighborhood improvement programs were initiated, coordinating the efforts of both City and County agencies to achieve housing, infrastructure and public safety improvements in the City's older neighborhoods.

- The City's South Antelope Valley Emergency Services program (SAVES) provided vouchers for emergency housing to homeless individuals and families.

- The City assumed ownership of three mobile home parks, providing spaces at rents affordable to very low- and low-income mobile home owners. The City continued to regulate rents in privately owned mobile home parks.

- The City's Community Redevelopment Agency acquired land in the Courson area to build 295 units of senior housing.

- The City provided emergency grants for home repairs to 209 very low-income Palmdale households and made neighborhood improvement grants to 666 low- and moderate-income households in the focus neighborhoods.

3.3 PROPOSED 2006-2014 HOUSING ELEMENT

REGIONAL HOUSING NEEDS ASSESSMENT

California Housing Element law requires that each city and county develop local housing programs designed to meet its "fair share" of existing and future housing needs for all income groups, as determined by the jurisdiction's regional Council of Governments, when preparing the state-mandated Housing Element of its General Plan. This "fair share" allocation is intended to ensure each jurisdiction provides policies and programs to address existing and forecasted housing needs.

The City of Palmdale is a member government of SCAG, which finalized the RHNA allocation in 2007 quantifying the existing and projected growth needs for Palmdale. Specifically, the City's RHNA allocation for the period January 1, 2006 to June 30, 2014 is provided in Table 3-2, *RHNA Allocation (2006-2014)*. As indicated in Table 3-2, the City's fair share housing needs allocation is 17,910 new housing units for the 2006 to 2014 planning period.

Table 3-2
RHNA Allocation (2006-2014)

Income Category	Number of Units	Percentage
Very Low (50% or less of median)	4,481	25.0%
Low (51% to 80% of median)	2,822	15.8%
Moderate (80% to 120% of median)	3,024	16.9%
Above Moderate (>120% of median)	7,583	42.3%
Total	17,970	100%

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-37.

In order to determine the regional housing needs for the 2006-2014 planning period, the needs are adjusted by the actual number of units constructed from January 1, 2006 to the present. Table 3-3, *Adjusted RHNA Allocation (2006-2014)*, summarizes the units constructed as of December 31, 2011, according to income category. As indicated in Table 3-3, a total of 3,489 dwelling units have been constructed in the City during that time period. The units constructed since January 1, 2006 are credited towards the City's RHNA allocation. In consideration of the units constructed, the City's adjusted need for 2006-2014 is 14,421 housing units, with 6,920 units allocated for very low- and low-income households.

Table 3-3
Adjusted RHNA Allocation (2006-2014)

Income Level	RHNA Allocated Units	Completed Units	Remaining Units
Very Low (50% or less of median)	4,481	57	4,424
Low (51% to 80% of median)	2,822	326	2,496
Moderate (80% to 120% of median)	3,024	39	2,985
Above Moderate (>120% of median)	7,583	3,067	4,516
Total	17,910	3,489	14,421

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-38.

3.4 PROJECT CHARACTERISTICS

The Housing Element comprises one of the seven General Plan Elements mandated by the State of California, as expressed in Sections 65580 to 65589.8 of the California Government Code. California State Law requires that the Housing Element consist of "identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing."

As required by State Housing Law, the City of Palmdale must plan for its share of the region's new housing needs in four state-defined income categories by identifying an adequate supply of land zoned at appropriate densities to accommodate needs in each income category. The RHNA goals do not explicitly require the City to construct the identified housing need, but rather seek to ensure the City has, or plans to add policies, programs, and regulations that will accommodate new housing growth.

To address the City's needs for very low- and low-income housing, Palmdale must demonstrate that it has an adequate supply of land for higher density housing. Although zoning land for higher density development does not guarantee the construction of housing that is affordable to low- and moderate-income families, without such higher density zoning, the opportunity to provide housing for lower income households is limited.

The City of Palmdale 2006-2014 Housing Element identifies and analyzes existing and projected housing needs, and articulates the City's official policies for the preservation, conservation, improvement, and production of housing within the City. The Housing Element has been prepared in compliance with State Housing Element law. It examines the City's housing needs, as they exist today, and projects future housing needs. It sets forth statements of goals, objectives, and policies and includes a housing policy program that responds to current and future needs within the limitations posed by available resources. The housing policy program details a series of actions to achieve its goals and objectives. Upon adoption by the Palmdale City Council, the updated Housing Element would serve as a comprehensive statement of the City's housing policy and provide a specific program of actions for implementation.

In addition to goals, objectives, and policies, the proposed 2006-2014 Housing Element Update includes implementing actions that involve site-specific changes to land use designations and zoning, as well as an amendment to the Palmdale Transit Village Specific Plan in order to meet its RHNA allocation. This EIR focuses on the proposed programs presented in the City of Palmdale Housing Element 2006-2014, including the proposed General Plan Amendment, Zone Change, Zoning Ordinance Amendment, and Specific Plan Amendment, described further under *Sites Proposed for General Plan Amendment/Zone Changes*.

HOUSING PROGRAMS AND OBJECTIVES

The City's housing programs are intended to illustrate the City's commitment to the continued maintenance, improvement, and development of housing within the City. Section VIII, Goals, Objectives, Policies, and Programs, of the proposed Housing Element, describes specific actions to implement the City's housing programs. The Housing Element's policy program is intended to show the City's commitment to maintain, improve, and develop housing in the community through "good faith, diligent efforts," as required by State Housing Law (Government Code Section 65583(c)). While the program provides a comprehensive approach to address housing issues throughout the City, its emphasis is on providing adequate and affordable housing for Palmdale residents of all income levels, and to identify and accommodate segments of the City population with special housing needs.

Ability to Meet Regional Housing Needs Allocation

To enable the City to meet its share of the region's housing needs, the City has evaluated its capacity to meet the future needs, based on entitled development, existing development capacities, and vacant land resources. Housing Element Table H-40 outlines the seven residential zones in Palmdale (excluding Specific Plan areas) and their corresponding permitting densities. The availability of land suited to accommodate the various income levels is based upon the allowed density within these zones. Based upon the site inventory and analysis, the City has demonstrated that it has or will make available adequate sites with appropriate zoning and development standards and with services and facilities.

ADEQUATE SITES ANALYSIS

California Government Code Section 65883(a)(3) requires that housing elements include an inventory of land suitable for residential development, including vacant sites and sites having the potential for redevelopment, and an analysis of the zoning and infrastructure available to serve these sites. This inventory is used to identify sites that can be feasibly developed for housing within the planning period in order to meet the RHNA. Housing Element Section VI contains the required inventory of adequate sites for new housing that can be developed to meet the City's housing needs within the planning period. The findings of the inventory and analysis are summarized below.

As indicated in Table 3-3, a total of 3,489 dwelling units have been constructed in the City between 2006 and 2011. In consideration of the units constructed, the City's adjusted need for 2006-2014 is 14,421 dwelling units, with 6,920 units allocated for very low- and low-income households.

Units Under Construction. The City has one project currently under construction within the Palmdale Transit Village Specific Plan, which consists of 198 units for very low- and low-income and 79 dwellings for moderate-income. As building permits for these units were issued after December 31, 2011, the units were not included as completed units within Table 3-3.

Vacant Land. The proposed Housing Element Site Analysis section identifies 40 separate areas available for new housing at densities that would accommodate moderate- and above moderate-income dwelling units; refer to Exhibit 3-3, *Vacant Land Suitable for Moderate- and Above Moderate-Income Housing*. These areas consist of 3,149 acres of vacant land (255 parcels) that are currently zoned for residential uses, and land within existing specific plans that are currently designated for residential uses. Based on the permitted densities, the vacant land would allow for construction of a minimum of 7,687 moderate- and above moderate-income dwelling units. Although the Site Analysis specifically identifies 3,149 vacant acres capable of accommodating a minimum of 7,687 moderate- and above moderate-income dwelling units, the City has determined that based upon current zoning, there is sufficient vacant land available citywide to accommodate a total of 30,223 units.

RHNA Summary. When considering the units under construction and vacant land currently zoned for residential uses, Palmdale has enough vacant land to accommodate its moderate- and above moderate-income need; refer to Table 3-4, *RHNA Needs Summary*. However, because the permitted densities are lower than the 30 dwelling units per acre required by State housing law for the construction of housing units affordable to lower-income households, the City would have a remaining RHNA need of 6,722 very low- and low-income dwellings. Therefore, the City has a shortfall of vacant and underutilized residential land to accommodate its very low- and low-income growth needs.

Table 3-4
RHNA Needs Summary

Income Category	Adjusted RHNA Allocation (2006-2014)	Dwelling Units Under Construction	Residentially Zoned Vacant Land Capacity	Remaining RHNA Need	Dwelling Units with General Plan Amendment and Zone Change	Final RHNA Need
Very Low (50% or less of median)	4,424	198	0	6,722	7,658	-936
Low (51% to 80% of median)	2,496					
Moderate (80% to 120% of median)	2,985	79	7,687	-265	0	-265
Above Moderate (>120% of median)	4,516					
Total	14,421	277				

SITES PROPOSED FOR GENERAL PLAN AMENDMENT/ZONE CHANGES

Pursuant to AB 2348, jurisdictions with a shortfall of vacant and underutilized residential land to meet its RHNA needs must commit to a rezoning program to provide adequate sites to meet its housing growth needs. In order to provide sites for the remaining very low- and low-income units, Palmdale proposes to amend its General Plan, Zoning Ordinance, Zoning Map, and the Palmdale Transit Village Specific Plan, including changing the General Plan Land Use and Zoning designations for the properties identified in Exhibit 3-4, *Proposed Sites for General Plan Land Use and Zone Changes*.

Section VIII of the proposed Housing Element includes a number of implementation actions involving changes to the General Plan Land Use Map and/or the Zoning Ordinance that are necessary to accommodate the remaining very low- and low-income needs, thereby, ensuring continued compliance with State law. These implementation actions include site-specific changes to land use designations and zones, as well as introduction of new land use designations and changes to the Zoning Ordinance that apply citywide. The proposed changes would allow for construction of a minimum of 7,658 dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need; refer to Table 3-4. In addition to accommodating the adjusted RHNA allocation of 6,722 very low- and low-income units at the minimum permitted density, General Plan Amendment 11-03, Zone Change 11-01, and Specific Plan Amendment 11-01 would provide opportunity for an additional 5,595 dwelling units that could also accommodate very low and low-income units at a typical development density.

General Plan Amendment 11-03

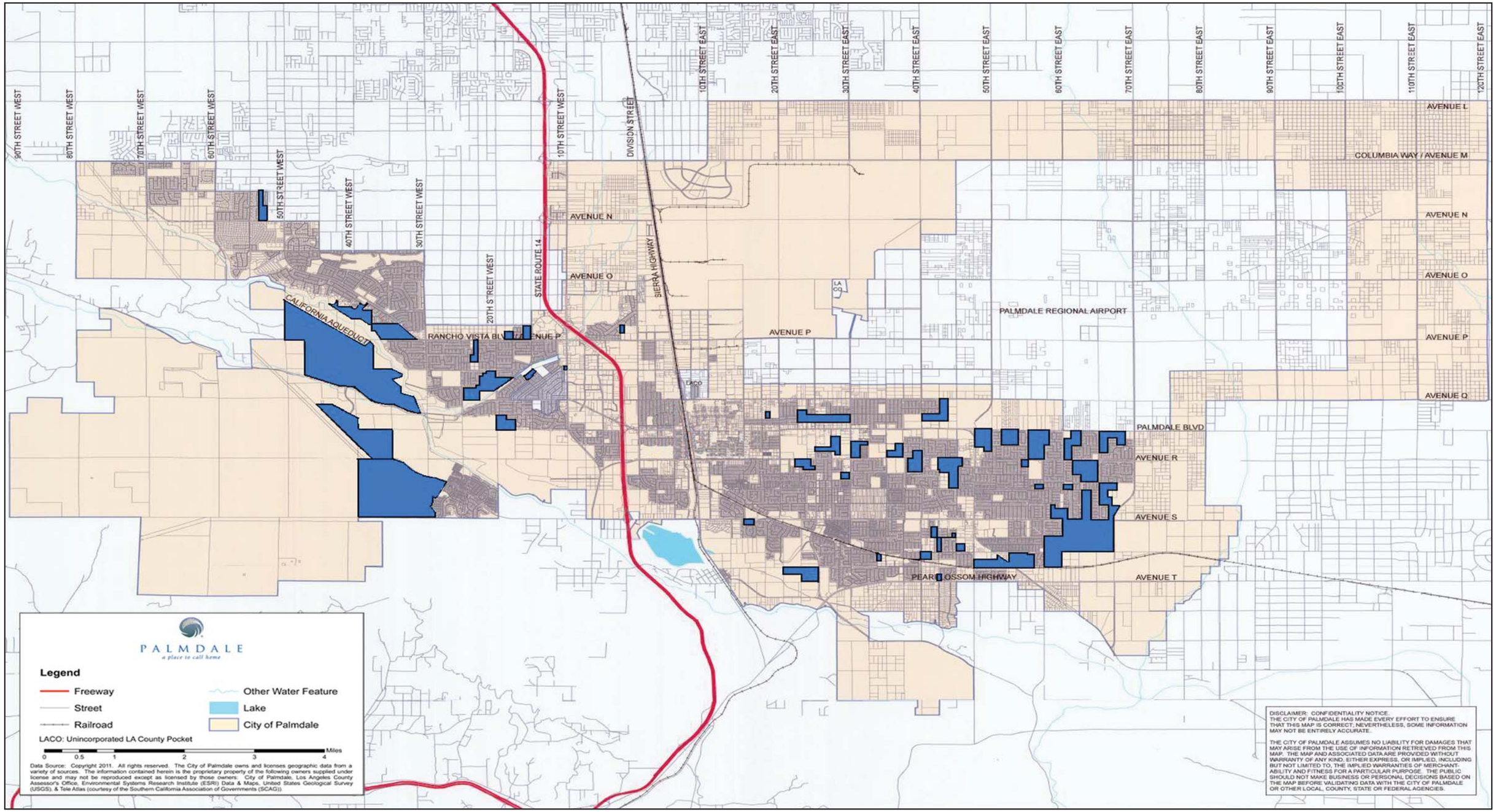
General Plan Amendment (GPA) 11-03 would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with new Medium-High and High Density Residential land use designations. The General Plan Land Use Map would be amended to identify the properties proposed for new Medium-High and High Density Residential land uses; refer to Exhibit 3-5, *Proposed General Plan Land Use*.

Zone Change 11-01

Zone Change (ZC) 11-01 would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) and R-4 (50) (High Density Residential, minimum of 50 dwelling units per acre) zones; refer to Exhibit 3-6, *Proposed Zoning*. ZC 11-01 is generally located within the central portion of the City, between Avenue Q on the north, Avenue R on the south, east of the alignment of 4th Street East on the west and 15th Street East to the east. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres. The new R-4 (50) zone would allow high-density residential development at a density of between 50 and 60 dwelling units per acre.

Zoning Ordinance Amendment 11-05

Zoning Ordinance Amendment (ZOA) 11-05 would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones. ZOA 11-05 could affect properties Citywide.



Source: City of Palmdale, 2011.

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Vacant Land Suitable for Moderate- and Above Moderate-Income Housing

Exhibit 3-3

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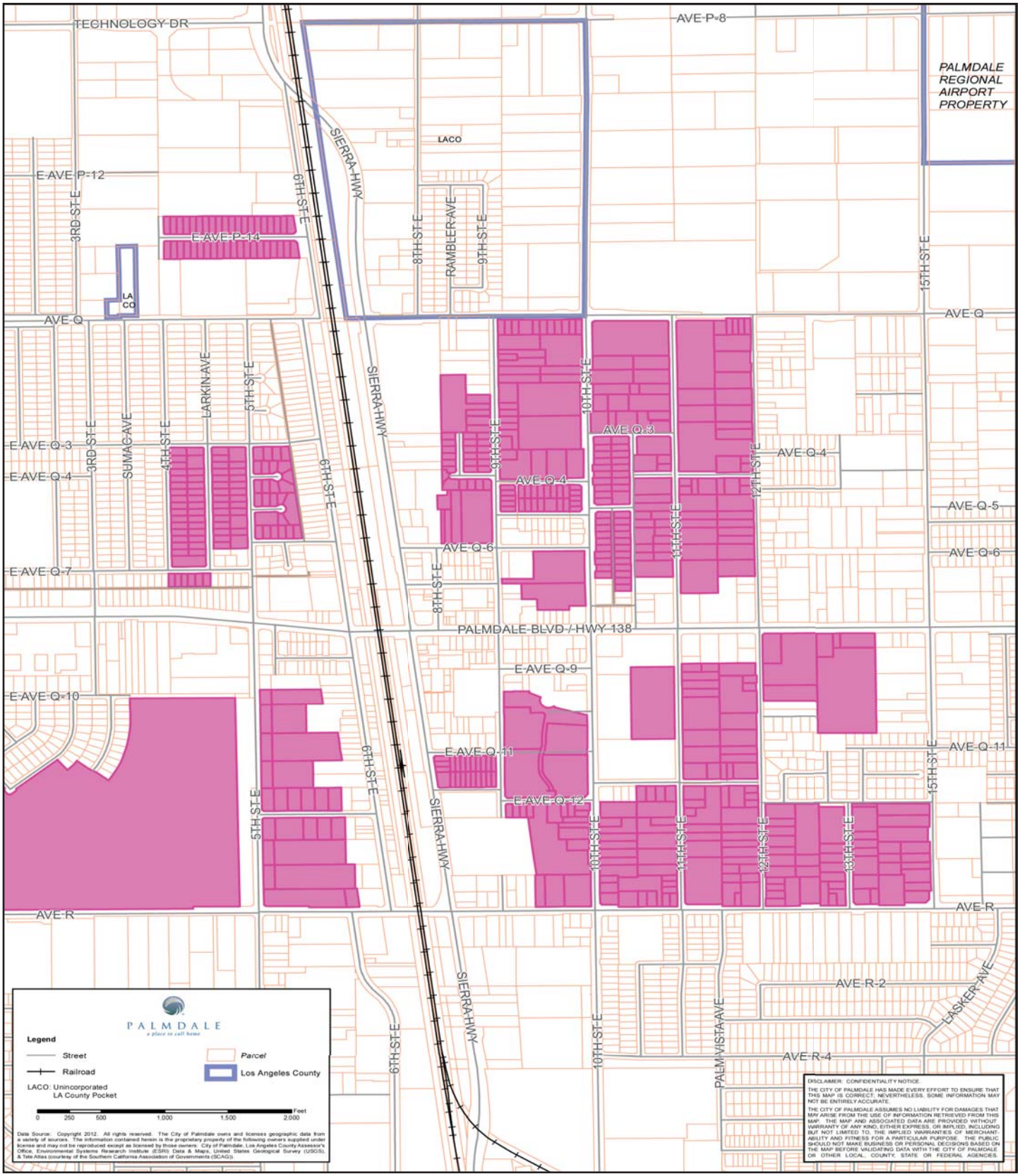

Source: City of Palmdale, 2011.

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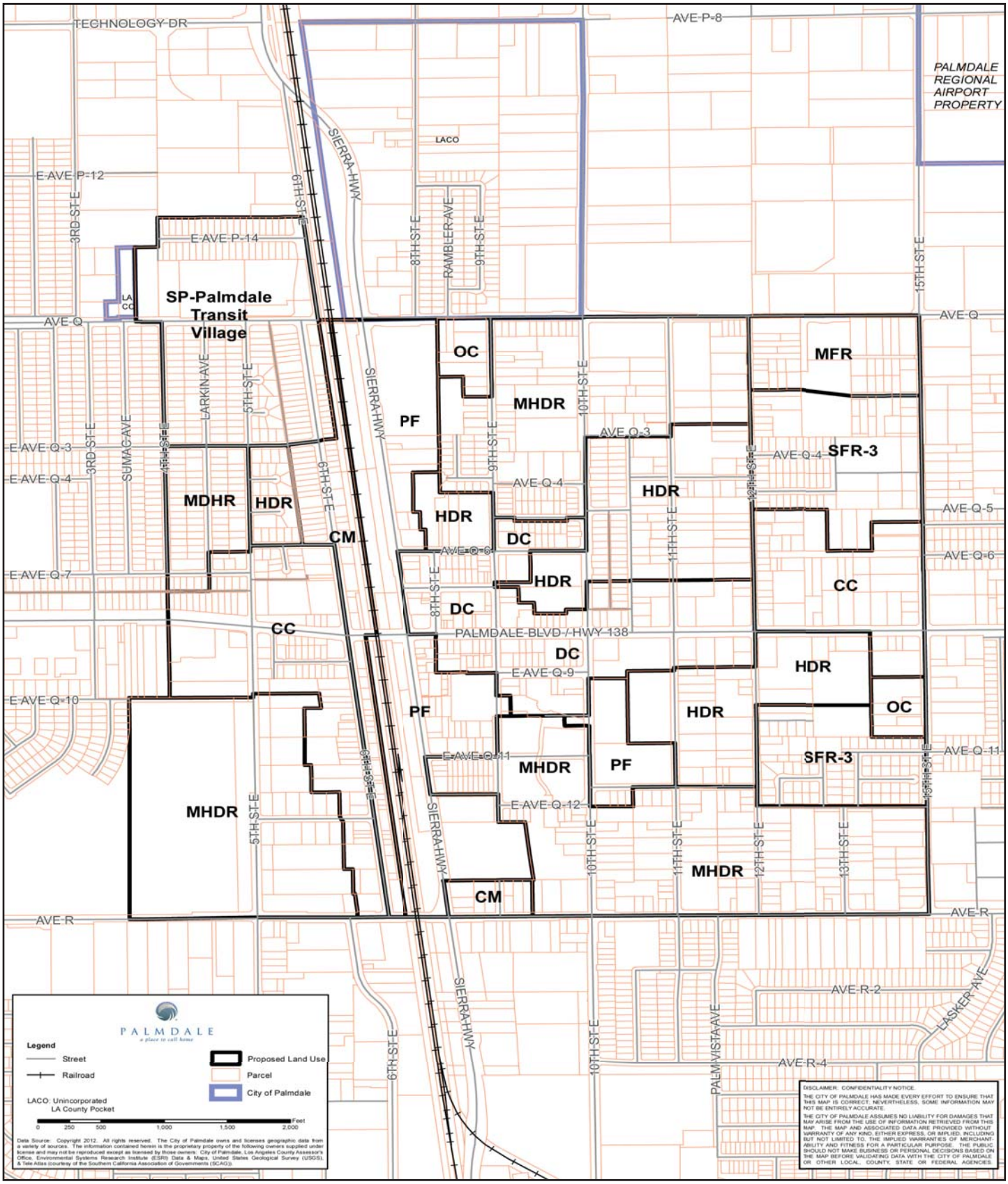
Proposed Sites for General Plan Land Use and Zone Changes

Exhibit 3-4



Source: City of Palmdale, 2011.

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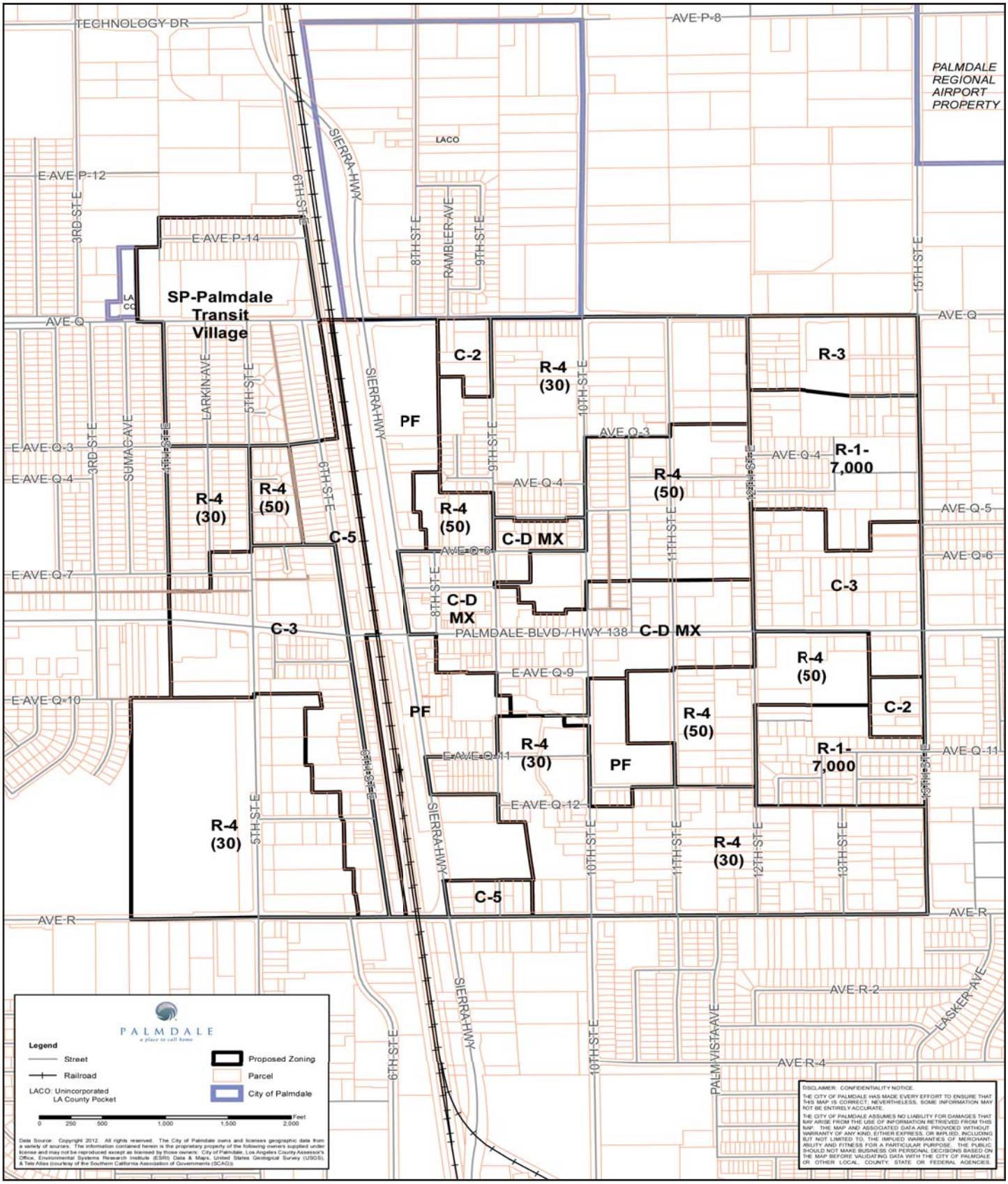
Proposed General Plan Land Use

Exhibit 3-5



Source: City of Palmdale, 2011.

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Proposed Zoning

Exhibit 3-6

Specific Plan Amendment 11-01

Specific Plan Amendment (SPA) 11-01 would involve the properties within Neighborhood C of the Palmdale Transit Village Specific Plan (SP-18), generally located on the north and south sides of Avenue P-14, between 4th Street East and 6th Street East; refer to Exhibit 3-4. SPA 11-01 would amend the permitted density within Neighborhood Zone C from 25-40 dwelling units per acre to 30-40 dwelling units per acre.

Table 3-5, *GPA 11-03, ZC 11-01, and SPA 11-01 Net Development Potential*, summarizes the residential development potential that would be accommodated assuming removal of existing land uses and new development of medium- and high-density residential uses at typical densities that would occur within the new R-4(30) and R-4(50) zones and within Neighborhood Zone C of the Palmdale Transit Village Specific Plan.

Table 3-5
GPA 11-03, ZC 11-01, and SPA 11-01 Net Development Potential

Land Use	Residential (dwelling units)	Non-Residential (square feet)
Existing (on-the-ground) Uses Potentially to be Removed		
Single-Family	-204	
Multiple-Family	-2,834	
Civic		-1,714
Public Facility		-30,000
Religious Assembly		-39,916
Subtotal	*-3,038*	*-71,630*
Potential New Development		
Single-Family	0	
Multiple-Family	13,253	
Civic		0
Public Facility		0
Religious Assembly		0
Subtotal	*13,253*	*0*
Net Development Potential		
Single-Family	-204	
Multiple-Family	+10,419	
Civic		-1,714
Public Facility		-30,000
Religious Assembly		-39,916
Total	+10,215	-71,630

Sites Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of approximately 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Regarding the remaining 2,786 dwelling units, given the conceptual nature of their future development, the analysis in this document is limited to a programmatic-level review of potential environmental impacts. Additionally, the analysis refers to these 2,786 dwelling units as development on "residentially-zoned land" that would occur throughout the General Plan study area.

Also, as concluded above, 13,253 dwelling units could be accommodated with implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01, and 3,038 dwelling units and 71,630 square feet of non-residential uses could potentially be removed. Regarding the remaining net development of 10,215 dwellings, although there is no immediate physical development associated with the project, the analysis in this document would evaluate the potential impacts, at a site-specific level, commensurate with the degree of specificity involved in the proposed GPA, ZC, and SPA. Additionally, the analysis refers to these 10,215 dwelling units as development on "rezoned land" that would occur within the area illustrated on Exhibit 3-4.

Overall, implementation of the proposed project is anticipated to result in a net increase of 13,001 dwelling units throughout the City and the potential construction of 16,039 new units.

3.5 PROJECT GOALS/OBJECTIVES

The Housing Policy Program details the City's goals, objectives, policies, and implementation actions in regards to the maintenance, improvement, preservation, and development of housing for all segments of the community. In developing the policy program, the City assessed its current and projected housing needs, evaluated performance in implementing existing policies and programs, and analyzed current constraints and resources. The City has identified the following overarching goals/objectives of the Housing Element:

- Promote the construction of new housing affordable to all income groups;
- Preserve and improve the existing supply of affordable housing;
- Remove government constraints on housing;
- Promote equal housing for all persons;
- Adequately house households with special needs;
- Implement energy and water conservation measures;
- Enhance the vitality and safety of existing residential neighborhoods;
- Promote neighborhood versatility by encourage a mix of new housing alternatives to increase affordability and promote home ownership;
- Promote higher density residential uses in close proximity to existing transportation infrastructure, including the Palmdale Transportation Center;
- Provide for higher density residential uses close to support services for residents, such as commercial uses, schools, parks and open space; and
- Provide development standards and design guidelines that provide a safe environment for residents and will direct transit and pedestrian oriented development.

3.6 PHASING

Although the planning period for the proposed Housing Element Update is 2006-2014, individual development projects would occur in incremental phases over time, based largely on economic considerations, market demand, and other planning considerations. The phasing and exact details of each project would be evaluated by the City on a case-by-case basis.

3.7 APPROVALS

Approvals would include, but are not limited to the following:

- Environmental Review
  - Certification recommendation by the Planning Commission
  - Certification by the City Council
  - Additional environmental review for specific development proposals would be evaluated on a case-by-case basis

- General Plan Amendment
  - Amend the Land Use and Housing Elements
  - Amend the General Plan Land Use Map

- Zone Change
  - Amend the City of Palmdale Zoning Map

- Zoning Ordinance Amendment
  - Introduce a new Article 44 creating the R-4 zone
  - Amend various sections regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential facilities

- Palmdale Transit Village Specific Plan Amendment
  - Amend the permitted density within Neighborhood C

4.0 Basis for Cumulative Analysis

4.0 BASIS FOR CUMULATIVE ANALYSIS

4.1 INTRODUCTION

CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts . . ." The following elements are necessary in an adequate discussion of cumulative impacts, as noted in Sections 15130(b) through 15130(e) of the *CEQA Guidelines*.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

1. *Either:*

    a. *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, or*

    b. *A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.*

2. *When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resources being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*

3. *Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*

4. *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*

5. *A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

(c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

(d) Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided by Section 15183(j).

4.2 CUMULATIVE ANALYSIS IN THIS EIR

In compliance with *CEQA Guidelines* Section 15130(1)(b), the cumulative analysis sections of the EIR describe the environmental effects of implementation of the proposed project, in combination with the effects of Palmdale General Plan buildout. The geographic area for each impact varies, depending on the nature of the impact, whether it is regional, such as air quality, or local, such as noise.

Quantification can be difficult for cumulative impacts, as it requires speculative estimates of impacts including, but not limited to the following: the geographic diversity of impacts (impacts of future development may affect different areas); variations in time of impacts; and changes in data for buildout projections following subsequent approvals. However, every attempt has been made herein to make sound qualitative judgments of the combined effects of, and relationship between, land uses and potential impacts.

As of January 1, 2011, the California Department of Finance (DOF) estimated the City of Palmdale's housing stock to be 46,589 dwelling units and population to be 153,334 persons. Essential public services and a network of utilities and service systems are available to serve these residents, as discussed in Section 5.10 through Section 5.15.

The General Plan EIR forecasts the City's buildout housing stock would total approximately 139,205 dwelling units,[1] or approximately 199 percent over the existing housing stock of 46,589 units. Similarly, the General Plan EIR forecasts the City's buildout population would total approximately 441,280 persons, or approximately 188 percent over the existing population of 153,334 persons. Additionally, a total of approximately 661,941,546 square feet of non-residential development (excluding Airport Related and Public Facilities) were forecast at buildout.[2]

[1] City of Palmdale, *Final Program EIR for the City of Palmdale General Plan*, February 1, 1993, Table 4-10 and Page 4-101.

[2] Ibid.

Growth occurred in the City between 1993 (when the General Plan/General Plan EIR were prepared) and 2009. The State of the City Report (SOC) Report was prepared to evaluate the changes that occurred in the City between 1993 and 2009. SOC Report Table 2.02, *General Plan Buildout Statistics Incorporated City Boundary*, summarizes General Plan buildout statistics as updated to reflect annexations and new development proposals that required General Plan Amendments, since the time the General Plan was last updated. As indicated in SOC Report Table 2.02, at buildout of the 104.59 square miles encompassed within the City of Palmdale, the SOC forecast that growth in Palmdale could reach the following maximum levels:[3]

- Residential: 136,934 dwelling units;
- Non-Residential: 465,514,173 square feet;
- Population: 487,485 persons;
- Employment: 611,113 jobs (117,967 jobs in commercial sector and 493,146 jobs in industrial sector); and
- Jobs/Housing Ratio: 4.46 jobs per dwelling.

Based on the SOC Report, the City's housing stock is forecast to increase approximately 194 percent over the existing housing stock of 46,589 dwelling units. Similarly, the City's population is forecast to increase approximately 218 percent over the existing 2011 population of 153,334 persons.

Comparatively, the SOC Report forecasts slightly less residential development (approximately two percent or 2,271 fewer dwelling units), less population (approximately 10.5 percent or 46,205 fewer persons), and significantly less non-residential development (approximately 30 percent less or approximately 196,427,373 fewer square feet) than the General Plan EIR. Accordingly, the environmental impact findings presented in the General Plan EIR remain relevant, with the various data updates presented in the SOC Report.

[3] Employment estimates were calculated using maximum building coverage permitted by Code per acre for commercial and industrial land, and assuming 600 square feet per employee for commercial retail uses, 275 square feet per employee for commercial office uses, 400 square feet per employee for Business Park uses and 1,200 square feet per employee for industrial uses.

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5.0 Environmental Analysis

5.0 ENVIRONMENTAL ANALYSIS

The following subsections of the EIR contain a detailed environmental analysis of the existing conditions, project impacts (including direct and indirect, short-term, long-term, and cumulative impacts), recommended mitigation measures, and unavoidable significant impacts. The EIR analyzes those environmental issue areas where potentially significant impacts may occur, as stated in Appendix A, Initial Study/Notice of Preparation.

The EIR examines environmental factors outlined in Appendix G of the *CEQA Guidelines*, *Environmental Checklist Form*, as follows:

5.1 Land Use and Planning;
5.2 Transportation/Circulation;
5.3 Air Quality;
5.4 Greenhouse Gas Emissions/Climate Change;
5.5 Noise;
5.6 Hazards and Hazardous Materials;
5.7 Hydrology and Water Quality;
5.8 Biological Resources;
5.9 Cultural Resources;
5.10 Police Protection;
5.11 Schools;
5.12 Parks and Recreational Facilities;
5.13 Water;
5.14 Wastewater; and
5.15 Solid Waste.

Based on the Initial Study, as stated in Appendix A, Initial Study/Notice of Preparation, no significant impacts upon aesthetics, agriculture and forestry resources, mineral resources, and geology/soils are anticipated. As a result, these issues are addressed in Section 8.0, Effects Found Not To Be Significant.

Each environmental issue is addressed in a separate section of the EIR and is organized into six sections, as follows:

- **"*Existing Setting*"** describes the physical conditions that exist at this time and that may influence or affect the issue under investigation.

- ***"Regulatory Setting"*** describes the applicable Federal, State, and local regulatory plans, policies, or ordinances.

- ***"Impact Thresholds and Significance Criteria"*** provides the thresholds that are the basis of conclusions of significance, which are primarily the criteria in the CEQA Guidelines Appendix G, Environmental Checklist (California Code of Regulations, Sections 15000 – 15387).

Primary sources used in identifying the criteria include the *CEQA Guidelines*; local, State, Federal, or other standards applicable to an impact category; and officially established significance thresholds. ". . . An ironclad definition of significant effect is not possible because the significance of any activity may vary with the setting" (*CEQA Guidelines* Section 15064[b]). Principally, ". . . a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance" constitutes a significant impact (*CEQA Guidelines* Section 15382).

- ***"Impacts and Mitigation Measures"*** describes the potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented.

  Evidence, based on factual and scientific data, is presented to show the cause and effect relationship between the proposed project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range, or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant; all of the potential direct and reasonably foreseeable indirect effects are considered.

  Mitigation measures are those project-specific measures that would be required of the proposed project to avoid a significant adverse impact; to minimize a significant adverse impact; to rectify a significant adverse impact by restoration; to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations; or to compensate for the impact by replacing or providing substitute resources or environment.

  The *"Level of Significance"* identifies the impacts that will remain after the application of mitigation measures, if applicable, and whether the remaining impacts are or are not considered significant. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "unavoidable significant impacts."

- ***"Cumulative Impacts and Mitigation Measures"*** describes potential environmental changes to the existing physical conditions that may occur as a result of the proposed project together with all other reasonably foreseeable, planned, and approved future projects producing related or cumulative impacts.

- ***"Significant Unavoidable Impacts"*** describes impacts that would be significant, but cannot be feasibly mitigated to less than significant, so would be unavoidable. To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable environmental impacts in determining whether to approve the project. If the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered "acceptable" and the project approved (*CEQA Guidelines* Section 15093[a]).

5.1 Land Use and Planning

5.1 LAND USE AND PLANNING

This section identifies the existing land use conditions, evaluates the project's consistency with relevant planning policies, and recommends mitigation measures that would avoid or lessen the significance of potential impacts. This section also identifies on-site and surrounding land use conditions and relevant land use policies and regulations, as set forth by the City of Palmdale. Information in this section is based upon the following reference documents:

- *City of Palmdale General Plan* (General Plan);
- *City of Palmdale Municipal Code* (Municipal Code);
- *City of Palmdale Housing Element Update* (Proposed Housing Element);
- Southern California Association of Governments, *2006–2014 Regional Housing Needs Assessment*; and
- Southern California Association of Governments, *2008 Regional Comprehensive Plan*.

5.1.1 EXISTING SETTING

The City of Palmdale (project area) is approximately 104-square miles and is comprised of many different neighborhoods and areas with a variety of development including residential, commercial, industrial, public facility, and open space uses. Approximately 16,408 acres of the City are currently developed with residential uses. Residential uses are typically located along the aqueduct, at the base of the Sierra Pelona Mountain Range, and on the valley floor away from the airport. Residential areas range from primarily low density single-family homes with some larger concentrations of higher-density residential uses generally located within the central portion of the City, east of 4th Street East. Of the City's 46,605 dwelling units, approximately 85.2 percent are single-family and 14.8 percent are multi-family; refer to Table 5.1-1, *Existing Residential Uses*.

Table 5.1-1
Existing Residential Uses
(on-the-ground)

Land Use	Acres	Dwelling Units
Single-Family Residential	15,485.69	37,030
Medium Density Residential	537.65	2,687
Multi-Family Residential	384.35	6,888
Total Residential	16,408	46,605[1]

It is noted, because this estimate is as of April 2012, it varies slightly from the Department of Finance January 1, 2011 estimate of 46,589 dwellings units used in Section 7.3, Growth-Inducing Impacts.

Approximately 304 acres of land located within the central portion of the City (the area generally located between 4th Street East and 15th Street East, Avenue Q to Avenue R) have been identified for potential residential development/redevelopment. As indicated in Table 5.1-2, *Existing Land Uses – GPA/ZC Area*, there are approximately 2,298 dwelling units and approximately 71,630 square feet of non-residential uses located in this area.

Table 5.1-2
Existing Land Uses – GPA/ZC Area

Land Use	Dwelling Units	Square Feet
Single-Family Residential	164	
Multi-Family Residential	2,834	
Civic		1,714
Public Facility		30,000
Religious Assembly		39,916
Total	*2,998*	*71,630*

5.1.2 REGULATORY SETTING

Development in the City is subject to the policies, standards and guidelines contained within several relevant planning documents. Relevant planning documents related to land uses for the project are described below.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

SCAG functions as the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The region encompasses a population exceeding 19 million persons in an area of more than 38,000 square miles. As the designated MPO, SCAG is mandated by the Federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the State level. SCAG is responsible for the maintenance of a continuous, comprehensive, and coordinated planning process. SCAG is also responsible for the development of demographic projections, as well as the development of the integrated land use, housing, employment, transportation programs, measures, and strategies.

2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

On April 4, 2012, SCAG's Regional Council adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future. The RTP/SCS is the culmination of a multi-year effort involving stakeholders from across the SCAG Region.

SCAG's Intergovernmental Review (IGR) Section is responsible for performing a consistency review of local plans, projects, and programs with regional plans. There are two sets of minimum criteria for classification of projects as regionally significant: Criteria 1 through 12 are recommended for use by *CEQA Guidelines* Section 15206; and Criteria 13 through 22 reflect SCAG's mandates and regionally significant projects that directly relate to policies and strategies contained in the 2008 RCP.[1]

[1] Southern California Association of Governments Website, Intergovernmental Review Section, http://www.scag.ca.gov/igr/clist.htm, Accessed August 18, 2011.

Integrated Growth Forecast

SCAG's Forecasting Section is responsible for producing socio-economic estimates and projections at multiple geographic levels and in multiple years. The Forecasting Section develops, refines, and maintains SCAG's regional and small area socio-economic forecasting/allocation models. The socio-economic estimates and projections are used by federal and state mandated long-range planning efforts such as the RTP, the Air Quality Management Plan (AQMP), the Regional Transportation Improvement Program (RTIP), and the Regional Housing Needs Assessment (RHNA). SCAG's Adopted 2012 RTP Growth Forecasts are used to assess a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint; refer to Section 7.3, Growth-Inducing Impacts. Adopted 2012 RTP Growth Forecasts[2] provide population, household, and employment data for 2008, 2020, and 2035.

Regional Transportation Plan (2012 – 2035 RTP)

The Regional Transportation Plan (RTP) is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs.

Sustainable Communities Strategy

Senate Bill 375 (SB 375) was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. Under the law, SCAG is tasked with developing a Sustainable Communities Strategy (SCS), a newly required element of the 2012-2035 RTP that provides a plan for meeting emissions reduction targets set forth by the California Air Resources Board (ARB). The SCS will integrate land use and transportation strategies that will achieve ARB emissions reduction targets. On September 23, 2010, ARB issued a regional 8 percent per capita reduction target for the planning year 2020, and a conditional target of 13 percent for 2035.

Compass Blueprint Growth Visioning Program

In 2001, SCAG started a regional visioning process (i.e., Southern California Compass) to develop a strategy for regional growth that would accommodate growth while providing for livability, mobility, prosperity, and sustainability. This process was spearheaded by the Growth Visioning Subcommittee, which consists of civic leaders from throughout the region. The result is a shared "Growth Vision" for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The Compass Blueprint Growth Vision is a response, supported by a regional consensus, to the land use and transportation challenges facing Southern California now and in the coming years. The Growth Vision is driven by four key principles: mobility- getting where we want to go; livability- creating positive communities; prosperity- long-term health for the region; and sustainability- promoting efficient use of natural resources. The Growth Vision Report (GVR) presents the comprehensive Growth Vision for the six-county

[2] Southern California Association of Governments Website, Forecasting Section, http://www.scag.ca.gov/forecast/downloads/excel/2012AdoptedGrowthForecast.xls, Accessed May 11, 2012.

SCAG region as well as the achievements of the Compass process. It details the evolution of the draft vision, from the study of emerging growth trends to the effects of different growth patterns on transportation systems, land consumption, and other factors. The GVR concludes with a series of implementation steps – including tools for each guiding principle and overarching implementation strategies – that will guide Southern California toward its envisioned future.

SCAG Regional Housing Needs Assessment

California State Housing Element Law enacted in 1980 requires SCAG and other regional councils of government in California to determine the existing and projected regional housing needs for persons at all income levels. SCAG is also required by law to determine each jurisdiction's share of the regional housing need in the six-county southern California region. State legislation and the Regional Housing Needs Assessment (RHNA) process are intended to address housing needs for projected state population and household growth, to create a better balance of jobs and housing in communities, and to ensure the availability of decent affordable housing for all income groups. SCAG takes the lead in overseeing the assessment by identifying measures to gauge housing demand and comparing those numbers against socioeconomic factors throughout the region. The RHNA consists of two measurements: 1) existing need for housing, and 2) future need for housing.

The State's Housing Element law requires local governments to make plans to adequately address their share of existing and projected population growth, taking into consideration affordability of available and future housing. The California Department of Housing and Community Development (HCD) enforce State Housing Element Law by requiring certified Housing Elements as part of every city's General Plan. The RHNA quantifies the need for housing by income group within each jurisdiction during specific planning periods. The current planning period is January 1, 2006 to June 30, 2014.

Table 5.1-3, *RHNA Allocation (2006-2014)*, identifies the City of Palmdale's fair share housing needs allocation for 2006 to 2014 planning period.

Table 5.1-3
RHNA Allocation (2006 – 2014)

Income Category	Number of Units	Percentage
Very Low (50% or less of median)	4,481	25.0%
Low (51% to 80% of median)	2,822	15.8%
Moderate (80% to 120% of median)	3,024	16.9%
Above Moderate (>120% of median)	7,583	42.3%
Total	17,970	100%

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-37.

In order to determine the regional housing needs for the 2006-2014 planning period, the needs are adjusted by the actual number of units constructed from January 1, 2006 to the present. Table 5.1-4, *Adjusted RHNA Allocation (2006-2014)*, summarizes the units constructed as of

December 31, 2011, according to income category. As indicated in Table 5.1-4, a total of 3,489 dwelling units have been constructed in the City during that time period. The units constructed since January 1, 2006 are credited towards the City's RHNA allocation. In consideration of the units constructed, the City's adjusted need for 2006-2014 is 14,421 housing units, with 6,920 units allocated for very low- and low-income households.

Table 5.1-4
Adjusted RHNA Allocation (2006-2014)

Income Level	RHNA Allocated Units	Completed Units	Remaining Units
Very Low (50% or less of median)	4,481	57	4,424
Low (51% to 80% of median)	2,822	326	2,496
Moderate (80% to 120% of median)	3,024	39	2,985
Above Moderate (>120% of median)	7,583	3,067	4,516
Total	17,910	3,489	14,421

Source: *City of Palmdale Draft Housing Element 2006 – 2014*, Table H-38.

AIR FORCE PLANT 42

Joint Land Use Committee

Air Force Plant 42 (Plant 42) is located in the northeast portion of the City. The City of Palmdale, City of Lancaster, and the U.S. Air Force formed the Joint Land Use Committee (JLUC) in 1991 to discuss airport land use compatibility issues. The JLUC developed a number of policies affecting land use decisions for projects in the general vicinity of Air Force Plant 42 (Plant 42). The *Palmdale General Plan* has established several policies related to the JLUC and Plant 42. New projects and land use requests are reviewed for conformance with the intent of the JLUC policies.

Air Installation Compatible Use Zone (AICUZ) Study

The *Air Force Plant 42 Air Installation Compatible Use Zone* (AICUZ) *Study* (2011) addresses the health, safety, and general welfare in the areas surrounding Plant 42. The 2011 AICUZ study documents aircraft operations and provides noise contours and compatible use guidelines for land areas surrounding the installation. The AICUZ Study also addresses the aircraft maintenance activities associated with PRA. The purpose of the AICUZ program is to promote compatible land development in areas subject to aircraft noise and accident potential. The AICUZ study is to be used in the planning process of affected jurisdictions to prevent incompatible land uses.

Air Force AICUZ guidelines establish land use recommendations for the clear zones (CZ), accident potential zones (APZ) I and II, and for the four noise zones. The AICUZ Study defines a CZ as an obstruction-free surface on the ground symmetrically centered on the extended runway centerline beginning at the end of the runway and extending outward 3,000 feet. APZ I begins at the outer end of the CZ and is 5,000 feet long by 3,000 feet wide. APZ II begins at the outer end of APZ I and is 7,000 feet long by 3,000 feet wide. The AICUZ Study shows the CZ, APZ, and noise contours for Plant 42 (Figure 4-4, Incompatible Land Uses in the Vicinity of

Plant 42). The AICUZ Study also provides the land use compatibility guidelines that are applicable to Plant 42; refer to AICUZ Study Table 3-5, *Land Use Compatibility, Noise exposure, and Accident Potential*.

CITY OF PALMDALE GENERAL PLAN

In the late 1980s, the City of Palmdale undertook preparation of a general plan to provide a foundation for future development of the City. The *Palmdale General Plan* (General Plan) presents goals and policies addressing a variety of issues affecting land use decisions within the City. The General Plan is a comprehensive document with six elements that address mandatory issues in accordance with State law. The elements include Land Use, Circulation, Environmental Resources, which includes Open Space and Conservation, Safety, Noise and Housing. The General Plan also contains three additional elements: Public Services, Parks, Recreation and Trails and Community Design. On January 25, 1993, the Palmdale City Council adopted Resolution No. 93-10, adopting the General Plan and certifying the General Plan Environmental Impact Report.

Land Use Element

While the General Plan elements carry equal weight, the Land Use Element is considered the single-most representative element of the General Plan. "The Land Use Element of the General Plan contains the City's blueprint for long-range growth and development." Goals, objectives, and policies are identified to address significant issues facing the community through a variety of land use planning strategies. Implementation measures provide specific actions to achieve the goals and objectives. The Land Use Element identifies issues and opportunities for future development within the City including development patterns, growth trends, year 2010 and buildout projections, demographic profile and land use trends and issues.

LAND USE DESIGNATIONS

The Land Use Element identifies the future land use pattern and establishes standards of density and intensity for future development within the City. The General Plan Land Use Map illustrates the locations of the various land use designations within the City. The land use classifications established in the Land Use Element and the Land Use Map provide the overall land use pattern desired by the City for its future. Development within the City must be consistent with the Land Use Map as well as the provisions identified in the General Plan. The Palmdale General Plan Land Use Element establishes land use classifications for land within the City and the standards of density and intensity for each classification, as summarized below.

EQUESTRIAN RESIDENTIAL

The Equestrian Residential (ER) designation is intended for single family residential uses at a maximum gross density of 0.40 dwelling units (du) per acre (1 du per 2.5 acres), yielding an estimated population of 800 persons per square mile. The character of areas within this designation is to be rural in nature with parcel sizes of 2.5 acres or larger.

LOW DENSITY RESIDENTIAL

The Low Density Residential (LDR) designation is intended for single family residential uses at a maximum gross density of one du per acre with an estimated population of 1,600 persons per square mile. The Low Density designation is appropriate to hillside areas and as a transition between rural and suburban areas. Minimum lot size within this designation will generally be one acre or larger, although clustering may be permitted to encourage preservation of natural resources and steep slopes. Actual permitted density will be based on applicable environmental and infrastructural conditions.

SINGLE FAMILY RESIDENTIAL – 1 (0 - 2 DU/AC)

The Single Family Residential-1 (SFR-1) designation is intended for single family residential uses with gross densities ranging from 0 to 2.0 du per acre and an estimated population of 3,600 persons per square mile. Net lot sizes will generally be 0.5 acre or larger, creating a semi-rural environment. This designation may be utilized in lower hillside areas where inclines are present but topography is lacking significant slope constraints. It may also be utilized in outlying valley areas where large lot subdivisions are desired. Clustering may be permitted to preserve steep hillsides and significant physical features. Actual permitted density will be based on site specific environmental and infrastructural conditions.

SINGLE FAMILY RESIDENTIAL – 2 (0 - 3 DU/AC)

The Single Family Residential-2 (SFR-2) designation is intended for single family residential uses with gross densities ranging from 0 to 3.0 du per acre and an estimated population of 5,600 persons per square mile. Net lot sizes will generally be 10,000 square feet or larger, although clustering may be permitted to preserve steeper terrain or significant physical features. This designation is appropriate in those areas between the valley floor and steeper hillside areas (generally having less than ten percent slope). Actual permitted density will be based on site specific environmental and infrastructural conditions.

SINGLE FAMILY RESIDENTIAL – 3 (3.1 - 6 DU/AC)

The Single Family Residential-3 (SFR-3) designation is intended for single family residential uses with gross densities ranging from 3.1 to 6.0 du per acre and an estimated population of 9,700 persons per square mile. Subdivisions containing the City's standard 7,000 square foot minimum lot size will typically be located within this designation. Actual permitted density will be based on site specific environmental and physical constraints.

MEDIUM RESIDENTIAL (6.1 - 10.0 DU/AC)

The Medium Residential (MR 6.1 to 10.0 du/ac) designation is intended for residential uses at maximum gross densities ranging from 6.1 to 10.0 units per acre and an estimated population of 16,200 persons per square mile. Housing types may include single family detached, single family attached, townhouses, condominiums, duplexes, triplexes, apartments, or manufactured housing developments. Permitted structure types will be as specified in the underlying zone district. For single family residential uses within this designation, the minimum permitted lot size is 7,000 square feet, unless otherwise specified in an approved specific plan or residential planned development offering a variety of lot sizes, housing types, and public amenities, a senior housing project, or other approved development plan. Maximum permitted density will be

determined through the development review process, based upon environmental and infrastructural conditions.

MULTI-FAMILY RESIDENTIAL (MFR 10.1-16)

The Multi-family Residential (MFR 10.1-16) designation is intended for residential uses with densities ranging from 10.1 to 16 du per acre and an estimated population of 26,000 persons per square mile. Housing types may include a variety of attached and detached dwelling unit types, as permitted by the underlying zone. Actual density permitted will be based on site specific environmental and infrastructural conditions.

Table 5.1-5, *Existing General Plan Development Potential*, outlines the existing residential land use designations and provides the City's development potential, based on typical residential densities. As indicated in Table 5.1-5, there are approximately 31,633 acres within the City designated for residential uses, with a resultant development potential of approximately 78,612 dwelling units.

Table 5.1-5
Existing General Plan Development Potential

Land Use Designation	Acres	Typical Density (du/acre)	Development Potential (du)
Equestrian Residential	112.41	0.4	45
Low Density Residential	3,186.00	1.0	3,186
Single Family Residential – 1	1,492.15	1.0	1,492
Single Family Residential – 2	3,034.88	2.0	6,070
Single Family Residential – 3	7,660.08	4.8	36,768
Medium Residential	537.65	8.0	4,301
Multi-Family Residential	384.35	12.8	4,920
Specific Plan[1]	15,225	Various	21,830
Total	31,633[2]		78,612[3]

du/ac = dwelling units per acre

1. Includes the following Specific Plan areas: City Ranch (Anaverde) (1,980 acres/approximately 5,200 dwelling units); Foothill Ranch (formerly College Park) (540 acres/approximately 380 dwelling units); Joshua Hills (435 acres/approximately 2,500); Palmdale Transit Village (110 acres/approximately 1,027 dwelling units); Rancho Vista (1,315 acres/approximately 5,100 dwelling units; and Ritter Ranch (10,625 acres/approximately 7,200 dwelling units).
2. Of which, approximately 304 acres involve the GPA area and approximately 7.7 acres involve the Palmdale Transit Village Specific Plan area.
3. The SOC Report is the most current forecast of the City's residential development potential (and population). According to the SOC Report, 136,934 dwelling units are forecast at buildout, in contrast with the 78,612 dwelling units forecast in this analysis. The SOC Report's residential development potential differs from this analysis, because the SOC Report's forecasts are based on maximum densities, whereas these forecasts are based on typical densities.

LAND USE DESIGNATIONS WITHIN GPA AREA[3]

Table 5.1-6, *Existing General Plan Development Potential – GPA Area*, outlines the existing land use designations within the GPA area and the development potential, based on typical residential densities and non-residential intensities. As indicated in Table 5.1-6, approximately 262 acres are designated residential, with a resultant development potential of approximately 2,171 dwelling units. Additionally, approximately 42 acres are designated non-residential (Commercial and Public Facility), with a resultant development potential of approximately 606,747 square feet.

Table 5.1-6
Existing General Plan Development Potential - GPA Area

Land Use Designation	Acres	RESIDENTIAL		NON-RESIDENTIAL	
		Typical Density (du/ac)	Development Potential (du)	Typical Intensity (FAR)	Development Potential (sf)
Single Family Residential – 3	58.68	4.8	282		
Medium Residential	148.48	8.0	1,188		
Multi-Family Residential	54.84	12.8	702		
Sub-Total Residential	*262.00*		*2,171*		
Office Commercial	17.57			0.50	136,234
Community Commercial	12.51			0.25	57,608
Downtown Commercial	5.29			0.25	30,231
Public Facility	6.94			0.10	382,675
Sub-Total Non-Residential	*42.31*				*606,747*
Total	*304*		*2,171*		*606,747*
du/ac = dwelling units per acre; FAR = floor area ratio; sf = square feet					

Circulation Element

The Circulation Element provides "a blueprint for construction and maintenance of a transportation network which will accommodate growth, support economic development, allow safe and convenient access and meet regional transportation goals." The element identifies goals, objectives, and policies to provide guidance for circulation within and through the City and implementation measures to achieve the goals and objectives. Recreational trails and bikeways are addressed within the Parks, Recreation, and Trails Element.

Environmental Resources Element

The Environmental Resources Element combines the State mandated Open Space and Conservation Elements to address resource conservation and open space. These two elements are integrally related to one another and frequently overlap; therefore, they have been combined in the *General Plan*. The element provides a basis to evaluate existing resources and

[3] This GPA area coincides with the Zone Change (ZC) area addressed in the following discussions; refer also to Exhibit 3-4, *Proposed Sites for General Plan and Zoning Code Amendments*.

to plan for their protection by establishing goals, objectives and policies concerning air, water, open space, recreation and energy resources and their conservation, preservation and managed use. The element is divided into four major topics: open space, conservation, outdoor amenities and scenic highways.

Public Services Element

The Public Services Element establishes goals, objectives and policies to ensure that public services and infrastructure are available for growth and to promote public health, safety and welfare. The element is closely related to the Land Use Element because it "addresses existing conditions and concerns and establishes measures to accommodate future growth and development patterns."

Safety Element

The Safety Element identifies potential safety hazards and establishes goals, objectives, and policies to protect life and property from natural and man-made hazards. The element is designed to identify areas where private and public decisions on land use need to be sensitive to hazardous conditions caused by geologic conditions, seismic activity, flood and inundation, fire as well as aircraft accident potential, hazardous materials and crime. It establishes a decision-making framework for City leaders to evaluate land use issues for their safety impact. The Safety Element provides recommendations for hazard mitigation and ensures that adequate emergency response can be provided when needed.

Noise Element

The purpose of the Noise Element is to identify ambient noise levels and establish policies and programs designed to minimize the effects of noise on people living and working in Palmdale. Goals, objectives, and policies related to the control of noise levels and the maintenance of appropriate noise levels are included to limit the noise generated from future projects as well as to abate existing noise problems. The Noise Element also serves as a guideline for compliance with the State's noise standards.

Housing Element

The Housing Element establishes goals, objectives, polices, and programs to guide officials in making decisions to address local housing needs within a regional context. State law requires preparation of a housing element to ensure that housing opportunities exist for existing and future residents at all income levels. Requirements include assessment of existing and projected housing need, identification of community goals, and statement of objectives and policies as they relate to housing. The Housing Element contains the following main components: (1) regional housing needs assessment; (2) vacant land inventory; (3) housing constraints; (4) goals and policies; (5) housing programs and quantified objectives; and (6) an implementation program. Additionally, the element addresses special housing needs for specific populations such as the elderly, the disabled, female heads of households and the homeless.

The City's current Housing Element was adopted in April 2001. The existing housing element identifies and analyzes the community's housing needs and provides a statement of goals,

policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing for the 1998 to 2005 planning period. The City's RHNA for the 1998 to 2005 planning period totaled 9,878 units, with 3,495 units being very low- and low-income. During this time, 7,424 new units were constructed within the City with 450 units being very low- and low-income.

Parks, Recreation, and Trails Element

The Parks, Recreation and Trails Element guides the future development of parks, recreational facilities, multi-use trails, bikeways and open space areas to serve the recreation needs of the City. This element addresses current and future needs with recommendations for facility and program improvements. Goals, objectives, and policies are established to provide a basis for funding prioritization and program development.

Community Design Element

The Community Design Element, although not a required element of the City's *General Plan*, serves as a comprehensive guide for local planners for immediate improvements and long-range developments within the planning area. The element is a tool to improve the functional and aesthetic quality of the built environment for the City of Palmdale and the entire planning area by identifying areas of concern, as well as areas of exemplary aesthetic value. The Community Design Element will assist in guiding growth of future development to achieve visual integrity of the City and the planning area.

CITY OF PALMDALE MUNICIPAL CODE

The Zoning Ordinance provides the legislative framework to enhance and implement the goals, policies, plans, principles, and standards of the General Plan. The purpose of the Zoning Ordinance is to promote and preserve the public health, safety, and general welfare and to preserve and enhance the quality of life within the City by establishing regulations to ensure that an appropriate mix of land uses is developed in an orderly manner. Specifically, the Zoning Ordinance intends to achieve the following objectives:

- To implement the goals, objectives and policies of the General Plan;
- To retain and enhance established residential neighborhoods, commercial and industrial districts, public facilities, recreation, open space and other amenities;
- To allow for the infill and redevelopment of areas at similar scale and character;
- To accommodate expansion of development into vacant and under-utilized lands, while considering environmental and infrastructural constraints;
- To provide a diversity of areas throughout the community characterized by differing land use activity, scale and intensity;
- To maintain and enhance significant environmental and visual resources;
- To provide opportunities for economic development, including business creation and expansion in a variety of manufacturing, service and marketing industries; and

- To establish Palmdale as a distinctive community with a high quality of life and a visually pleasing, secure environment for the City's residents and businesses.

Title 17, Zoning Ordinance, of the Palmdale Municipal Code creates zoning districts in the incorporated area of the City of Palmdale and prescribes area requirements, classes of uses and standards of development for buildings, structures, improvements, and premises in each zoning district. Residential zones within the City are provided for a range of residential types and densities, as described below.

R-1 (Single Family Residential): The R-1 Zone is established for the development of single family detached dwellings at gross densities ranging from 0 to 6 dwelling units per acre and a minimum lot size of seven thousand (7,000) square feet. Development within the R-1 Zone generally consists of single-family residential neighborhoods of a suburban type and density.

R-2 (Medium Residential): The R-2 Zone is intended to allow the development of housing at a gross density of between 6.1 and 10 dwelling units per acre. This zone permits a mix of dwelling unit densities and structure types, including single family detached and attached; zero lot line and wide-shallow subdivisions; duplexes, triplexes, condominium and townhouse developments; and moderate density apartment and manufactured housing development.

R-3 (Multiple Residential): The R-3 Zone is intended to promote the development of grouped housing such as townhouses, condominiums, and apartments at a density of up to sixteen dwelling units per gross acre.

A-1 (Light Agriculture): The A-1 Zone is intended to ensure that the rural character of portions of the planning area is maintained. Typical uses in this zone include low density residential uses, among others. Residential development permitted in this zone consists of large lot single family homes which may involve limited agriculture, including equestrian and other animal uses.

Mixed Use (MX) Overlay: The Mixed Use (MX) Overlay Zone is established to facilitate the coexistence of residential and commercial land uses for the establishment and maintenance of dual use properties in appropriate areas. This zone is intended as a modifier to an underlying commercial zone, which would permit construction and operation of mixed residential/commercial projects within a common area. The location of the MX Overlay Zone must be consistent with the land use designations of DC (Downtown Commercial), CC (Community Commercial), or OC (Office Commercial).

Table 5.1-7, *Existing Zoning Development Potential*, outlines the existing residential zones and provides the City's development potential, based on typical residential densities. As indicated in Table 5.1-7, there are approximately 31,611 acres within the City zoned residential, with a resultant development potential of approximately 80,129 dwelling units.

ZONING DISTRICTS (WITHIN ZC AREA)

Table 5.1-8, *Existing Zoning Development Potential – ZC Area*, outlines the existing zoning within the ZC area and the development potential, based on typical residential densities and non-residential intensities. As indicated in Table 5.1-8, approximately 262 acres are zoned residential, with a resultant development potential of approximately 2,171 dwelling units. Additionally, approximately 42 acres are zoned non-residential, with a resultant development potential of approximately 606,747 square feet.

Table 5.1-7
Existing Zoning Development Potential

Zoning District	Acres	Typical Density (du/acre)	Development Potential[1] (du)
R-1-7,000	7,539.18	4.8	36,188
R-1-10,000	1,186.57	3.5	4,153
R-1-12,000	14.97	3.0	45
R-1-13,000	352.81	2.5	882
R-1-15,000	929.85	2.0	1,860
R-1-20,000	1,659.34	1.5	2,489
R-1-1	1,377.48	0.8	1,102
R-1-2.5	112.41	0.4	45
R-2	537.65	8.0	4,301
R-3	384.5	12.8	4,922
A-1	2,238.9	0.8	1,791
MX Overlay[1]	52.15	10.0	522
Specific Plan	15,225	Various	21,830
Total	*31,611*[2]		*80,129*

du = dwelling units
1. For analysis purposes, the maximum of 10.0 dwelling units/acre allowed within the MX Overlay zone is used.
2. It is acknowledged that this acreage calculation differs from the 31,633 acres noted in Table 5.1-5, *Existing General Plan Development Potential*. This acreage difference is attributed to the paper to GIS conversion process. The City intends to conduct a "clean-up" process, in order to ensure consistency between both maps.

Table 5.1-8
Existing Zoning Development Potential - ZC Area

Zoning District	Acres	RESIDENTIAL		NON-RESIDENTIAL	
		Typical Density (du/ac)	Development Potential (du)	Typical Intensity (FAR)	Development Potential (sf)
R-1-7,000	58.68	4.8	282		
R-2 (Medium Residential)	148.48	8.0	1,188		
R-3 (Multiple Residential)	54.84	12.8	702		
Sub-Total Residential	*262.00*		*2,171*		
C-2 (Office Commercial)	17.57			0.50	136,234
C-3 (General Commercial)	12.51			0.25	57,608
C-D (Downtown Commercial)	5.29			0.25	30,231
(PF) Public Facility	6.94			0.10	382,675
Sub-Total Non-Residential	*42.31*				*606,747*
Total	*304*		*2,171*		*606,747*

du/ac = dwelling units per acre; FAR = floor area ratio; sf = square feet

PALMDALE TRANSIT VILLAGE SPECIFIC PLAN

The *Palmdale Transit Village Specific Plan* (Specific Plan) establishes land use regulations for a mix of residential and non-residential uses located within approximately 110 acres generally bounded by Technology Drive, Avenue Q-3, the block west of 3rd Street East, and the Metrolink Railroad tracks adjacent to Sierra Highway. The Palmdale Transportation Center (Transportation Center), constructed in 2004, is located in the northern portion of the Specific Plan area.

Table 5.1-9, *Existing Specific Plan Development Potential*, summarizes the maximum development potential allowed within the Specific Plan area. The proposed project involves only Specific Plan Neighborhood Zone C, which totals approximately 7.7 acres and contains approximately 40 dwelling units. Assuming a typical density of 27 dwelling units per acre, Neighborhood Zone C's development potential is approximately 207 dwelling units.

Table 5.1-9
Existing Specific Plan Development Potential

Proposed Use	Dwelling Units[1]	Building Square Feet	Open Space (Acres)
Single-Family/Duplex (8-12 du/acre)(Zone I)	78		
Townhomes (12-30 du/acre)(Zone F, G & H)	192		
Multi-family (up to 58 du/acre)(Zone C & D)	725		
Neighborhood Retail – Mixed Use (0.40-0.60 FAR)	32	9,000	
Neighborhood Retail – Stand Alone (0.40 FAR)		40,000	
Office – Stand Alone (0.60-0.80 FAR)		353,000	
Office – Mixed Use (0.80 FAR)		93,000	
Greenspace			4.0
Total	*1,027*	*495,000*	*4.0*

du = dwelling unit; FAR = floor area ratio.
1. Represents the maximum dwelling units proposed.

5.1.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to land use and planning. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Physically divide an established community (refer to Section 8.0, Effects Found Not To Be Significant).

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan,

local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

- Conflict with any applicable habitat conservation plan or natural community conservation plan, and/or policies by agencies with jurisdiction over the project (refer to Section 8.0, Effects Found Not To Be Significant).

For the purposes of this impact analysis, a significant impact would occur if project implementation would result in inconsistencies or conflicts with the adopted goals, objectives, and policies of the *General Plan* and/or applicable rules and regulations of the Zoning Ordinance, as well as the specified regional plans. Based on these standards, the project's effects have been categorized as either a "less than significant impact" or "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.1.4 IMPACTS AND MITIGATION MEASURES

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH SCAG'S REGIONAL PLANNING EFFORTS.**

Impact Analysis: As discussed in detail in Section 3.4, the proposed project anticipates the development of 2,786 dwelling units within the residentially-zoned vacant land that exists throughout the City. Additionally, 13,253 dwelling units could be accommodated, and up to 3,038 dwellings and 71,630 square feet of non-residential uses could potentially be removed within the GPA/ZC area, through implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01.

SCAG's Intergovernmental Review (IGR) Section is responsible for performing a consistency review of local plans, projects, and programs with regional plans. According to SCAG's criteria for classification of projects as regionally significant, the following criterion is relevant to the proposed project:

- *Criteria 1*: A proposed local general plan, element, or amendment thereof for which an EIR was prepared.

The project proposes General Plan Amendment (GPA) 11-03, which would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with new medium-high and high density residential land use designations. The General Plan Land Use Map would be amended to identify the properties proposed for new medium-high and high density residential land uses. Thus, the proposed project would be considered regionally significant.

The analysis of the project's consistency with SCAG's IGR policies is provided in Table 5.1-10, *SCAG IGR Policies Consistency Analysis*. As concluded in Table 5.1-10, the proposed project is considered consistent with the relevant SCAG policies and a less than significant impact would occur in this regard.

Table 5.1-10
SCAG IGR Policies Consistency Analysis

Goals/Principles		Consistency Statement
REGIONAL TRANSPORTATION PLAN		
RTP G1	Maximize mobility and accessibility for all people and goods in the region.	Consistent. Implementation of the proposed project would allow for development of higher-density residential uses in proximity to existing transportation routes and transit, including the Palmdale Transportation Center. As indicated in Section 5.2, Transportation and Circulation, potential impacts to the circulation system would be reduced to less than significant with the implementation of mitigation.
RTP G2	Ensure travel safety and reliability for all people and goods in the region.	Consistent. All intersection and roadway improvements within the City would be constructed according to specified City standards. As concluded in Section 5.2, Transportation and Circulation, with implementation of the recommended mitigation, traffic and circulation impacts associated with implementation of the proposed project would be reduced to less than significant, except for the segment of Palmdale Boulevard (SR-138) between Division Street and 10th Street East where there would be a significant and unavoidable impact
RTP G3	Preserve and ensure a sustainable regional transportation system.	Consistent. The proposed project would be in furtherance of a sustainable regional transportation system through implementation of mitigation; refer to Response to Goal RTP G1 above. Additionally, the project assumes implementation of the High Desert Corridor (HDC), which is planned, programmed, and funded through the Regional Transportation Plan (RTP).
RTP G4	Maximize the productivity of our transportation system.	Consistent. As concluded in Section 5.2, Transportation and Circulation, with implementation of the recommended mitigation, traffic and circulation impacts associated with implementation of the proposed project would be reduced to less than significant, except for the segment of Palmdale Boulevard (SR-138) between Division Street and 10th Street East where there would be a significant and unavoidable impact.
RTP G5	Protect the environment, improve air quality, and promote energy efficiency.	Consistent. Implementation of the proposed project would allow for the development of higher-density residential uses in proximity to existing development and transit. The potential development of residential uses within the central portion of the City would provide opportunities for residents to walk, bike, and utilize transit to access amenities in the area and greater region, potentially improving air quality and promoting energy efficiency. Further, the proposed Housing Element includes Goal H6, which calls for the implementation of energy and water conservation measures.

Table 5.1-10 [continued]
SCAG IGR Policies Consistency Analysis

Goals/Principles		Consistency Statement
RTP G6	Encourage land use and growth patterns that complement our transportation investments and improve the cost-effectiveness of expenditures.	Consistent. Implementation of the proposed project would allow for the development of higher-density residential uses in proximity to existing transportation facilities and transit, including the Palmdale Transportation Center.
RTP G7	Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	Not Applicable. Implementation of the proposed Housing Element would not affect the security of the transportation system and associated planning and coordination with other security agencies.
COMPASS GROWTH VISIONING		
Principle 1: Improve mobility for all residents.		
GV P1.1	Encourage transportation investments and land use decisions that are mutually supportive.	Consistent. Implementation of the proposed project would allow for the development of higher-density residential uses in proximity to existing transportation facilities and transit, including the Palmdale Transportation Center.
GV P1.2	Locate new housing near existing jobs and new jobs near existing housing.	Consistent. The proposed Housing Element would allow for the development of housing throughout the City. Potential housing within the central portion of the City would be in proximity to existing jobs.
GV P1.3	Encourage transit-oriented development.	Consistent. Implementation of the proposed project would allow for the development of higher-density residential uses in proximity to existing transportation facilities and transit, including the Palmdale Transportation Center.
GV P1.4	Promote a variety of travel choices.	Consistent. The proposed Housing Element would allow for the development of a variety of housing types throughout the City. Higher-density residential development would be allowed within the central portion of the City, promoting a variety of travel choices including transit, bicycling and walking.
Principle 2: Foster livability in all communities.		
GV P2.1	Promote infill development and redevelopment to revitalize existing communities.	Consistent. The proposed Housing Element would promote infill development and redevelopment throughout the City to provide a variety of housing opportunities for residents. Specifically, Goal H1 promotes the construction of new housing affordable to all income groups. Additionally, the proposed Housing Element includes Goal H2, which calls for the preservation and improvement of the existing supply of affordable housing, which would help to revitalize the existing communities.

Table 5.1-10 [continued]
SCAG IGR Policies Consistency Analysis

Goals/Principles		Consistency Statement
GV P2.2	Promote developments, which provide a mix of uses.	Not Applicable. The proposed Housing Element does not involve site-specific development. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process. The project does not propose changes to the City's existing Mixed Use (MX) Overlay, which would facilitate the development of mixed uses.
GV P2.3	Promote "people scaled", walkable communities.	Consistent. The proposed Housing Element does not involve site-specific development. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process. However, future residential development associated with proposed GPA 11-03, ZC 11-01, and SPA 11-01 would allow for higher-density residential development within the central portion of the City, which would support "people scaled" walkable communities due to the proximity to existing development and transit opportunities.
GV P2.4	Support the preservation of stable, single-family neighborhoods.	Consistent. The proposed Housing Element includes Goal H7, which would enhance the vitality and safety of existing residential neighborhoods, including the preservation and improvement of stable, single-family neighborhoods.
Principle 3: Enable prosperity for all people.		
GV P3.1	Provide, in each community, a variety of housing types to meet the housing needs of all income levels.	Consistent. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process, including providing a variety of housing types to meet the housing needs of all income levels.
GV P3.2	Support educational opportunities that promote balanced growth.	Not Applicable. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process. The project would not inhibit educational opportunities within the City.
GV P3.3	Ensure environmental justice regardless of race, ethnicity, or income class.	Consistent. The Housing Element policies and implementation programs are intended to provide housing to all residents regardless of race, ethnicity, or income class.
GV P3.4	Support local and state fiscal policies that encourage balanced growth.	Consistent. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process.

Table 5.1-10 [continued]
SCAG IGR Policies Consistency Analysis

Goals/Principles		Consistency Statement
GV P3.5	Encourage civic engagement.	Consistent. Civic engagement in the preparation of the proposed Housing Element and this Environmental Impact Report was encouraged throughout the process.
Principle 4: Promote sustainability for future generations.		
GV P4.1	Preserve rural, agricultural, recreational, and environmentally sensitive areas.	Consistent. The Housing Element would allow for residential development throughout the City. The potential residential development would not occur in existing rural, agricultural, or recreational areas. However, the Ritter Ridge SEA is located within the southwestern portion of the project area; refer to SOC Report Figure 4.2-2. Additionally, drainage features (i.e., Anaverde Creek, Amargosa Creek, and their tributaries) that could include riparian habitat traverse the project area; refer to SOC Report Figure 4.2-5. However, the Housing Element does not propose site-specific development. Additionally, as concluded in Section 5.8, Biological Resources, future residential development proposals would be reviewed on a case-by-case basis and Biological Surveys would be performed as needed to assess any potential impacts to environmentally sensitive areas. Identification of feasible mitigation measures to reduce potential impacts would be required.
GV P4.2	Focus development in urban centers and existing cities.	Consistent. The Housing Element would allow for residential development within the existing City boundaries. Additionally, future residential development associated with proposed GPA 11-03, ZC 11-01, and SPA 11-01 would allow for higher-density residential development within the central portion of the City, which is urbanized.
GV P4.3	Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution, and significantly reduce waste.	Consistent. The proposed Housing Element includes Goal H6, which calls for the implementation of energy and water conservation measures. As indicated in Section 5.15, Solid Waste, future development projects within the City would be required to comply with the Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE) for diverting solid waste. Compliance with General Plan Policies would further reduce the volume of solid waste ultimately disposed of at the landfills.
GV P4.4	Utilize "green" development techniques.	Consistent. The proposed Housing Element does not involve site-specific development. The Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process. As stated, the proposed Housing Element does include Goal H6, which calls for the implementation of energy and water conservation measures.

Mitigation Programs:

General Plan Policies:

Policy L1.1.2: Provide incentives to promote infill development, in order to foster more cohesive neighborhoods, maximize use of infrastructure, consolidate development patterns and enhance community appearance.

Policy L1.1.4: In considering requests to amend the Land Use Map, discourage proposals for development requiring urban services in those areas which are functionally separated from developed portions of the City by lack of infrastructure, expanses of vacant land, significant topographic or jurisdictional barriers, or other similar constraints.

Policy L3.2.1: Permit a range of residential densities and housing types throughout the City, rather than concentrating higher densities in limited areas.

Policy L3.2.2: Direct the location of senior and multi-family housing to areas accessible to public transportation, supportive commercial uses, and community facilities.

Policy C1.8.1: Cooperate with other agencies and jurisdictions, including Caltrans, Los Angeles County, and adjacent cities, to evaluate the proposed solutions to regional transportation issues relating to the City of Palmdale.

Policy C2.2.1: Promote public transit operations within the Planning Area, and work with transit operators to coordinate schedules, services, service routes and fares.

Policy C2.2.2: Promote the use of public transit by facilitating dedication of access routes and construction of safe and convenient stops with sufficient parking.

Policy C2.2.3: Encourage location of bikeways and storage areas which are integrated with public transit facilities.

Policy C2.2.4: Encourage development of regional rail transit serving the Palmdale area.

Policy C2.2.5: Require provision of bus turnouts for new development, where deemed to be appropriate in consultation with the transit authority.

Policy C2.2.6: Establish a regional transportation center within the City, conveniently located to maximize access to downtown and major commercial centers, which will accommodate a variety of public transportation uses including rail, bus, and shuttle service.

Policy C3.1.1: Schools, parks and neighborhoods uses should be located within convenient walking distance to residential developments.

Policy C3.1.2: Land uses should be arranged in a manner which increases the opportunity to utilize alternate forms of transportation, such as transit systems, bikeways and pedestrian walkways.

Policy C3.1.3: Promote bicycle accessibility to all public facilities, including parks, schools, and centers of civic activity, to include secure bicycle storage areas.

Policy C3.1.4: Require residential subdivision designs to accommodate convenient pedestrian and bicycle access, both on- and off-site.

Policy ER4.2.1: Promote water conserving landscape techniques, through the use of native and drought tolerant plant species and landscape design standards.

Policy ER4.2.2: Utilize native plants or drought resistant planting materials and drip irrigation systems where feasible within the Landscape Assessment District areas.

Policy ER4.2.3: Require the use of water conserving appliances and plumbing fixtures in all new construction.

Policy ER4.3.4: Encourage residents and businesses to recycle water where feasible, and where water recycling does not result in health and safety concerns, within their homes and/or businesses.

Policy ER5.1.1: Reduce the number of work-related trips through such means as promoting alternate work schedules, telecommuting, teleconferencing, company-sponsored ride share and alternative fuel vehicle programs developed under the County's Congestion Management Program, the use of Metro Link trains and other alternative modes of transportation to the workplace and the creation of additional park and ride facilities.

Policy ER5.1.2: Reduce vehicle non-work trips through merchant transportation incentives, distance learning, and transit system improvements.

Policy ER5.1.3: Reduce vehicle emissions through maintaining and improving traffic flow as contained in the Circulation Element.

Policy ER5.5.1: Encourage energy conservation from all sectors of the community by promoting the use of energy efficient appliances, processes and equipment, and promoting energy audits of existing structures.

Policy ER5.5.2: Require local government, Palmdale citizens, and local businesses and industries to recycle, as mandated by state law, and to otherwise recycle to the extent possible.

Policy ER5.5.3: Require that new construction promote the use of solar energy systems by providing maximum solar access.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

CITY OF PALMDALE GENERAL PLAN

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH PALMDALE GENERAL PLAN GOALS.**

Impact Analysis: Table 5.1-11, *General Plan Consistency Analysis*, analyzes the project's consistency with the current General Plan's goals. As demonstrated in Table 5.1-11, the proposed project is consistent with the relevant General Plan goals, thus, resulting in a less than significant impact in this regard.

Table 5.1-11
General Plan Consistency Analysis

City of Palmdale General Plan Implementing Goals	Proposed Project
Land Use Element	
Goal L1: Create a vision for long-term growth and development in the City of Palmdale, which provides for orderly, functional patterns of land uses within urban areas, a unified and coherent urban form, and a high quality of life for its residents.	Consistent. The project proposes to amend the General Plan Land Use Element to establish new medium-high and high density residential land use designations and the General Plan Land Use Map to re-designate specific parcels within the central portion of the City with these new land use designations. The proposed land use designations would allow for higher residential densities than currently occur within the central portion of the City. These centrally-located increased residential densities would provide a functional pattern of land use within urban areas where existing services and transit facilities can support new residential development.
Goal L3: Provide a high quality of life for all existing and future residents, meeting the needs of a variety of lifestyles.	Consistent. The proposed Housing Element supports and encourages the provision of housing for existing and future residents with various income levels and lifestyles. The proposed GPA would establish two new land use designations, allowing for higher residential densities than are currently allowed. By allowing for higher residential densities, future opportunities for higher-density residential products that are not currently provided within the City would occur.
Circulation Element	
Goal C1: Establish, maintain and enhance a system of streets and highways, which will provide for the safe and efficient movement of people and goods throughout the Planning Area, while minimizing adverse impacts on the community.	Consistent. Section 5.2, Transportation and Circulation, specifies the improvements necessary to accommodate traffic generated by the project; refer to Section 5.5, Traffic/Circulation, which outlines the required Mitigation Measures.

Table 5.1-11 [continued]
General Plan Consistency Analysis

City of Palmdale General Plan Implementing Goals	Proposed Project
Goal C2: Reduce the number of trips and vehicle miles traveled by individuals within the Planning Area, to meet regional transportation and air quality goals.	Consistent. The Housing Element would allow for development of a variety of housing products and types throughout the City. As discussed in Section 5.2, Transportation and Circulation, the City is served by several transportation options, including AVTA and Metrolink. These services would continue to be available to residents throughout the City. Further, the proposed GPA would allow for higher density residential development in proximity to existing commercial and public facility uses, as well as transit services, including the Palmdale Transportation Center, providing increased opportunities to reduce trips and vehicle miles traveled. Implementation of Mitigation Measure TR-1, which involves development and implementation of a project-specific transportation demand management (TDM) program to reduce daily and peak hour traffic generation by approximately ten (10) percent would be required. The reductions in traffic generation could be accomplished through various options such as implementation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc, which would further contribute to the reduction of trips and vehicle miles traveled.
Goal C3: Encourage use of non-vehicular transportation throughout the Planning Area.	Consistent. The City's Bikeway and Multi-Purpose Trail Plan illustrates the existing and planned bikeways within the City. The City supports non-vehicular transportation through the provision of bike and trail facilities and sidewalks throughout the community. The roadway improvements associated with future housing development, if any, would be required to comply with the City's adopted standards for typical street sections. The streets would be designed as "complete streets," accommodating pedestrians, bicyclists, and motorists. Further, by allowing increased residential densities within the central portion of the City, greater opportunities for residents to access commercial and recreational uses within their vicinities without having to use a vehicle would be provided.
Goal C4: Promote opportunities for rail service to move goods, passengers and commuters into and out of the Planning Area.	Consistent. The Palmdale Transportation Center provides Metrolink commuter rail service via the Antelope Valley Line, which connects the Antelope Valley and Santa Clarita with downtown Los Angeles and the media districts in Burbank and Glendale between the Antelope Valley and Los Angeles. The Housing Element encourages development of housing in the central portion of the City in proximity to rail service, providing greater opportunities for residents to access rail service and move into and out of the Planning Area.

Table 5.1-11 [continued]
General Plan Consistency Analysis

City of Palmdale General Plan Implementing Goals	Proposed Project
Environmental Resources	
Goal ER4: Protect the quality and quantity of local water resources.	Consistent. Section 5.7, Hydrology and Water Quality, provides an analysis of potential impacts to groundwater supplies that could occur with implementation of the proposed project and identifies the regulatory requirements and General Plan Policies to reduce potential impacts to less than significant.
Goal ER5: Promote the attainment of state and federal air quality standards.	Consistent. Section 5.3, Air Quality, addresses the air quality impacts and mitigation measures. Due to the conceptual nature and magnitude of the anticipated residential development, project implementation could result in significant construction, operational, and cumulative air quality impacts, despite compliance with the specified General Plan Policies and recommended mitigation measures, which would reduce impacts to the maximum extent feasible.
Goal ER7: Protect historical and culturally significant resources which contribute to the community's sense of history.	Consistent. Section 5.9, Cultural Resources, provides an analysis of potential impacts to cultural resources that could occur with implementation of the proposed project and outlines mitigation measures to reduce potential impacts to less than significant.
Public Services Element	
Goal PS1: Ensure that adequate public services and facilities are available to support development in an efficient and orderly manner.	Consistent. Sections 5.10 through 5.15 provide an analysis of potential impacts to public services and facilities that could occur with implementation of the proposed project and outlines the General Plan Policies to reduce potential impacts to less than significant.
Goal PS2: Ensure that all development in Palmdale is served by adequate water distribution and sewage facilities.	Consistent. Sections 5.13 and 5.14 provide an analysis of potential impacts to water and sewer facilities. The residential development anticipated by the proposed Housing Element would occur over several years based on market demand. Individual residential development projects would be required to provide water and sewage facilities to serve the serve the increased demands. Placement of water and sewer lines would be coordinated with existing and future lines. Further, individual developments would be required to pay connection fees before being allowed to connect to the systems.
Goal PS3: Develop and maintain adequate storm drainage and flood control facilities.	Consistent. Section 5.7, Hydrology and Water Quality, provides an analysis of potential impacts associated with storm drainage and flood control facilities that could occur with implementation of the proposed project. Individual development proposals would be required to provide flood control facilities within their site to mitigate the impacts of storm runoff. Future development within a floodplain would require a Conditional Letter of Map Revision (CLOMR) and/or a Letter of Map Revision (LOMR) from the Federal Emergency Management Agency (FEMA).

Table 5.1-11 [continued]
General Plan Consistency Analysis

City of Palmdale General Plan Implementing Goals	Proposed Project
Goal PS5: Support the provision of adequate public and community services to meet the needs of residents.	Consistent. As indicated in Section 5.10, Police Protection, and Section 8.0, Effects Found Not to be Significant, the proposed project would not interfere with the provision of adequate public and community services to meet the needs of residents.
Goal PS6: Ensure provision of adequate facilities and programs to accommodate solid waste and hazardous waste collection, handling and disposal.	Consistent. Section 5.15, Solid Waste, and Section 5.6, Hazards and Hazardous Materials, provide an analysis of potential impacts associated with solid waste and hazardous waste collection and disposal that could occur with implementation of the proposed project, and outlines mitigation measures to reduce potential impacts to less than significant.
Safety Element	
Goal S1: Minimize danger and damage to public health, safety, and welfare resulting from natural hazards.	Consistent. As indicated in Section 8.0, Effects Found Not to be Significant, the proposed project would not result in impacts from natural hazards.
Goal S2: Minimize danger associated with man-made hazards.	Consistent. Section 5.6, Hazards and Hazardous Materials, provides an analysis of potential impacts associated with hazards and hazardous materials that could occur with implementation of the proposed project and outlines mitigation measures to reduce potential impacts to less than significant.
Goal S3: Maintain and enhance City emergency services.	Consistent. Section 5.10, Police Protection, provides an analysis of potential impacts associated with police protection services that could occur with implementation of the proposed project and outlines the General Plan Policies to reduce potential impacts to less than significant.
Noise Element	
Goal N1: Minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process.	Consistent. As concluded in Section 5.5, Noise, due to the conceptual nature and magnitude of future development, project implementation could result in a significant cumulative traffic noise impact from the anticipated residential development within the rezone project area, despite implementation of the General Plan Policies. However, each future residential development proposal would be reviewed on a project-by-project basis through the City's development review process, to ensure that potential noise impacts associated with cumulative background traffic noise levels are reduced to the maximum extent practicable.

Table 5.1-11 [continued]
General Plan Consistency Analysis

City of Palmdale General Plan Implementing Goals	Proposed Project
Goal N2: Promote noise compatible land uses within the 65 CNEL contour and the Frequent Overflight Area of Air Force Plant 42.	Consistent. The sites identified for potential residential development within the residentially-zoned land and re-zone project area are not located within the 65 CNEL contour of Air Force Plant 42. Therefore, project implementation would not expose people residing in the project area to excessive noise levels associated with Plant 42. Notwithstanding, any future residential development within the City would be subject to compliance with the land use compatibility guidelines established in the Air Installation Compatible Use Zone (AICUZ) Study, which would ensure residents would not be exposed to excessive noise levels associated with Plant 42.
Parks, Recreation and Trails Element	
Goal PRT1: Provide adequate parks to meet the needs of existing and future residents.	Consistent. As indicated in Section 5.12, Parks and Recreation Facilities, the proposed project would not interfere with the provision of adequate parks to meet the needs of existing and future residents.
Community Design Element	
Goal CD1: Create and maintain a well-designed built environment for the City of Palmdale, which contributes to the community's economic vitality and enhances the quality of life for its residents.	Consistent. The project does not propose site-specific development. The City's Zoning Ordinance establishes site design and development standards for residential development within the City. The proposed Zoning Ordinance Amendment (ZOA) would establish development standards for the new residential zoning districts. Future residential development projects would be reviewed on a project-by-project basis to ensure consistency with the City's Zoning Ordinance requirements.
Goal CD4: Promote safe, functional, attractive single family residential neighborhoods, integrated with the surrounding community, and easily accessible by multiple transportation modes.	Consistent. The Housing Element supports a variety of housing development and product types throughout the City. However, the project does not propose site-specific development. Future single-family residential development projects would be reviewed on a project-by-project basis to ensure that the proposed development is consistent with the General Plan, including integrating single-family development into the surrounding community and supporting multiple transportation modes.
Goal CD5: Multiple family housing shall provide a safe and pleasant living environment for residents and shall be integrated with surrounding neighborhoods so as to enhance the sense of community, through implementation of objectives and policies.	Consistent. As stated, the Housing Element supports a variety of housing development and product types throughout the City. However, the project does not propose site-specific development. Future multiple-family residential development projects would be reviewed on a project-by-project basis to ensure that the proposed development is consistent with the General Plan, including providing a safe and pleasant living environment and integrating the development with the surrounding neighborhoods to enhance the sense of community.

LAND USE ELEMENT

General Plan Amendment 11-03

The Palmdale General Plan Land Use Element establishes seven land use designations that accommodate residential development, as described above. GPA 11-03 proposes to amend the Land Use Element to create two new land use designations: Medium-High Density Residential (MHDR 30); and High-Density Residential (HDR 50).

- *Medium High Density Residential (MHDR 30)*. The MHDR 30 designation is intended for residential uses with densities ranging from 30 to 50 dwelling units per acre and an estimated population of 56,000 persons per square mile. Housing types may include a variety of attached dwelling unit types, including townhouses, condominiums, or apartments, as permitted by the underlying zone. The actual density permitted will be based on site specific environmental and infrastructural conditions.

- *High-Density Residential (HDR 50)*. The HDR 50 designation is intended for residential uses with densities ranging from 50 to 60 dwelling units per acre and an estimated population of 85,000 persons per square mile. Housing types may include a variety of attached dwelling unit types, including townhouses, condominiums, or apartments, as permitted by the underlying zone. Actual density permitted will be based on site specific environmental and infrastructural conditions.

GPA 11-03 also proposes to amend the General Plan Land Use Map to identify the properties proposed for new MHDR 30 and HDR 50 uses; refer to Exhibit 3-5.

Table 5.1-12, *Proposed General Plan Development Potential – GPA Area*, outlines the proposed land use designations within the GPA area and the development potential, based on typical residential densities. As indicated in Table 5.1-12, approximately 304 acres would be designated residential, with a resultant development potential of approximately 13,006 dwelling units.

Table 5.1-12
Proposed General Plan Development Potential - GPA Area

Land Use Designation	Acres	RESIDENTIAL		NON-RESIDENTIAL (sf)
		Typical Density (du/ac)	Development Potential (du)	
Medium-High Density Residential (MHDR 30)	220.91	40	8,836	
High-Density Residential (HDR 50)	83.40	50	4,170	
Total	*304*		*13,006*	*0*
du/ac = dwelling units per acre; sf = square feet				

Table 5.1-13, *Comparison of Existing and Proposed General Plan Development Potential – GPA Area*, compares the GPA area's existing development potential with the development potential that would result from implementation of proposed GPA 11-03. Of the GPA's 304 acres, approximately 262 acres are currently and would remain residentially-designated, however, at the higher densities allowed by the proposed MHDR 30 and HDR 50 designations. The remaining 42 acres would be redesignated from non-residential to the proposed MHDR 30 and HDR 50 designations. Implementation of GPA 11-03 would increase the GPA area's residential development potential by approximately 10,835 dwelling units and decrease the non-residential development potential by approximately 606,747 square feet. These proposed changes in land use within the GPA area are considered a less than significant impact, given that they are necessary, in order to meet the City's allocated RHNA needs, as discussed below.

Table 5.1-13
Comparison of Existing and Proposed General Plan Development Potential - GPA Area

Land Use Designation	Existing GP Development Potential			Proposed GP Development Potential		Difference		
	Acres	Square Feet	Dwelling Units	Acres	Dwelling Units[1]	Acres	Square Feet	Dwelling Units
Single Family Res – 3	58.68		282	0	0	-58.68		-282
Medium Residential	148.48		1,188	0	0	-148.48		-1,188
Multi-Family Residential	54.84		702	0	0	-54.84		-702
Office Commercial	17.57	382,675		0	0	-17.57	-382,675	
Community Commercial	12.51	136,234		0	0	-12.51	-136,234	
Downtown Commercial	5.29	57,608		0	0	-5.29	-57,608	
Public Facility	6.94	30,231		0	0	-6.94	-30,231	
MHDR 30	0.00			220.91	8,836	220.91		+8,836
HDR 50	0.00			83.40	4,170	83.40		+4,170
Total	*304*	*606,747*	*2,171*	*304*	*13,006*	*0*	*-606,747 -100%*	*+10,835 +500%*

Table 5.1-14, *Proposed General Plan Development Potential*, outlines the proposed City-wide residential land use designations and provides the development potential, based on typical residential densities. As indicated in Table 5.1-14, implementation of the proposed project would result in approximately 31,675 acres within the City designated for residential uses, with a resultant development potential of approximately 89,485 dwelling units.

Table 5.1-14
Proposed General Plan Development Potential

Land Use Designation	Acres	Typical Density (du/acre)	Development Potential (du)
Equestrian Residential	112.41	0.4	45
Low Density Residential	3,186.00	1.0	3,186
Single Family Residential – 1	1,492.15	1.0	1,492
Single Family Residential – 2	3,034.88	2.0	6,070
Single Family Residential – 3	7,601.40	4.8	36,487
Medium Residential	389.17	8.0	3,113
Multi-Family Residential	329.51	12.8	4,218
Medium-High Density Residential (MHDR 30)	220.91	40	8,836
High-Density Residential (HDR 50)	83.40	50	4,170
Specific Plan	15,225	Various	21,868
TOTAL	*31,675*		*89,485*
du/ac = dwelling units per acre			

Table 5.1-15, *Comparison of Existing and Proposed General Plan Development Potential*, compares the City's existing residential development potential with the development potential that would result from implementation of proposed GPA 11-03.

Table 5.1-15
Comparison of Existing and Proposed General Plan Development Potential

Land Use Designation	Existing GP Development Potential		Proposed GP Development Potential		Difference	
	Acres	Dwelling Units	Acres	Dwelling Units	Acres	Dwelling Units
Equestrian Residential	112.41	45	112.41	45	0.00	0
Low Density Residential	3,186.00	3,186	3,186.00	3,186	0.00	0
Single Family Residential – 1	1,492.15	1,492	1,492.15	1,492	0.00	0
Single Family Residential – 2	3,034.88	6,070	3,034.88	6,070	0.00	0
Single Family Residential – 3	7,660.08	36,768	7,601.40	36,487	-58.68	-282
Medium Residential	537.65	4,301	389.17	3,113	-148.48	-1,188
Multi-family Residential	384.35	4,920	329.51	4,218	-54.84	-702
MHDR 30	0.00	0	220.91	8,836	+220.91	+8,836
HDR 50	0.00	0	83.40	4,170	+83.40	+4,170
Specific Plan	15,225	21,830	15,225	21,868	0.00	+38
Total	*31,633*	*78,612*	*31,675*	*89,485*	*+42.31* *+0.13%*	*+10,873* *+14%*

When compared to the existing General Plan, implementation of the proposed GPA would increase the residentially-designated land within the City by approximately 42.3 acres (formerly designated commercial) and increase the City's residential development potential by approximately 10,873 dwelling units. Additionally, the proposed GPA would decrease the Single Family Residential – 3, Medium Residential, and Multi-Family Residential land use categories by approximately 59, 149, and 55 acres, respectively. Overall, approximately 304 acres located within the central portion of the City (GPA area) would be redesignated MHDR 30 and HDR 50.

Approval of GPA 11-03 by the City would result in the project's consistency with the General Plan land use designations. As concluded in Table 5.1-15 and the discussions above, the proposed project would not conflict with any applicable General Plan policy or regulation. A less than significant impact would occur in this regard. Moreover, the proposed changes in land use are considered a less than significant impact, given that they are necessary, in order to meet the City's allocated RHNA needs, as discussed below.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified beyond those identified throughout Section 5.0 in the topic-specific analysis sections.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

CITY OF PALMDALE ZONING ORDINANCE

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH PALMDALE ZONING ORDINANCE.**

Impact Analysis: The proposed project would amend the City of Palmdale Zoning Map and various sections of the Zoning Ordinance, as described further below.

Zoning Ordinance Amendment (ZOA) 11-05

Zoning Ordinance Amendment (ZOA) 11-05 proposes to amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 (High Density Residential) zone, and would set forth uses permitted subject to various types of approvals and standards of development.

- *R-4 (High Density Residential)*: The R-4 Zone is intended to promote the development of apartments at a density of between 30 and 60 dwelling units per gross acre. This designation permits the development of self-contained residential communities that provide adequate on-site recreational facilities and open space to meet the immediate needs of its residents. Additional uses are permitted that are complementary and not detrimental to the residential character of development in this zone.

Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended to be consistent with State law. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones.

ZOA 11-05 would permit the development of transitional and supportive housing facilities and emergency shelters for the homeless within at least one zone by right. The current ordinance limiting such facilities to a specific zone and requiring a Conditional Use Permit violates State law. ZOA 11-05 would also allow large residential care facilities within the R-2 and R-3 zones without the approval of a Conditional Use Permit. The Temporary Dependent Unit program is no longer compliant with State law and would be removed from the City's Zoning Ordinance under ZOA 11-05.

Zone Change (ZC) 11-01

Zone Change (ZC) 11-01 proposes to amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) and R-4 (50) (High Density Residential, minimum of 50 dwelling units per acre) zones; refer to Exhibit 3-6.

Table 5.1-16, *Proposed Zoning Development Potential – ZC Area*, outlines the proposed zoning within the ZC area and the development potential, based on typical residential densities. As indicated in Table 5.1-16, approximately 304 acres would be zoned residential, with a resultant development potential of approximately 13,006 dwelling units.

Table 5.1-16
Proposed Zoning Development Potential - ZC Area

Land Use Designation	Acres	Residential		Non-Residential (sf)
		Typical Density (du/ac)	Development Potential (du)	
R-4 (30) High Density Residential	220.91	40	8,836	
R-4 (50) High Density Residential	83.40	50	4,170	
Total	*304*		*13,006*	0

du/ac = dwelling units per acre; sf = square feet

Table 5.1-17, *Comparison of Existing and Proposed Zoning Development Potential – ZC Area*, compares the ZC area's existing development potential with the development potential that would result from implementation of proposed ZC 11-01. Of the 304 acres, approximately 262 acres are currently and would remain residentially-zoned, however, at the higher densities allowed by the proposed R-4 zones. The remaining 42 acres would be rezoned from non-residential (Office Commercial, Community Commercial, Downtown Commercial, and Public Facility) to the proposed R-4 zone. Implementation of ZC 11-01 would increase the ZC area's residential development potential by approximately 10,835 dwelling units and decrease the non-residential development potential by approximately 606,747 square feet. These proposed changes in land use within the ZC area are considered a less than significant impact, given that they are necessary, in order to meet the City's allocated RHNA needs, as discussed below.

Table 5.1-17
Comparison of Existing and Proposed Zoning Potential - ZC Area

Zoning District	Existing Zoning Development Potential			Proposed Zoning Development Potential		Difference		
	Acres	Square Feet	Dwelling Units	Acres	Dwelling Units[1]	Acres	Square Feet	Dwelling Units
R-1-7,000 (Single Family Residential)	58.68		282	0	0	-58.68		-282
R-2 (Medium Residential)	148.48		1,188	0	0	-148.48		-1,188
R-3 (Multiple Residential)	54.84		702	0	0	-54.84		-702
C-2 (Office Commercial)	17.57	136,234		0	0		-136,234	
C-3 (General Commercial)	12.51	57,608		0	0	-12.51	-57,608	
C-D (Downtown Commercial)	5.29	30,231		0	0	-5.29	-30,231	
PF (Public Facility)	6.94			0	0	-6.94		+347
R-4 (30) (Med. High Density Res)				220.91	8,836	220.91		+8,836
R-4 (50) (High Density Residential)				83.40	4,170	83.40		+4,170
Total	*304*	*606,747*	*2,171*	*304*	*13,006*	*0.00*	*-606,747* *-100%*	*+10,835* *+500%*

Table 5.1-18, *Proposed Zoning Development Potential*, outlines the proposed City-wide residential zoning and provides the development potential, based on typical residential densities. As indicated in Table 5.1-18, implementation of the proposed project would result in approximately 31,653 acres within the City zoned for residential uses, with a resultant development potential of approximately 91,002 dwelling units.

Table 5.1-18
Proposed Zoning Development Potential

Zoning District	Acres	Typical Density (du/acre)	Development Potential (du)
R-1-7,000	7,480.50	4.8	35,906
R-1-10,000	1,186.57	3.5	4,153
R-1-12,000	14.97	3.0	45
R-1-13,000	352.81	2.5	882
R-1-15,000	929.85	2.0	1,860
R-1-20,000	1,659.34	1.5	2,489
R-1-1	1,377.48	0.8	1,102
R-1-2.5	112.41	0.4	45
R-2	389.17	8.0	3,113
R-3	329.66	12.8	4,220
R-4 (30)	220.91	40.0	8,836
R-4 (50)	83.40	50.0	4,170
A-1	2,238.90	0.8	1,791
MX Overlay[1]	52.15	10.0	522
Specific Plan	15,225	Various	21,868
Total	*31,653*		*91,002*

du/ac = dwelling units per acre

Table 5.1-19, *Comparison of Existing and Proposed Zoning Development Potential*, compares the City's existing residential zoning potential with the development potential that would result from implementation of proposed ZC 11-01. When compared to existing zoning, implementation of the proposed ZC would increase the residentially-zoned land within the City by approximately 42.3 acres (formerly zoned commercial) and increase the City's residential development potential by approximately 10,873 dwelling units. Additionally, the proposed ZC would decrease the R-1-7,000, R-2, and R-3 zones by approximately 59, 149, and 55 acres, respectively. Overall, approximately 304 acres located within the central portion of the City (ZC area) would be rezoned R-4 (30) and R-4 (50).

Table 5.1-19
Comparison of Existing and Proposed Zoning Development Potential

Zoning District	Existing Zoning Development Potential		Proposed Zoning Development Potential		Difference	
	Acreage	Development Potential[1] (du)	Acreage	Development Potential[1] (du)	Acreage	Development Potential[1] (du)
R-1-7,000	7,539.18	36,188	7,480.50	35,906	-58.68	-282
R-1-10,000	1,186.57	4,153	1,186.57	4,153	0.00	0
R-1-12,000	14.97	45	14.97	45	0.00	0
R-1-13,000	352.81	882	352.81	882	0.00	0
R-1-15,000	929.85	1,860	929.85	1,860	0.00	0
R-1-20,000	1,659.34	2,489	1,659.34	2,489	0.00	0
R-1-1	1,377.48	1,102	1,377.48	1,102	0.00	0
R-1-2.5	112.41	45	112.41	45	0.00	0
R-2	537.65	4,301	389.17	3113	-148.48	-1,188
R-3	384.50	4,922	329.66	4,220	-54.84	-702
R-4 (30)	0.00	0	220.91	8,836	+220.91	+8,836
R-4 (50)	0.00	0	83.40	4,170	+83.40	+4,170
A-1	2,238.90	1,791	2,238.90	1,791	0.00	0
MX Overlay[2]	52.15	522	52.15	522	0.00	0
Specific Plan	15,225	21,830	15,225	21,868	0.00	+38
Total	*31,611*	*80,129*	*31,653*	*91,002*	*+42.31* *+0.13%*	*+10,873* *+14%*

du = dwelling units
1. Numbers rounded to the nearest whole number.
2. For analysis purposes, the maximum of 10.0 dwelling units/acre allowed within the MX Overlay zone is used.

Approval of ZOA 11-05 and ZC 11-01 by the City would result in the project's consistency with the Palmdale Zoning Ordinance and Palmdale Zoning Map, respectively. Additionally, approval of ZOA 11-05 would correct current inconsistencies with State law associated with transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates. ZOA 11-05 would also establish the purpose, location criteria, permitted uses, and standards of development for uses within the proposed R-4 zone. Future residential development projects within the R-4 zone would be reviewed on a project by project

basis to ensure compliance with the requirements established by the Palmdale Zoning Ordinance. Impacts would be less than significant in this regard.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

PROPOSED PALMDALE TRANSIT VILLAGE SPECIFIC PLAN AMENDMENT

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH PALMDALE TRANSIT VILLAGE SPECIFIC PLAN, AS AMENDED.**

Impact Analysis: Specific Plan Amendment (SPA) 11-01 would involve only the properties (approximately 7.7 acres) within Neighborhood Zone C of the Palmdale Transit Village Specific Plan (SP-18), generally located on the north and south sides of Avenue P-14, between 4th Street East and 6th Street East; refer to Exhibit 3-4. SPA 11-01 proposes to amend the permitted density within Neighborhood Zone C from the existing 25 to 40 dwelling units per acre to the proposed 30 to 40 dwelling units per acre. Assuming a typical density of 32 dwelling units per acre, Neighborhood Zone C's development potential is approximately 245 dwelling units.

Table 5.1-20, *Comparison of Existing and Proposed Specific Plan Development Potential – Neighborhood C*, provides a comparison of the existing and proposed development potential that would result from implementation of proposed SPA 11-01. As indicated in Table 5.1-20, all of Neighborhood Zone C is currently and would remain residentially-designated, however, at the higher density as allowed by the proposed Specific Plan amendment.

Table 5.1-20
Comparison of Existing and Proposed Specific Plan Development Potential – Neighborhood C

Neighborhood Zone	Acres	Existing		Proposed		Difference
		Typical Density (du/acre)	Development Potential (du)	Typical Density (du/acre)	Development Potential (du)	Development Potential (du)
C	7.67	27.0	207	32.0	245	+38

As indicated in Table 5.1-20, implementation of SPA 11-01 would allow for the development of an additional 38 dwelling units within Neighborhood Zone C when compared to the existing permitted density allowed by the Specific Plan.

Future development within Neighborhood Zone C would continue to occur in accordance with the permitted uses and design standards established by the Specific Plan. Approval of SPA 11-01 by the City would result in the project's consistency with the Specific Plan. Impacts would be less than significant in this regard.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

REGIONAL HOUSING NEEDS ASSESSMENT

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH THE REGIONAL HOUSING NEEDS ASSESSMENT.**

Impact Analysis: California Housing Element law requires that each city and county develop local housing programs designed to meet its "fair share" of existing and future housing needs for all income groups, as determined by the jurisdiction's regional Council of Governments, when preparing the state-mandated Housing Element of its General Plan. This "fair share" allocation is intended to ensure each jurisdiction provides policies and programs to address existing and forecasted housing needs. As required by State Housing Law, the City of Palmdale must plan for its share of the region's new housing needs in four state-defined income categories by identifying an adequate supply of land zoned at appropriate densities to accommodate needs in each income category. As indicated in Table 5.1-4, the City's adjusted RHNA allocation is 14,421 new housing units, with 6,920 units allocated for very low- and low-income households.

California Government Code Section 65883(a)(3) requires that housing elements include an inventory of land suitable for residential development, including vacant sites and sites having the potential for redevelopment, and an analysis of the zoning and infrastructure available to serve these sites. This inventory is used to identify sites that can be feasibly developed for housing within the planning period in order to meet the RHNA. Housing Element Section VI contains the required inventory of adequate sites for new housing that can be developed to meet the City's housing needs within the planning period.

Units Under Construction. The City has one project currently under construction within the Palmdale Transit Village Specific Plan, which consists of 198 units for very low- and low-income and 79 dwellings for moderate-income.

Vacant Land. The proposed Housing Element Site Analysis section identifies 40 separate areas available for new housing at densities that would accommodate moderate- and above moderate-income dwelling units; refer to Exhibit 3-3, *Vacant Land Suitable for Moderate- and Above Moderate-Income Housing*. These areas consist of 3,149 acres of vacant land (255 parcels) that are currently zoned for residential uses, and land within existing specific plans that are currently designated for residential uses. Based on the permitted densities, the vacant land would allow for construction of 7,687 moderate- and above moderate-income dwelling units. Although the Site Analysis specifically identifies 3,149 vacant acres capable of accommodating a minimum of 7,687 moderate- and above moderate-income dwelling units, the City has determined that based upon current zoning, there is sufficient vacant land available citywide to accommodate 30,223 units.

RHNA Summary. When considering the units under construction and vacant land currently zoned for residential uses, Palmdale has enough vacant land to accommodate its moderate- and above moderate-income need; refer to Table 5.1-21, *RHNA Needs Summary*. However, because the permitted densities are lower than what is required by State law to accommodate housing units affordable to lower-income households, the City would have a remaining need for sufficient land zoned appropriately to accommodate 6,722 very low- and low-income dwellings. Therefore, the City has a shortfall of vacant and underutilized residential land to accommodate its very low- and low-income growth needs.

Table 5.1-21
RHNA Needs Summary

Income Category	Adjusted RHNA Allocation (2006-2014)	Dwelling Units Under Construction	Residentially Zoned Vacant Land Capacity	Remaining RHNA Need	Dwelling Units with General Plan Amendment and Zone Change	Final RHNA Need
Very Low (50% or less of median)	4,424	198	0	6,722	7,658	-936
Low (51% to 80% of median)	2,496					
Moderate (80% to 120% of median)	2,985	79	7,687	-265	0	-265
Above Moderate (>120% of median)	4,516					
Total	14,421	277				

Pursuant to AB 2348, jurisdictions with a shortfall of vacant and underutilized residential land to meet its RHNA needs must commit to a rezoning program to provide adequate sites to meet its housing growth needs. In order to provide sites for the remaining very low- and low-income units, Palmdale proposes to amend its General Plan (GPA 11-03), Zoning Ordinance (ZOA 11-05), Zoning Map (ZC 11-01), and the Palmdale Transit Village Specific Plan (SPA 11-01), including changing the General Plan land use designations and zoning districts for the properties identified in Exhibit 3-4, *Proposed Sites for General Plan Land Use and Zone Changes*.

Section VIII of the proposed Housing Element includes a number of implementation actions involving changes to the General Plan Land Use Map and/or the Zoning Ordinance that are necessary to accommodate the remaining very low- and low-income needs, thereby, ensuring continued compliance with State law. These implementation actions include site-specific changes to land use designations and zoning, as well as introduction of new land use designations and changes to the Zoning Ordinance that apply citywide. The proposed changes would allow for construction of a minimum of 7,658 dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need; refer to Table 5.1-21. In addition to accommodating the adjusted RHNA allocation of 6,722 very low- and low-income units, GPA 11-03, ZC 11-01, and SPA 11-01 would provide opportunity for an additional 5,595 dwelling units that could also accommodate very low and low-income units. Thus, with implementation of the proposed project, the City would be able to meet their 2006-2014 RHNA allocation. Impacts would be less than significant.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

AIR INSTALLATION COMPATIBLE USE ZONE (AICUZ) STUDY

- **THE PROPOSED PROJECT WOULD NOT CONFLICT WITH THE AIR INSTALLATION COMPATIBLE USE ZONE (AICUZ) STUDY.**

Impact Analysis: The purpose of the Air Installation Compatible Use Zone (AICUZ) program is to promote compatible land development in areas subject to aircraft noise and accident potential. The AICUZ study is to be used in the planning process of affected jurisdictions to prevent incompatible land uses. Air Force AICUZ guidelines establish land use recommendations for the clear zones (CZ), accident potential zones (APZ) I and II and for the four noise zones.

Residentially-Zoned Land – General Plan Study Area

AICUZ Study (2011) Figure 3-6 illustrates the CZ and APZ for the two runways at Plant 42, and AICUZ Study Table 3-5 provides the land use compatibility guidelines that are applicable to Plant 42. According to AICUZ Study Table 3-5, residential land uses and related structures are not compatible and should be prohibited within the CZ, APZ I, and APZ II, with one exception: single detached units and related structures are compatible without restriction within APZ II. Additionally, the suggested maximum density for single detached units and "other residential" is one to two dwelling units per acre, possibly increased under a Planned Unit Development where maximum lot coverage is less than 20 percent. All future residential development throughout the City would be subject to compliance with the land use compatibility guidelines for the CZ, APZ I, and APZ II established in the AICUZ Study, thereby ensuring consistency with the AICUZ Study. Additionally, all future residential development would be subject to compliance with the Department of Defense (DoD) regulations as outlined in the AICUZ Study and the applicable FAA regulations, which affect development in the CZ and APZs. Further, General Plan Policies S2.2.1 and S2.2.2 require compliance with the regulations outlined in the AICUZ Study and ensure that all future residential development promote clear linear corridors. With implementation of General Plan Policies S2.2.1 and S2.2.2 and compliance with the AICUZ Study, project implementation would not result in land use inconsistencies associated with AICUZ Study for people residing on the residentially-zoned land.

Rezone Project Area

A review of AICUZ Study Figure 3-6 indicates that the residential development anticipated to occur within the rezone project area would be located outside of the CZ, APZ I, and APZ II for Plant 42. Notwithstanding, all future residential development within the rezone area would be subject to compliance with the land use compatibility guidelines for the CZ, APZ I, and APZ II established in the AICUZ Study, thereby ensuring consistency with the AICUZ Study. Thus,

project implementation would not result in land use inconsistencies associated with the AICUZ Study for people residing on the re-zoned land.

Mitigation Programs:

General Plan Policies:

Policy S2.2.1 Require all development to be consistent with Department of Defense regulations as outlined in the Air Force Plant 42 Air Installation Compatibility Use Zone (AICUZ) Report and to comply with applicable FAA regulations which affect development in the Accident Potential Zones. (General Plan Amendment 04-01, adopted by City Council April 14, 2004.)

Policy S2.2.2 Through the design review process, ensure that new buildings are located in a manner which will promote clear linear corridors through the developed area within any Accident Potential Zones, to create potential pilot options in the event of an aircraft emergency.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

5.1.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD RESULT IN CUMULATIVELY CONSIDERABLE LAND USE IMPACTS.**

Impact Analysis: The geographic context for the cumulative impacts associated with land use and planning is the City of Palmdale, assuming full buildout of the General Plan, as updated by the SOC Report. The General Plan EIR forecasts the City's buildout housing stock would total approximately 139,205 dwelling units,[4] or approximately 199 percent over the existing housing stock of 46,589 units. Additionally, a total of approximately 661,941,546 square feet of non-residential development (excluding Airport Related and Public Facilities) were forecast at buildout.[5] SOC Report Table 2.02, *General Plan Buildout Statistics Incorporated City Boundary*, summarizes General Plan buildout statistics as updated to reflect annexations and new development proposals that required General Plan Amendments, since the time the General Plan was last updated. As indicated in SOC Report Table 2.02, the SOC Report forecasts that growth in Palmdale could reach 136,934 dwelling units and 465,514,173 square feet of non-residential uses at buildout. As indicated above, implementation of proposed GPA 11-03 would result in a net increase in the City's residential development potential of approximately 10,873 dwelling units, or approximately 8.0 percent over the SOC Report's forecast of approximately 136,934 dwelling units.

[4] City of Palmdale, *Final Program EIR for the City of Palmdale General Plan*, February 1, 1993, Table 4-10 and Page 4-101.

[5] Ibid.

As concluded above, impacts involving land use and planning resulting from project implementation are considered less than significant following compliance with General Plan Policies. When viewed in conjunction, the land use impacts resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the location and nature of the project, and the surrounding land uses. However, all future residential and non-residential development within the City would be reviewed on a project-by-project basis to ensure consistency with adopted land use plans and policies, in accordance with CEQA, State Zoning and Planning Law, and State Subdivision Map Act requirements, all of which require findings of plan and policy consistency prior to approval of land use entitlements. Therefore, the cumulative impacts associated with potential conflicts between future development and adopted plans and policies would be less than significant. Moreover, the project's contribution to such cumulative impacts would not be considerable given that the anticipated residential development would be compatible with surrounding land uses and consistent with applicable plans, policies, and regulations, upon approval of the proposed GPA 11-03, ZC 11-01, and SPA 11-01. Consequently, the residential development anticipated by the proposed project would have a less than significant contribution to cumulative impacts associated with plan or policy inconsistency. Moreover, it is anticipated that future growth within the City, in general, would result in changes to the local land use environment through the conversion of vacant land and low-density uses to higher density uses. However, all future development would be subject to compliance with the General Plan and Zoning Ordinance.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified beyond those identified throughout Section 5.0 in the topic-specific analysis sections.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

5.1.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Land use and planning impacts associated with implementation of the proposed project would be less than significant following compliance with the General Plan Policies. Therefore, no significant unavoidable impacts would occur as a result of the proposed project.

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5.2 Transportation and Circulation

5.2 TRANSPORTATION AND CIRCULATION

The purpose of this section is to evaluate implementation of the proposed project with respect to traffic and circulation. The evaluation considers impacts citywide and within a more defined area as described below.

As discussed in detail in Section 3.4, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have undergone environmental review. Regarding the remaining 2,786 dwelling units, there is no immediate physical development proposed. Given the conceptual nature of their future development, and since there is no land use change proposed, the analysis presented below is a programmatic-level review of potential transportation and circulation impacts citywide. This citywide analysis, which involves the General Plan study area, is based upon information obtained from the *Final Program EIR for the City of Palmdale General Plan* (SCH No. 87120908) (February 1, 1993) and *City of Palmdale State of the City Report* (June 2009).

Additionally, 13,253 dwelling units could be accommodated through implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01, and 3,038 dwelling units and 71,630 square feet of non-residential could potentially be removed. Regarding the remaining net development of 10,215 dwelling units, although there is no immediate physical development proposed, these involve changes in land use and residential densities. As illustrated on Exhibit 3-4, these proposed changes would involve parcels generally located between Avenue Q on the north, Avenue R on the south, east of the alignment of 4th Street East on the west and 15th Street East to the east, and includes those properties located east of the alignment of 4th Street East on the north and south side of Avenue P-14. In this context, the analysis presented below is site-specific level of review of potential transportation and circulation impacts within the study area associated with GPA 11-03, ZC 11-01, and SPA 11-01. This site-specific analysis is based upon the *Palmdale Housing Element Traffic Analysis* (Traffic Impact Analysis), dated May 18, 2012, prepared by RBF Consulting (Appendix C, Traffic Impact Analysis).

The Traffic Impact Analysis addresses existing and future weekday daily, AM peak hour, and PM peak hour traffic conditions for the following conditions:

- Existing Conditions;
- Forecast Existing With Rezoning Project Conditions;
- Forecast Year 2040 Without Rezoning Project Conditions; and
- Forecast Year 2040 With Rezoning Project Conditions.

It is noted, the "Existing With Project Condition" was prepared as a result of a recent Sixth District Court of Appeal decision in *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* (2010) 190 Cal.App.4th 1351, which invalidated an EIR prepared for a roadway extension project because it used projected traffic conditions in the year 2020, based on expected growth under the City of Sunnyvale's General Plan and in neighboring communities as its "baseline" to evaluate the roadway project's traffic and related impacts. The City in that case took this approach because the project lacked funding and would have taken several years to design and construct. In rejecting the EIR's analysis, the court found that use of such a baseline could not be upheld since, in the court's view, CEQA requires a straightforward assessment of the impacts produced by the project alone on the existing environment "normally" meant to be those conditions at the time of issuance of the Notice of Preparation. (CEQA

Guidelines, Section 15125, subd. (a).) Thus, according to the court's reasoning, the analysis within an EIR must consider the impacts of a project at or prior to the date of project approval.

Therefore, the "Forecast Existing With Rezoning Project" condition is analyzed in this section, as required by the recent *Sunnyvale* decision. This is despite the fact that, if approved, the rezoning project would not reach peak operational levels until at least 2040.

5.2.1 EXISTING SETTING

GENERAL PLAN STUDY AREA – (CITYWIDE)

The City's roadway system consists of a wide range of transportation facilities, which serve two basic functions: mobility and land access. A circulation network is composed of facilities that emphasize mobility or access to different degrees. The following types of facilities are typically defined:

- Freeway: Mobility with very limited access.
- Expressway: Mobility with more frequent access to arterial streets than a freeway, but no direct land access.
- Arterial: Mobility with access to collectors, some local streets and major traffic.
- Collector: Connects local streets with arterials and also provides access to adjacent land uses; thus balancing mobility with access.
- Local: Provides access to adjacent land uses exclusively.

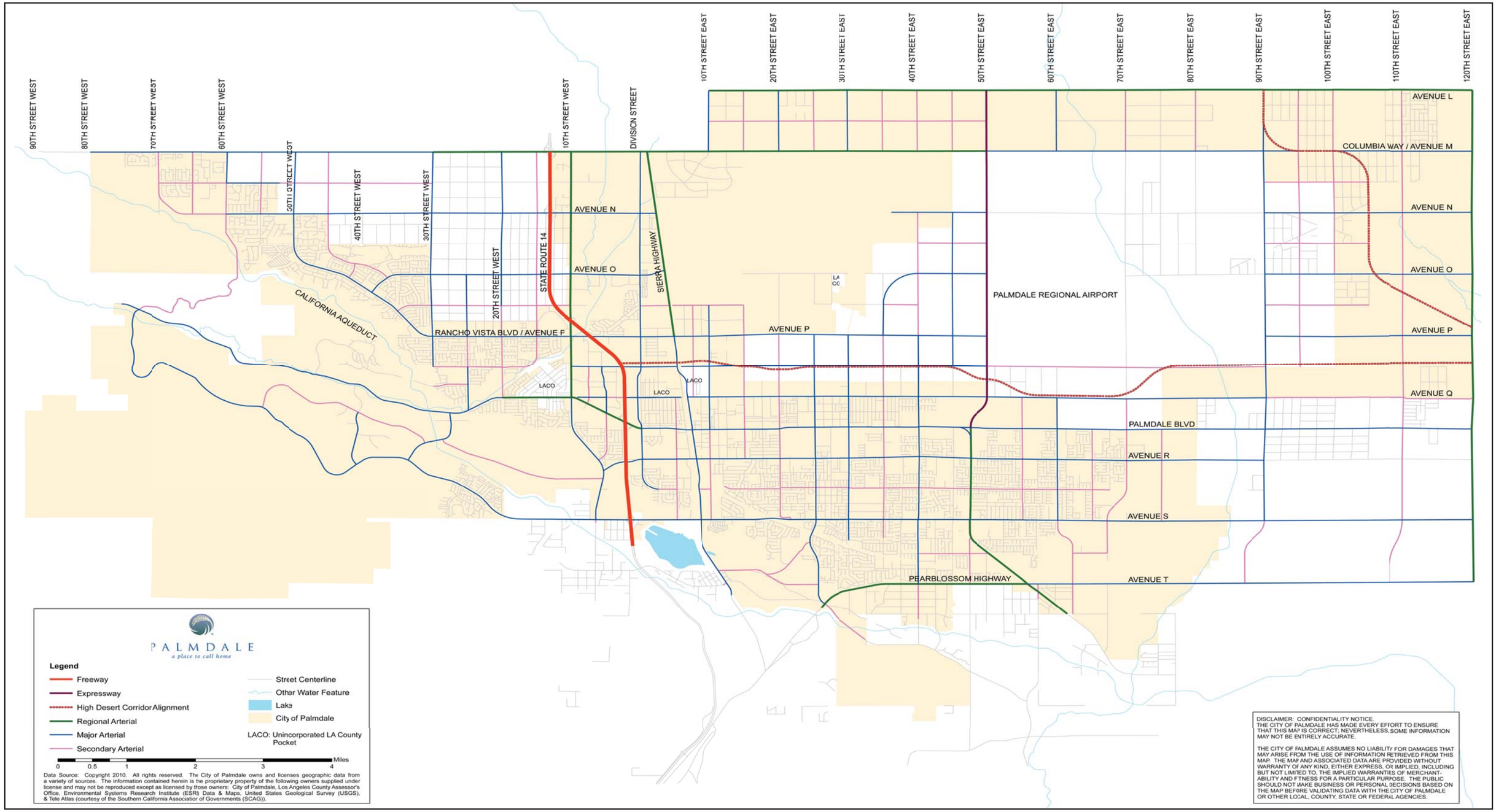
The City's circulation network has primarily been developed around a grid system in which arterials are spaced approximately every mile and secondary arterials are spaced every half-mile between major arterials.

The City is located approximately 60 freeway miles north of Los Angeles. Regional access to the City is provided via the Antelope Valley Freeway (State Route 14 [SR-14]), which extends north to Kern County and south to the San Fernando Valley. Additional arterials providing regional access to the City are Palmdale Boulevard, Elizabeth Lake Road, Pearblossom Highway (SR-138), and Sierra Highway. The City's existing roadway network and functional classification system are illustrated in Exhibit 5.2-1, *Circulation System*.

TRAFFIC IMPACT ANALYSIS STUDY AREA

The Traffic Impact Analysis study area is generally comprised of the area east of State Route 14 (SR-14) and both north and south of State Route 138 (SR-138). Major arterials in the vicinity include Palmdale Boulevard (SR-138), Sierra Highway, 10th Street East, Avenue Q, Avenue R, and Division Street. A full high-speed partial cloverleaf interchange is provided at Palmdale Boulevard for access to SR-14.

The Traffic Impact Analysis study roadway segments and intersections are described below and illustrated on Exhibit 5.2-2, *Roadway Segments and Intersections – Traffic Impact Analysis Study Area*. The study area is generally within the jurisdiction of the City of Palmdale, while Palmdale Boulevard (SR-138) is owned and managed by Caltrans. These roadway segments and intersections provide local access to the study area.



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CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

Circulation System

Exhibit 5.2-1

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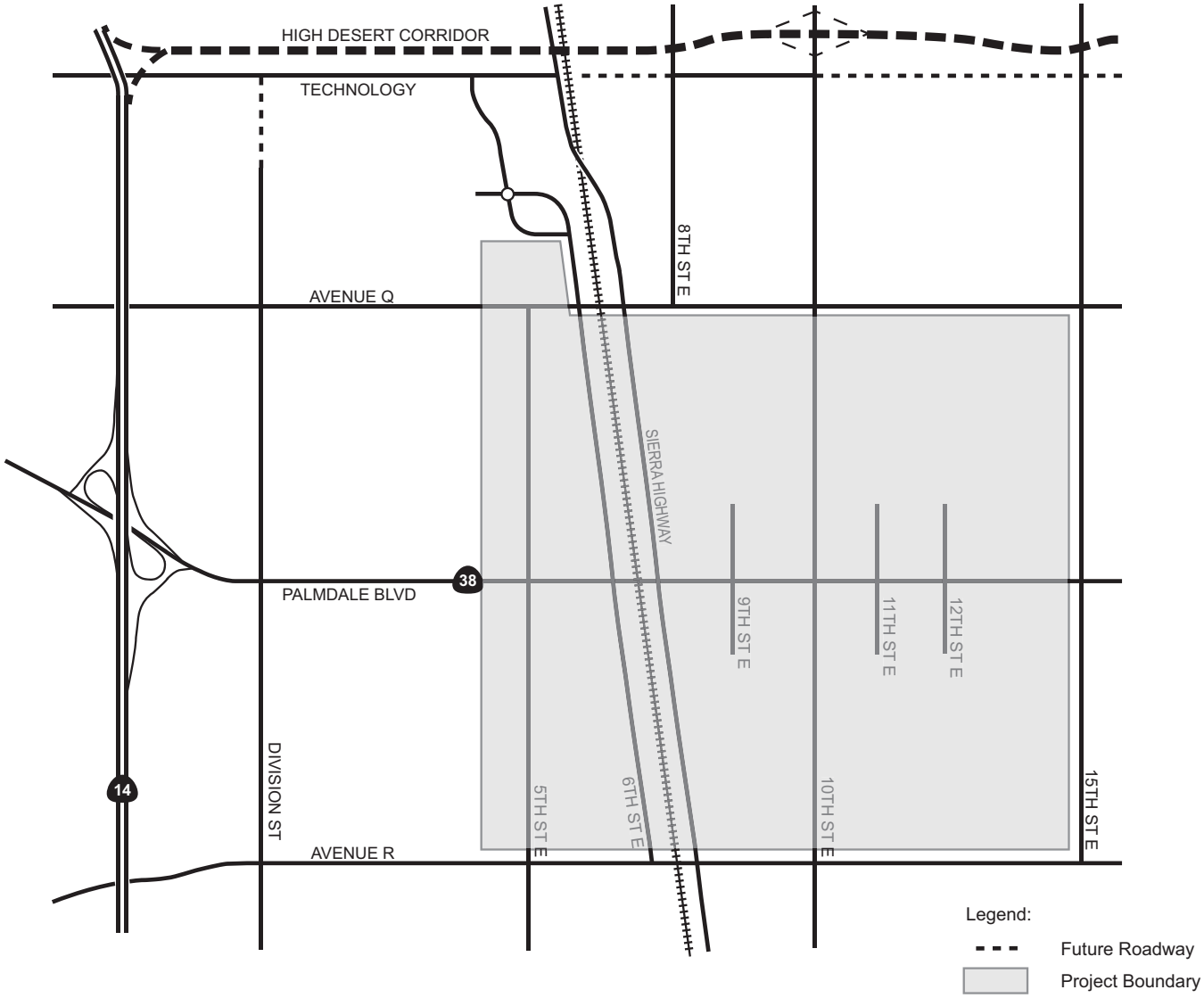

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CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

Roadway Segments and Intersections – Traffic Impact Analysis Study Area

Exhibit 5.2-2

Roadway Segments

1. Division Street north of Avenue Q;
2. Division Street between Avenue Q and Palmdale Boulevard (SR-138);
3. Division Street between Palmdale Boulevard (SR-138) and Avenue R;
4. 5th Street East between Avenue Q and Palmdale Boulevard (SR-138);
5. 5th Street East between Palmdale Boulevard (SR-138) and Avenue R;
6. 5th Street East between Avenue R and Avenue R-8;
7. 6th Street East north of Avenue Q;
8. 6th Street East between Avenue Q and Palmdale Boulevard (SR-138);
9. 6th Street East between Palmdale Boulevard (SR-138) and Avenue R;
10. Sierra Highway north of Avenue Q;
11. Sierra Highway between Avenue Q and Palmdale Boulevard (SR-138);
12. Sierra Highway between Palmdale Boulevard (SR-138) and Avenue R;
13. Sierra Highway between Avenue R and Avenue R-8;
14. 8th Street East north of Avenue Q;
15. 10th Street East north of Avenue Q;
16. 10th Street East between Avenue Q and Palmdale Boulevard (SR-138);
17. 10th Street East between Palmdale Boulevard (SR-138) and Avenue R;
18. 10th Street East between Avenue R and Avenue R-8;
19. 15th Street East north of Avenue Q;
20. 15th Street East between Avenue Q and Palmdale Boulevard (SR-138);
21. 15th Street East between Palmdale Boulevard (SR-138) and Avenue R;
22. Avenue Q between Division Street and 5th Street East;
23. Avenue Q between 5th Street East and 6th Street East;
24. Avenue Q between Sierra Highway and 8th Street East;
25. Avenue Q between 8th Street East and 10th Street East;
26. Avenue Q between 10th Street East and 15th Street East;
27. Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
28. Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;
29. Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East;
30. Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East;
31. Avenue R between Division Street and 5th Street East;
32. Avenue R between 5th Street East and 6th Street East;
33. Avenue R between Sierra Highway and 10th Street East; and
34. Avenue R between 10th Street East and 15th Street East.

The characteristics of the Traffic Impact Analysis study area roadways are described below:

Antelope Valley Freeway (State Route 14) provides regional access for the Palmdale area as a major north-south freeway facility connecting Interstate 5 (I-5) in the San Fernando Valley with the Antelope Valley. In the study area vicinity, SR-14 is a six-lane freeway, consisting of two general purpose lanes and one high occupancy vehicle (HOV) lane in each direction.

5th Street East is a two-lane undivided roadway trending in a north-south direction. On-street parking is permitted on 5th Street East in the vicinity of Palmdale Boulevard (SR-138). The posted speed limit on 5th Street East is 35 miles per hour. Per the City of Palmdale General Plan Circulation Element, 5th Street East is classified as a Secondary Arterial with a median, no bike lanes, and a right-of-way width of 84 feet.

6th Street East is a two-lane divided roadway with a continuous left-turn lane trending in a north-south direction. On-street parking is permitted on 6th Street East in the vicinity of Palmdale Boulevard (SR-138). The posted speed limit on 6th Street East is 40 miles per hour north of Palmdale Boulevard (SR-138) and 45 miles per hour south of Palmdale Boulevard (SR-138). 6th Street East changes names north of Avenue Q to Clock Tower Plaza Drive. Per the City of Palmdale General Plan Circulation Element, 6th Street East is classified as a Collector.

8th Street East is a two-lane undivided roadway trending in a north-south direction. On-street parking is generally prohibited on 8th Street East in the vicinity of the study area. The posted speed limit on 8th Street East is 35 miles per hour. Per the City of Palmdale General Plan Circulation Element, 8th Street East is classified as a Secondary Arterial with a median, no bike lanes, and a right-of-way width of 84 feet.

10th Street East is a two-lane undivided roadway north of Avenue Q, four-lane divided roadway with a continuous left-turn lane between Avenue Q and Palmdale Boulevard (SR-138), and a two-lane divided roadway with a continuous left-turn lane between Palmdale Boulevard (SR-138) and Avenue R trending in a north-south direction. A portion of 10th Street East north of Palmdale Boulevard currently only provides one northbound lane and two southbound lanes. For the purposes of this analysis, 10th Street East between Avenue Q and Palmdale Boulevard (SR-138) is analyzed as a two-lane roadway. On-street parking is generally permitted on 10th Street East between Avenue Q and Avenue R. The posted speed limit on 10th Street East is 50 miles per hour north of Avenue Q and 45 miles per hour south of Avenue Q.

Per the City of Palmdale General Plan Circulation Element, 10th Street East north of Palmdale Boulevard is classified as a Major Arterial with a median and bike lane (except for the segment north of Avenue Q there is no bike lane) and a right-of-way width of 104 feet. South of Palmdale Boulevard, 10th Street East is classified as a Secondary Arterial with a median, bike lanes (except for the segment south of Avenue R there are no bike lanes), and a right-of-way width of 92 feet.

15th Street East is a two-lane undivided roadway trending in a north-south direction. On-street parking is generally prohibited on 15th Street East in the vicinity of the study area. The posted speed limit on 15th Street East varies from 40 miles per hour to 55 miles per hour. Per the City of Palmdale General Plan Circulation Element, 15th Street East is classified as a Secondary Arterial with a median, no bike lanes, and a right-of-way width of 84 feet.

Avenue Q is a two-lane divided roadway with a continuous left-turn lane west of 6th Street and a two-lane undivided roadway east of Sierra Highway trending in an east-west direction. On-street parking is generally prohibited on Avenue Q within the study area vicinity. The posted speed limit on Avenue Q is 45 miles per hour. Per the City of Palmdale General Plan Circulation Element, Avenue Q west of Division Street is classified as a Major Arterial with a median, bike lanes, and a right-of-way width of 114 feet. Avenue Q east of Division Street is classified as a Major Arterial with no median, bike lanes, and a right-of-way width of 80 feet.

Avenue R is a two-lane divided roadway with a continuous left-turn lane between Division Street and 6th Street East and a four-lane divided roadway with a continuous left-turn lane east of 6th Street East trending in an east-west direction. West of SR-14 Avenue R changes name to Rayburn Road. On-street parking is prohibited on Avenue R. The posted speed limit on Avenue R is 50 miles per hour west of 5th Street East and 40 miles per hour east of 5th Street

East. Per the City of Palmdale General Plan Circulation Element, Avenue R is classified as a Major Arterial with a median, bike lanes, and a right-of-way width of 114 feet.

Division Street is a two-lane undivided roadway trending in a north-south direction. On-street parking is prohibited on Division Street in the vicinity of the study area. The posted speed limit on Division Street is 25 miles per hour north of Palmdale Boulevard and 50 miles per hour south of Palmdale Boulevard. Division Street north of Avenue P-12 is not currently paved. Per the City of Palmdale General Plan Circulation Element, Division Street is classified as a Major Arterial with a median, bike lanes, and a right-of-way width of 104 feet.

Palmdale Boulevard (SR-138) is a four to six-lane divided roadway trending in an east-west direction. West of SR-14, Palmdale Boulevard is a four-lane divided roadway with a raised median. Between SR-14 and 6th Street East, Palmdale Boulevard is a six-lane divided roadway with a raised median. East of 6th Street East, Palmdale Boulevard is a four-lane divided roadway with a raised median. On-street parking is prohibited on Palmdale Boulevard west of Sierra Highway. The posted speed limit varies on Palmdale Boulevard in the study area vicinity from 40 miles per hour to 50 miles per hour. Per the City of Palmdale General Plan Circulation Element, Palmdale Boulevard (SR-138) is classified as a Major Arterial with a median, no bike lanes, and a right-of-way width of 104 feet.

Sierra Highway is a four-lane divided roadway with a continuous left-turn lane trending in a north-south direction. On-street parking is prohibited on Sierra Highway. The posted speed limit on Sierra Highway is 50 miles per hour south of Palmdale Boulevard, and 55 miles per hour north of Palmdale Boulevard. Per the City of Palmdale General Plan Circulation Element, Sierra Highway is classified as a Major Arterial with a median, bike lanes, and a right-of-way width of 114 feet.

Per the City of Palmdale Circulation Element, designated truck routes are identified on the following roadways in the study area vicinity:

- Palmdale Boulevard (SR-138) from SR-14 to 90th Street East;
- 10th Street West from Avenue P to Avenue M;
- Sierra Highway from SR-14 to Avenue M; and
- Avenue R from SR-14 to Sierra Highway.

Intersections

1. Southbound SR-14 Ramps/Palmdale Boulevard (SR-138) (signalized);
2. Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) (signalized);
3. Division Street/Palmdale Boulevard (SR-138) (signalized);
4. 5th Street East/Palmdale Boulevard (SR-138) (signalized);
5. 6th Street East/Palmdale Boulevard (SR-138) (signalized);
6. Sierra Highway/Palmdale Boulevard (SR-138) (signalized);
7. 9th Street East/Palmdale Boulevard (SR-138) (signalized);
8. 10th Street East/Palmdale Boulevard (SR-138) (signalized);
9. 11th Street East/Palmdale Boulevard (SR-138) (two-way stop controlled);
10. 12th Street East/Palmdale Boulevard (SR-138) (two-way stop controlled); and
11. 15th Street East/Palmdale Boulevard (SR-138) (two-way stop controlled).

TRAFFIC IMPACT ANALYSIS METHODOLOGY

Roadway Segment Analysis Methodology

Level of Service (LOS) is commonly used as a qualitative description of roadway segment operation and is based on the capacity of the roadway segment and the volume of traffic using the roadway segment. The City of Palmdale utilizes the Volume-to-Capacity (V/C) analysis methodology to determine the operating LOS of the roadway segments. The V/C analysis methodology describes the operation of a roadway segment using a range of LOS from LOS A (free flow conditions) to LOS F (severely congested conditions), based on the corresponding Volume/Capacity (V/C) ratios shown in Table 5.2-1, *V/C and LOS Ranges*.

The City of Palmdale General Plan Circulation Element (adopted 1993) discusses the capacity and connectivity of the circulation system. The *General Plan* defines the capacity of roadways as follows:

> *The capacity of a roadway is affected by a number of factors, including the street's width, the number of crossing arterials and collectors, the amount of green time give to the street at each signal, the presence or absence of on-street parking, the number of turning lanes at each intersection and the number of driveways.*

Table 5.2-1
V/C and LOS Ranges

Roadway Segments	
V/C Ratio	LOS
≤ 0.60	A
> 0.61 ≤ 0.70	B
> 0.71 ≤ 0.80	C
> 0.81 ≤ 0.90	D
> 0.91 ≤ 1.00	E
> 1.00	F
Source: 1990 Transportation Research Board.	

The City of Palmdale roadway capacities used in this analysis to determine V/C ratios are shown in Table 5.2-2, *City of Palmdale Roadway Segment Classification and Capacity*.

Table 5.2-2
City of Palmdale Roadway Segment Classification and Capacity

Facility Type	Number of Lanes	LOS E Capacity (Vehicles)
Regional Arterial	8	72,000
Major Arterial	6	54,000
Secondary Arterial	4	36,000
Collector	2	18,000
Source: City of Palmdale General Plan Circulation Element (Adopted 1993).		

Intersection Analysis Methodology

Caltrans utilizes the Highway Capacity Manual (HCM) intersection analysis methodology to analyze the operation of study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for unsignalized intersections shown in Table 5.2-3, *LOS and Delay Ranges*.

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

Table 5.2-3
LOS and Delay Ranges

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	< 10.0
B	> 10.0 ≤ 20.0	> 10.0 to < 15.0
C	> 20.0 ≤ 35.0	> 15.0 to < 25.0
D	> 35.0 ≤ 55.0	> 25.0 to < 35.0
E	> 55.0 ≤ 80.0	> 35.0 to < 50.0
F	> 80.0	> 50.0
Source: 2000 Highway Capacity Manual.		

Traffic Impact Analysis

The average daily traffic (ADT) volumes for the study roadways were in part provided by Palmdale staff, while the remainder was collected in the field in January 2012. Traffic movement counts at all study intersections were collected in January 2012. The a.m. peak period intersection counts were collected from 7:00 a.m. to 9:00 a.m.; the p.m. peak period intersection counts were collected from 4:00 p.m. to 6:00 p.m. The traffic volumes used in this analysis were taken from the highest hour within the peak period counted. Detailed traffic count

data and exhibits illustrating existing ADT volumes at the study roadways, existing roadway segment geometry, and existing study intersection geometry are included in Appendix C.

FUTURE TRAFFIC CONDITIONS

The following Capital Improvement Plan (CIP) projects are planned, programmed, and funded within the study area, thus, are assumed in the future traffic analysis:

- 5th Street East Improvements (Palmdale Boulevard (SR-138) to Avenue S), as funded by the City of Palmdale Ten-Year CIP Project STR-007. Street widening of 5th Street East as a Secondary Arterial as identified on the Circulation Element.

- 10th Street East Improvements (Rancho Vista Boulevard to Avenue Q), as funded by the City of Palmdale Ten-Year CIP Project STR-008. Street widening of 10th Street East as a Major Arterial as identified on the Circulation Element.

- Division Street Improvements (Technology Drive to Palmdale Boulevard (SR-138)), as funded by the City of Palmdale Ten-Year CIP Project STR-065. Street widening of Division Street to a Major Arterial as identified on the Circulation Element.

Additionally, construction of the HDC as a 4- to 8-lane grade-separated facility with an interchange at the junction of 10th Street East and HDC is planned, programmed, and funded through the RTP. Therefore, the 4- to 8-lane HDC facility is assumed in year 2040 conditions analysis.

The Southern California Association of Governments (SCAG) maintains a travel demand forecast model for Los Angeles County, including the Antelope Valley where the City of Palmdale is located. The model is based on input variables such as population, households, employment, school enrollment, income, traffic counts, traffic speeds, intersection configuration, and planned roadway networks from a variety of sources such as locally approved General Plan land use entitlements, local planning department input, and state and federal data sources. The model forecasts the demand for future transportation infrastructure by prediction of future traffic patterns based on the input variables.

Parsons Transportation Group (Parsons) provided regional traffic modeling forecast year 2040 volumes consistent with modeling underway for the HDC environmental review. Use of the Parsons HDC model outputs provides consistency with both the SCAG model and the HDC model, allowing for consistent results when the HDC environmental review occurs.

Forecast year 2040 conditions traffic volumes were obtained through review of the Parsons HDC model outputs, and peak hour volumes were derived through post-processing model peak period data. The methodology and approach used in post-processing model peak period data, in order to estimate the peak hour volumes are discussed in detail in the Traffic Impact Analysis.

PERFORMANCE CRITERIA

City of Palmdale

For roadway segments, the City of Palmdale strives to maintain LOS C or better to the extent practical; in some circumstances, a LOS D may be acceptable for a short duration during peak periods.

The City of Palmdale target for peak hour intersection operation is LOS D or better.

State Highway Performance Criteria

As noted in the Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans, December 2002), Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities.

EXISTING CONDITIONS

Existing Roadway Segment Level of Service

GENERAL PLAN STUDY AREA

SOC Report Table 6.0-1, *Roadway Segment Operation Existing Conditions*, presents the General Plan study area roadway capacity analysis for the major and minor arterials, including the number of lanes, capacity, traffic volumes (i.e., ADT), volume/capacity ratio, and LOS. As indicated in SOC Table 6.0-1, the majority of the General Plan study area roadways operate at an acceptable LOS (C or better). SOC Table 6.0-2, *Roadway Segments Operating Below LOS C*, outlines the roadways and segments operating below LOS C and indicates a total of 14 roadways (46 segments) studied operate at LOS D or worse at peak hour.

TRAFFIC IMPACT ANALYSIS STUDY AREA

Table 5.2-4, *Existing Roadway Segment ADT and LOS*, summarizes existing conditions roadway segment ADT volumes and corresponding LOS for study roadways.

As indicated in Table 5.2-4, the Traffic Impact Analysis study area roadway segments are operating at an acceptable LOS according to City of Palmdale and Caltrans performance criteria.

Existing Intersection Level of Service

GENERAL PLAN STUDY AREA

The SOC analysis focused upon roadways; refer to the *Existing Roadway Segment Level of Service - General Plan Study Area* Section above.

TRAFFIC IMPACT ANALYSIS STUDY AREA

Table 5.2-5, *Existing AM and PM Peak Hour Intersection LOS*, summarizes existing conditions a.m. peak hour and p.m. peak hour LOS of the Traffic Impact Analysis study intersections.

As indicated in Table 5.2-5, the following three study intersections are currently operating at a deficient LOS (LOS D or worse) according to Caltrans performance criteria:

- 11th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours);
- 12th Street East/Palmdale Boulevard (SR-138) (p.m. peak hour only); and
- 15th Street East/Palmdale Boulevard (SR-138) (p.m. peak hour only).

Table 5.2-4
Existing Roadway Segment ADT and LOS

Study Roadway Segment	LOS E Capacity	Existing ADT	V/C Ratio	LOS
1. Division Street north of Avenue Q	18,000	208	0.01	A
2. Division Street between Avenue Q and Palmdale Boulevard	18,000	1,922	0.11	A
3. Division Street between Palmdale Boulevard and Avenue R	18,000	8,198	0.46	A
4. 5th Street East between Avenue Q and Palmdale Boulevard	18,000	1,703	0.09	A
5. 5th Street East between Palmdale Boulevard and Avenue R	18,000	6,258	0.35	A
6. 5th Street East between Avenue R and Avenue R-8	18,000	5,190	0.29	A
7. 6th Street East north of Avenue Q	18,000	3,433	0.19	A
8. 6th Street East between Avenue Q and Palmdale Boulevard	18,000	4,115	0.23	A
9. 6th Street East between Palmdale Boulevard and Avenue R	18,000	3,578	0.20	A
10. Sierra Highway north of Avenue Q	36,000	17,364	0.48	A
11. Sierra Highway between Avenue Q and Palmdale Boulevard	36,000	12,678	0.35	A
12. Sierra Highway between Palmdale Boulevard and Avenue R	36,000	11,852	0.33	A
13. Sierra Highway between Avenue R and Avenue R-8	36,000	7,947	0.22	A
14. 8th Street East north of Avenue Q	18,000	1,195	0.07	A
15. 10th Street East north of Avenue Q	18,000	4,500	0.25	A
16. 10th Street East between Avenue Q and Palmdale Boulevard	18,000	4,897	0.27	A
17. 10th Street East between Palmdale Boulevard and Avenue R	18,000	6,112	0.34	A
18. 10th Street East between Avenue R and Avenue R-8	18,000	5,779	0.32	A
19. 15th Street East north of Avenue R	18,000	2,802	0.16	A
20. 15th Street East between Avenue Q and Palmdale Boulevard	18,000	1,683	0.09	A
21. 15th Street East between Palmdale Boulevard and Avenue R	18,000	1,549	0.09	A
22. Avenue Q between Division Street and 5th Street East	18,000	3,708	0.21	A
23. Avenue Q between 5th Street East and 6th Street East	18,000	2,666	0.15	A
24. Avenue Q between Sierra Highway and 8th Street East	18,000	11,237	0.62	B
25. Avenue Q between 8th Street East and 10th Street East	18,000	7,626	0.42	A
26. Avenue Q between 10th Street East and 15th Street East	18,000	8,619	0.48	A
27. Palmdale Blvd between Division Street and 5th Street East	54,000	33,064	0.61	B
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	27,389	0.51	A
29. Palmdale Blvd between 6th Street East and 10th Street East	36,000	25,257	0.70	B
30. Palmdale Blvd between 10th Street East and 15th Street East	36,000	26,264	0.73	C
31. Avenue R between Division Street and 5th Street East	18,000	8,374	0.47	A
32. Avenue R between 5th Street East and 6th Street East	18,000	12,867	0.71	C
33. Avenue R between Sierra Highway and 10th Street East	36,000	17,455	0.48	A
34. Avenue R between 10th Street East and 15th Street East	36,000	18,350	0.51	A

Table 5.2-5
Existing Conditions AM and PM Peak Hour Intersection LOS

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
1. SB SR-14 Ramps/Palmdale Boulevard (SR-138)	7.8 – A	9.4 – A
2. NB SR-14 Ramps/Palmdale Boulevard (SR-138)	4.6 – A	5.2 – A
3. Division Street/Palmdale Boulevard (SR-138)	21.1 – C	19.2 – B
4. 5th Street East/Palmdale Boulevard (SR-138)	18.0 – B	18.2 – B
5. 6th Street East/Palmdale Boulevard (SR-138)	12.9 – B	16.1 – B
6. Sierra Highway/Palmdale Boulevard (SR-138)	25.2 – C	26.7 – C
7. 9th Street East/Palmdale Boulevard (SR-138)	8.2 – A	14.6 – B
8. 10th Street East/Palmdale Boulevard (SR-138)	17.0 – B	17.2 – B
9. 11th Street East/Palmdale Boulevard (SR-138)	28.0 – D	88.2 – F
10. 12th Street East/Palmdale Boulevard (SR-138)	23.0 – C	48.2 – E
11. 15th Street East/Palmdale Boulevard (SR-138)	17.8 – C	39.7 – E

Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.

FUTURE WITHOUT PROJECT CONDITIONS

Future Without Project Roadway Segment Level of Service

BUILDOUT - GENERAL PLAN STUDY AREA

As indicated in GPEIR Table 4-13, the GPEIR concluded the majority of the roadways would operate at an acceptable LOS (C or better) under future buildout conditions. The GPEIR concluded nine roadways (14 segments) would operate at LOS D or worse under future buildout conditions.

The SOC Report summarizes General Plan buildout statistics in consideration of the changes (annexations and development proposals involving General Plan Amendments) that occurred between 1993 (when the General Plan was prepared) and 2009 (when the SOC Report was prepared). SOC Report Table 6.0-6, *Roadway Segment Analysis General Plan Buildout Comparison With 1993 General Plan Buildout*, provides the predicted operating condition of roadway segments. As indicated in SOC Report Table 6.0-6, eight roadways (24 segments) within the General Plan study area would operate at LOS D or worse at General Plan buildout.

This assumes that all roadways are constructed to full General Plan Circulation Element standards. Depending on the roadway under consideration, these improvements could include an increase in the number of through lanes, additional turning lanes, channelization of various intersections, computerized traffic signal coordination measures, etc. The SOC Report predictions are generally similar to the predictions featured in the GPEIR.

FORECAST YEAR 2040 - TRAFFIC IMPACT ANALYSIS STUDY AREA

Table 5.2-6, *Forecast Year 2040 Without Project Roadway Segment ADT and LOS*, summarizes forecast year 2040 without project conditions roadway segment ADT volumes and corresponding LOS.

As indicated in Table 5.2-6, the following two roadway segments are forecast to operate at a deficient LOS according to City of Palmdale and Caltrans performance criteria for forecast year 2040 without project conditions:

- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and
- Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East.

All other study roadway segments are anticipated to operate at an acceptable LOS under Forecast Year 2040 without project conditions.

Future Without Project Intersection Level Of Service

BUILDOUT – GENERAL PLAN STUDY AREA

The SOC analysis focused upon roadways; refer to the *Future Without Project Roadway Segment Level of Service - General Plan Study Area* Section above.

FORECAST YEAR 2040 - TRAFFIC IMPACT ANALYSIS STUDY AREA

Table 5.2-7, *Forecast Year 2040 Without Project AM and PM Peak Hour Intersection LOS*, summarizes forecast year 2040 without project conditions a.m. peak hour and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

As indicated in Table 5.2-7, the following three study intersections are forecast to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for forecast year 2040 without project conditions:

- 11th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours);
- 12th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours); and
- 15th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours).

PUBLIC TRANSIT AND ALTERNATIVE TRAVEL MODES

Transit Network

The Palmdale Transportation Center (PTC), located at 39000 Clock Tower Plaza Drive, opened in April 2005. The PTC is a regional multi-modal hub including connections between Antelope Valley Transit Authority (AVTA) buses, Metrolink commuter rail service, Santa Clarita Transit service, Greyhound bus service, and Amtrak Throughway bus service. Hours of operation for the PTC are from 3:00 a.m. to midnight Monday through Friday, and 6:00 a.m. to 10:30 p.m. Saturday and Sunday. There are eight centrally located bus stops providing convenient connections between regional service providers and local bus routes. The PTC provides an indoor passenger waiting area that includes concessions, public telephones, seating, restrooms, and security service. The PTC provides parking for passengers using bus transit or commuter rail service, however, is not a designated Park and Ride facility. Metrolink passengers may also utilize partially enclosed outdoor waiting accommodations on the rail platform.

Table 5.2-6
Forecast Year 2040 Without Project Roadway Segment ADT and LOS

Study Roadway Segment	LOS E Capacity	Forecast Year 2040 Without Project Conditions ADT	V/C Ratio	LOS
1. Division Street north of Avenue Q	54,000	10,265	0.19	A
2. Division Street between Avenue Q and Palmdale Boulevard	54,000	16,292	0.30	A
3. Division Street between Palmdale Boulevard and Avenue R	18,000	11,438	0.64	B
4. 5th Street East between Avenue Q and Palmdale Boulevard	18,000	3,926	0.22	A
5. 5th Street East between Palmdale Boulevard and Avenue R	36,000	10,869	0.30	A
6. 5th Street East between Avenue R and Avenue R-8	36,000	16,259	0.45	A
7. 6th Street East north of Avenue Q	18,000	9,000	0.50	A
8. 6th Street East between Avenue Q and Palmdale Boulevard	18,000	7,054	0.39	A
9. 6th Street East between Palmdale Boulevard and Avenue R	18,000	9,415	0.52	A
10. Sierra Highway north of Avenue Q	36,000	18,264	0.51	A
11. Sierra Highway between Avenue Q and Palmdale Boulevard	36,000	10,898	0.30	A
12. Sierra Highway between Palmdale Boulevard and Avenue R	36,000	7,725	0.21	A
13. Sierra Highway between Avenue R and Avenue R-8	36,000	13,367	0.37	A
14. 8th Street East north of Avenue Q	18,000	2,700	0.15	A
15. 10th Street East north of Avenue Q	54,000	10,298	0.19	A
16. 10th Street East between Avenue Q and Palmdale Boulevard	18,000	8,237	0.46	A
17. 10th Street East between Palmdale Boulevard and Avenue R	18,000	2,965	0.16	A
18. 10th Street East between Avenue R and Avenue R-8	18,000	5,194	0.29	A
19. 15th Street East north of Avenue R	18,000	1,629	0.09	A
20. 15th Street East between Avenue Q and Palmdale Boulevard	18,000	6,700	0.37	A
21. 15th Street East between Palmdale Boulevard and Avenue R	18,000	9,839	0.55	A
22. Avenue Q between Division Street and 5th Street East	18,000	3,951	0.22	A
23. Avenue Q between 5th Street East and 6th Street East	18,000	2,042	0.11	A
24. Avenue Q between Sierra Highway and 8th Street East	18,000	7,183	0.40	A
25. Avenue Q between 8th Street East and 10th Street East	18,000	7,620	0.42	A
26. Avenue Q between 10th Street East and 15th Street East	18,000	7,869	0.44	A
27. Palmdale Blvd between Division Street and 5th Street East	54,000	44,928	0.83	D
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	38,809	0.72	C
29. Palmdale Blvd between 6th Street East and 10th Street East	36,000	42,922	1.19	F
30. Palmdale Blvd between 10th Street East and 15th Street East	36,000	39,049	1.08	F
31. Avenue R between Division Street and 5th Street East	18,000	8,977	0.50	A
32. Avenue R between 5th Street East and 6th Street East	18,000	11,815	0.66	B
33. Avenue R between Sierra Highway and 10th Street East	36,000	19,133	0.53	A
34. Avenue R between 10th Street East and 15th Street East	36,000	20,601	0.57	A

Note: **Bold** indicates a deficient intersection.

Table 5.2-7
Forecast Year 2040 Without Project AM and PM Peak Hour Intersection LOS

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
1. SB SR-14 Ramps/Palmdale Boulevard (SR-138)	8.2 – A	12.6 – B
2. NB SR-14 Ramps/Palmdale Boulevard (SR-138)	5.7 – A	12.4 – B
3. Division Street/Palmdale Boulevard (SR-138)	23.8 – C	25.3 – C
4. 5th Street East/Palmdale Boulevard (SR-138)	24.7 – C	28.0 – C
5. 6th Street East/Palmdale Boulevard (SR-138)	16.4 – B	18.4 – B
6. Sierra Highway/Palmdale Boulevard (SR-138)	25.6 – C	27.0 – C
7. 9th Street East/Palmdale Boulevard (SR-138)	7.6 – A	14.0 – B
8. 10th Street East/Palmdale Boulevard (SR-138)	17.6 – B	18.0 – B
9. 11th Street East/Palmdale Boulevard (SR-138)	30.9 – D	107.2 – F
10. 12th Street East/Palmdale Boulevard (SR-138)	31.3 – D	383.9 – F
11. 15th Street East/Palmdale Boulevard (SR-138)	35.8 – E	OVRFL – F

Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.

Bus Service. Local bus service within the City of Palmdale is provided by AVTA, a joint powers agency whose members include the City of Palmdale, Lancaster, and the County of Los Angeles. AVTA operates 11 fixed bus routes for general transit use. Additionally, AVTA operates six supplemental and special fixed bus routes serving local schools. Operating hours of AVTA fixed bus service are 6:00 a.m. to 11:00 p.m. Monday through Friday, and 7:00 a.m. to 7:00 p.m. Saturday and Sunday. Transfer centers are located at Lancaster City Park and the PTC.

The public transit routes serving the City include:

- *Route 1, Lancaster/Palmdale*: Servicing Lancaster Senior Center, all along 10th Street West, Antelope Valley Mall, and Avenue S and 47th Street East in Palmdale. Connects transfers at Lancaster Metrolink Station, Lancaster City Park, and Palmdale Transportation Center.

- *Route 2, Palmdale Boulevard*: Servicing Antelope Valley Mall, 10th Street West, Palmdale Regional Medical Center, Palmdale Boulevard, 40th Street East, Antelope Valley Medical Center, Avenue R, and 47th Street East, with connections to Route 3 at 47th Street and Avenue S, and Antelope Valley Mall.

- *Route 3, Palmdale - Avenue R*: Servicing Antelope Valley Mall, Avenue P, 10th Street West, Avenue R, 40th Street East, and Avenue S, with connections to Route 2 at Antelope Valley Mall and 47th Street and Avenue S.

- *Route 7, Quartz Hill – West Lancaster/West Palmdale*: Servicing Avenue H, 50th Street West, High Desert Hospital, 60th Street West, Quartz Hill High, Rancho Vista Boulevard and 10th Street West, and Lancaster Senior Center, with connections at Palmdale Transportation Center and Lancaster Metrolink.

- *Route 10, Lancaster/University of Antelope Valley/Palmdale*: Servicing Lancaster City Park, University of Antelope Valley, 10th Street West and Avenue M, Antelope Valley Courthouse, Palmdale Transportation Center, and Avenue S and 47th Street East.

- *Lake LA Express – Palmdale*: Servicing Town Center Plaza, Stephen Sorenson Park, 170th Street East, Avenue P-8, 160th Street East, East Palmdale Boulevard, East Avenue Q, and Palmdale School District, with connections at Palmdale Transportation Center.

- *Supplemental Routes*: AVTA operates supplemental/deviated routes during the traditional school year to accommodate increased student ridership on routes that serve Antelope Valley High School (Route 94), Littlerock High School (Route 96), Highland High School (Route 97), and Pete Knight High School (Route 98).

Commuter bus service is facilitated by AVTA bus lines between the City of Palmdale and Los Angeles and the San Fernando Valley. Commuter buses run Monday through Friday from 3:45 a.m. to 8:00 p.m. The commuter routes serving the project area are:

- *Route 785/Downtown Los Angeles*: Servicing Lancaster/Palmdale to Los Angeles, Monday through Friday only.

- *Route 786/West Los Angeles*: Servicing Lancaster/Palmdale to Century City/West Los Angeles, Monday through Friday only.

- *Route 787/San Fernando*: Servicing Lancaster/Palmdale to West San Fernando Valley, Monday through Friday only.

In addition to AVTA, Santa Clarita Transit provides one commuter express route that travels through the City of Palmdale:

- *Route 795*: Servicing between the Santa Clarita Metrolink Station and the Lancaster Metrolink Station with key stops at the McBean Transfer Station, Valencia Town Center, the Newhall Metrolink Station, the Vincent Grade Metrolink Station, PTC, and Lancaster Park and Ride.

The County of Los Angeles provides a Summer Beach Bus, which transports passengers during summer months from the Antelope Valley to Santa Monica with service three days a week on Tuesdays, Thursdays, and Saturdays.

An Antelope Express airport shuttle links Palmdale with Los Angeles International Airport (LAX) with seven round trips daily leaving a private parking lot located at 332 West Avenue S in the City of Palmdale.

Metrolink. Fixed rail service is provided on the Antelope Valley line offered by Metrolink. The commuter rail serves the City of Palmdale with a northern terminus at the City of Lancaster, and a southern terminus at Union Station in downtown Los Angeles. Metrolink's Antelope Valley Line (Los Angeles Union Station to Lancaster) generally runs parallel and east of SR-14, traversing the study area. The Antelope Valley Line connects the Antelope Valley and Santa Clarita with downtown Los Angeles and the media districts in Burbank and Glendale. Currently, ten Metrolink trains (in each direction) stop at the PTC Monday through Friday. Six Metrolink

trains (in each direction) stop at the PTC during Saturday service. Three Metrolink trains (in each direction) stop at the PTC during Sunday service.

Park and Ride. The following three locations are designated Park and Ride facilities in the City of Palmdale:

- East Avenue S Park and Ride (210 East Avenue S);
- West Avenue S Park and Ride (434 West Avenue S); and
- Pelona Vista Park and Ride (445 West Avenue R-8).

Other Services. Dial-A-Ride (DAR) provides curb-to-curb van service for seniors over the age of 65 and disabled residents of the Antelope Valley. AVTA DAR provides rides for people who are 65 years of age or older, or who are certified as eligible for Para-transit services under the rules listed in the Eligibility Application. DAR is intended to fill transportation gaps between local, fixed route transit and Americans with Disabilities Act (ADA) mandated paratransit services, which are provided by Access Paratransit Services.

Access Services serves the disabled as a "complementary paratransit service" in accordance with the Americans with Disabilities Act. Access Services, a local public entity, is the Los Angeles County Consolidated Transportation Services Agency ("CTSA") and administers the Los Angeles County Coordinated Paratransit Plan ("Plan") on behalf of the County's 43 public fixed route operators (i.e., bus and rail). Pursuant to the Plan, Access facilitates the provision of complementary ADA paratransit services to certain persons with disabilities. Paratransit is an alternative mode of flexible passenger transportation that does not follow fixed routes or schedules. Typically, vans or mini-buses are used to provide paratransit service, but also shared taxis and jitneys are important providers as a form of transportation.

The Tuesday Medical Shuttle service offers rides to nine major medical facilities in the Los Angeles basin and San Fernando Valley.

Bicycle Network

Exhibit 5.2-3, *Bikeway and Multi-Purpose Trail Plan*, illustrates the existing and planned bikeways within the City.

The following bicycle routes are located within Traffic Impact Analysis study area:

- *Class I (Off-Street Bike Trail)*: A Class I facility is a dedicated path for exclusive use by bicycles and potential pedestrians that is separated from motor vehicle traffic. Class I facilities are located at the following locations within the study area:
    - East side of Sierra Highway north of Technology Drive;
    - West side of Sierra Highway/6th Street East between Technology Drive and Palmdale Transportation Center; and
    - West side of Sierra Highway between Avenue Q and Avenue Q-12.

- *Class II (On-Street Bike Lanes)*: A Class II facility is identified with a paved area of the roadway marked as a lane for use by bicycles only. It is identified by both pavement markings and through signage. Class II facilities are located at the following locations within the study area:

- Clock Tower Plaza Drive/6th Street East from Palmdale Transportation Center to Avenue R;
- On 5th Street East between Avenue R and Avenue S; and
- On 10th Street East between Palmdale Boulevard (SR-138) and Avenue R.

- *Class III (On-Street Bike Route)*: A Class III bicycle facility is identified by "Bike Route" signs only. No special markings on the pavement are provided, and the bicycle facility is designated within the public right-of-way. No Class III bike facilities are located within the study area.

Pedestrian Network

Sidewalks throughout the City are discontinuous based on the pattern of development that has occurred. Sidewalks primarily occur adjacent to developed parcels within the urbanized area of the City and within master planned residential developments. There are several residential areas throughout the City where sidewalks do not occur. Most vacant/undeveloped sites do not have sidewalks.

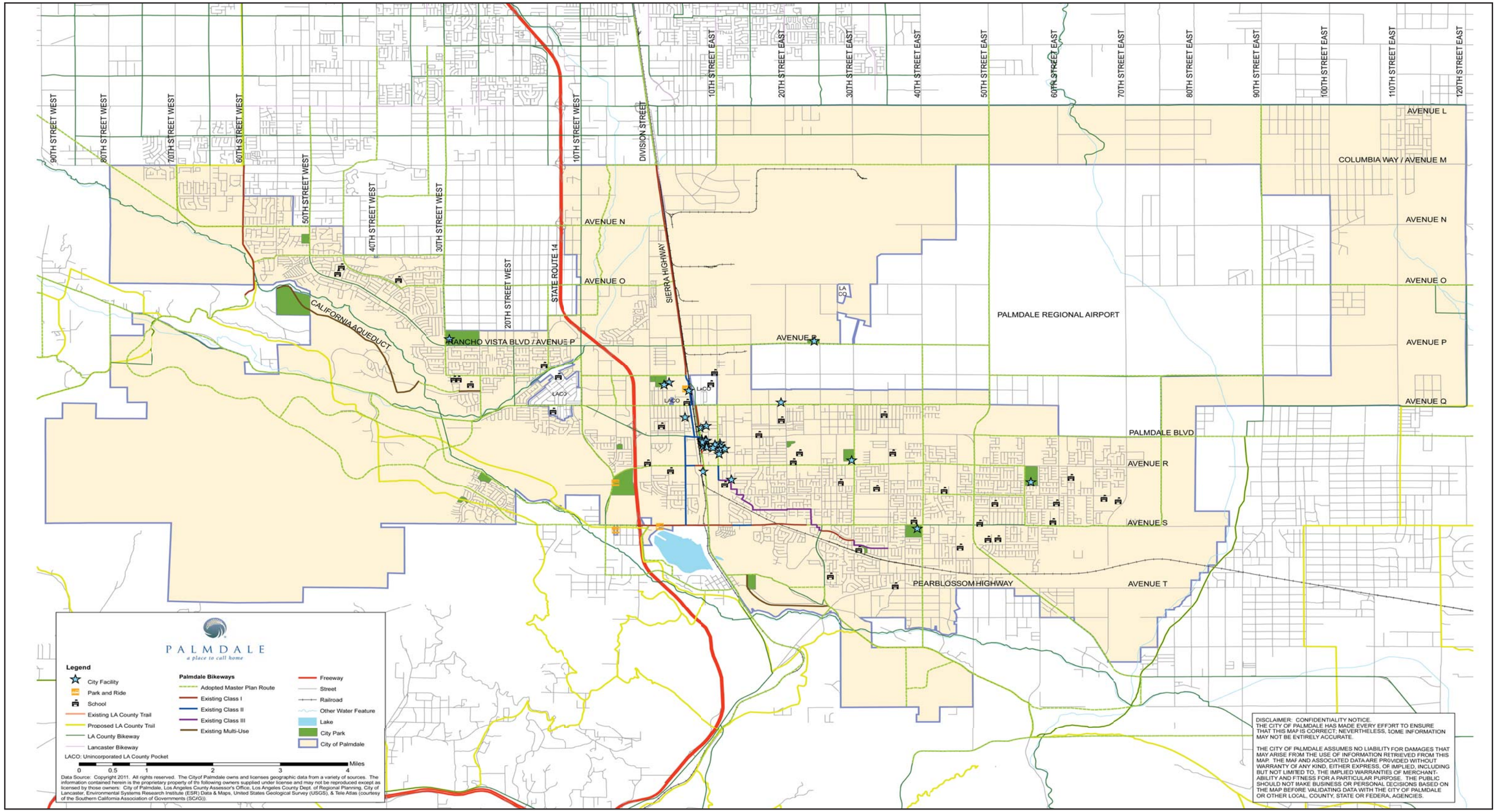
Sidewalks within the Traffic Impact Analysis study area are also discontinuous depending upon the pattern of development. Generally, sidewalks are provided for the entirety of Palmdale Boulevard (SR-138) within the Traffic Impact Analysis study area, except for gaps east of 12th Street West. Crosswalks are generally provided at signalized intersections, but are notably absent at the 15th Street East/Palmdale Boulevard (SR-138) intersection where the intersection is two-way stop-controlled. AVTA Transit stops on both sides of Palmdale Boulevard at the 15th Street East/Palmdale Boulevard (SR-138) intersection support pedestrian activity in the area; however, the nearest designated crosswalk is 0.25-mile to the east at 17th Street East/Palmdale Boulevard (SR-138).

Crosswalks are not provided adjacent to R. Rex Parris High School at 38801 Clock Tower Plaza Drive (northwest corner of the 6th Street East/Avenue Q intersection). Crosswalks are provided adjacent Yucca Elementary School at 38440 2nd Street East (northeast corner of the 2nd Street East/Avenue Q-7 intersection).

5.2.2 REGULATORY SETTING

CONGESTION MANAGEMENT PLAN

Pursuant to Proposition 111, every county in California is required to develop a Congestion Management Program (CMP) that examines the relationships between land use, transportation, and air quality. The CMP addresses the impact of local growth on the regional transportation system. Proposition 111 also established a nine percent per gallon gas tax, staged over a five-year period, for the purpose of funding transportation-related improvements statewide. In order to be eligible for the revenues associated with Proposition 111, the CMP legislation (originally AB 471, amended by AB 1791) requires that a CMP be developed, adopted, and updated biennially for every county that includes an urbanized area and shall include every city and the county government within that county. Statutory elements of the CMP include Highway and Roadway System monitoring, multi-modal system performance analysis, the Transportation Demand Management Program, the Land Use Analysis Program, and local conformance for all the county's jurisdictions.



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CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

Bikeway and Multi-Purpose Trail Plan

Exhibit 5.2-3

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As the Congestion Management Agency for Los Angeles County, the Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for implementing Los Angeles County's CMP. Metro serves as Los Angeles County's transportation planner and coordinator, designer, builder and operator.

The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use and air quality planning programs throughout the County. The program is consistent with that of the Regional Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG). The CMP program requires review of significant individual projects, which might on their own impact the CMP transportation system.

According to the 2010 CMP (Los Angeles County Metropolitan Transportation Authority), those proposed projects, which meet the following criteria, shall be evaluated:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hours (of adjacent street traffic).

- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The following CMP-monitored facilities are located within or traverse the City of Palmdale:

- SR-14 (Antelope Valley Freeway);
- SR-138 (Palmdale Boulevard)*: at SR-14, Sierra Highway*, 47th Street East; Fort Tejon Road, Pearblossom Highway; and
- Sierra Highway*.

*Denotes facility is located within or traverses Traffic Impact Analysis Study Area.

CITY OF PALMDALE GENERAL PLAN

Circulation Element

The General Plan Circulation Element provides a blueprint for construction and maintenance of a transportation network, which will accommodate growth, support economic development, allow safe and convenient access, and meet regional transportation goals. The City's road network is based upon projected development permitted by the Land Use Element. The Element addresses the City's plans to upgrade and expand its pedestrian walkways, surface streets, arterial and regional highways, public transportation, rail service, and air service. The Circulation Element policies that are relevant to the proposed project are outlined in the *Impacts and Mitigation Measures* Section below.

The General Plan Circulation Element identifies the arterials that need to be improved for transportation continuity within the community: Avenue M, Avenue P-8, Avenue R, Avenue R-8, Avenue S, Division Street, 10th Street East, and 110th Street East. Avenue P-8 and Division Street are located within the Traffic Impact Analysis study area.

The General Plan Circulation Element includes discussion of issues and improvements that are relevant to roadway improvements in the vicinity of the Traffic Impact Analysis study area. The General Plan Circulation Element identifies the following issues related to roadway connectivity and interactions with the north-south railroad through the community:

- The need for increased arterial roadway capacity along north-south routes, especially east of State Route 14;
- The need for grade separations over the railroad tracks; and
- The need to connect and upgrade discontinuous streets and varying cross-sections on arterials.

The General Plan Circulation Element provides a program for roadway improvements, increasing roadway capacity, and overall intersection traffic operations. Despite the improvements identified in the General Plan Circulation Element, some intersections are forecast to operate beyond LOS D. Therefore, the General Plan Circulation Element recommends reduction of traffic demand through aggressive local Transportation Demand Management (TDM) measures. The City TDM Ordinance includes but is not limited to the following measures:

- Support a computerized rideshare service to facilitate creation of carpools between persons living and working in the same vicinities.
- Provide information to businesses on how to establish carpool and vanpool programs.
- Continue to operate the City's Park-and-Ride facilities at SR-14 and Avenue S, and participate in construction and operation of an additional facility at Sierra Highway and State Route 14.
- Prepare a long-range park-and-ride plan for future facilities within the City including methods of financing these facilities.

Parks, Recreation, and Trails Element

The General Plan Parks, Recreation, and Trails Element serves as a guide to future development of multi-use trails and bikeways, among other facilities. The Policies that are relevant to the proposed project are outlined in the *Impacts and Mitigation Measures* Section below.

CITY OF PALMDALE MUNICIPAL CODE

Various sections of the City of Palmdale Municipal Code include regulations and standards pertaining to transportation.

Municipal Code Chapter 3.40, Traffic Impact Fee Requirements

Municipal Code Chapter 3.40 concludes that employees and residents associated with new residential and nonresidential development in Palmdale would create an increased need for transportation facilities. Sources of City revenue other than traffic impact fees, including tax revenues, which will be paid by new residential and nonresidential development, will be needed for many public purposes and therefore will not be sufficient to offset the burdens on transportation facilities created by new residential and nonresidential development.

It is the intent of the City to require every person or organization that develops land to mitigate the impacts of that development on the City's transportation system. Therefore, the City requires developers to mitigate traffic impacts caused by their development or to pay a traffic impact fee that would be used to mitigate those impacts by constructing transportation facilities pursuant to the most current transportation facilities plan.

MUNICIPAL CODE SECTION 3.40.020
RESIDENTIAL TRAFFIC IMPACT FEES REQUIRED

According to Municipal Code Section 3.40.020, the required traffic impact fee for a residential building shall be paid, in an amount established by resolution of the City Council, prior to or on the date of the final Building Department inspection of the building, or the date the Certificate of Occupancy is issued, whichever occurs first, except as provided in Municipal Code Section 3.40.040. If the residential development contains more than one dwelling, the traffic impact fee may be paid on a lump-sum basis when the first dwelling in the development or development phase receives its final inspection or certificate of occupancy, whichever occurs first.

MUNICIPAL CODE SECTION 3.40.030
NONRESIDENTIAL TRAFFIC IMPACT FEES REQUIRED

The required traffic impact fee for a nonresidential development shall be paid, in an amount established by resolution of the City Council, prior to issuance of the Certificate of Occupancy for that development, except as provided in Municipal Code Section 3.40.040; provided, however, that if a nonresidential development project is to be constructed and occupied in phases, and a separate Certificate of Occupancy will be issued for each phase, payment of the Traffic Impact Fee may be made separately prior to the issuance of a Certificate of Occupancy for each phase of the development.

MUNICIPAL CODE CHAPTER 16.110
DEDICATIONS AND IMPROVEMENTS

The subdivider is required to construct all required improvements, both on-site and off-site, in accordance with the standards approved by City Council ordinance and applicable City standards as provided by this title. Additionally, the applicant is required to pay all impact fees, pursuant to the applicable impact fee ordinances, in the amount that is in effect at the time such fees are due.

MUNICIPAL CODE SECTION 16.110.070.A
DEDICATION FOR BICYCLE PATHS

Pursuant to Government Code Section 66475.1, the subdivider of any map which contains 200 or more parcels shall dedicate such additional land as may be necessary to construct any bicycle paths, as shown in the City's Parks, Recreation, and Trails Element or as required by the Planning Commission as a condition of approval of the tentative map, which are within or adjacent to the unit of land to be subdivided.

5.2.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

DEFINITION OF SIGNIFICANT IMPACT

Traffic impacts are identified if a project would result in a significant adverse change in traffic conditions on an analyzed facility. A significant impact is typically identified if traffic generated by a project would cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below the poorest acceptable level and project traffic would substantially worsen the condition, thereby causing a further decline below the threshold.

City of Palmdale

To determine whether the addition of project-generated trips at a study roadway segment results in a significant impact, the following traffic threshold of significance is used:

- A significant project impact occurs at a roadway segment when the addition of project-generated trips causes or worsens the level of service of the study roadway segment to change from acceptable operation (LOS A, B, C, or D) to deficient operation (LOS E or F).

To determine whether the addition of project-generated trips at a study intersection results in a significant impact, the City of Palmdale has established the following threshold of significance:

- A significant project-related impact occurs at a study intersection if the addition of project-generated trips causes an intersection operating at LOS D or better to operate at a deficient LOS (LOS E or F) or if the addition of project-generated trips causes a 2 percent increase in delay at any intersection operating at a deficient LOS (LOS E or F).

State Highway Intersection

While Caltrans has not established traffic thresholds of significance, this traffic analysis utilizes the following traffic threshold of significance:

- A significant project impact occurs at a Caltrans State Highway study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F).

CEQA SIGNIFICANCE CRITERIA

Environmental impact thresholds as indicated in Appendix G of the *CEQA Guidelines* (Initial Study Checklist Form) are also used as significance thresholds in this analysis. As such, a project would create a significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation systems, taking into account all modes of transportation including mass transit and non-motorized travel and relevant

components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; refer to Section 8.0, Effects Found Not To Be Significant;

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); refer to Section 8.0, Effects Found Not To Be Significant;

- Result in inadequate emergency access; refer to Section 8.0, Effects Found Not To Be Significant; and

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; refer to Section 8.0, Effects Found Not To Be Significant.

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

5.2.4 IMPACTS AND MITIGATION MEASURES

EXISTING PROJECT CONDITIONS

- **PROJECT IMPLEMENTATION WOULD CAUSE A SIGNIFICANT INCREASE IN TRAFFIC FOR EXISTING CONDITIONS WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE STREET SYSTEM**

Impact Analysis:

PROJECT TRIP GENERATION

Institute of Transportation Engineers (ITE) trip generation rates were utilized in order to calculate the trips forecast to be generated by the anticipated residential development. Table 5.2-8, *ITE Trip Generation Rates*, summarizes the ITE trip generation rates used to calculate the number of trips forecast to be generated by uses proposed and displaced by the proposed project.

Table 5.2-8
ITE Trip Generation Rates

Land Use (*ITE* Code)	Units	AM Peak Hour			PM Peak Hour			Daily Trip Rate
		In	Out	Total	In	Out	Total	
Single-Family Detached Housing (210)	Du	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Apartment (220)	Du	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Residential Townhouse (230)	Du	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Recreational Community Center (496)	Tsf	0.99	0.63	1.62	0.54	0.91	1.45	22.88
Church (560)	Tsf	0.35	0.21	0.56	0.26	0.29	0.55	9.11

Source: 2008 ITE Trip Generation Manual, 8th Edition.

Residentially-Zoned Land - General Plan Study Area

The forecast number of trips associated with the current residentially-zoned land is presented in Table 5.2-9, *Forecast Trip Generation – General Plan Study Area*.

Table 5.2-9
Forecast Trip Generation – General Plan Study Area

Land Use	Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
		In	Out	Total	In	Out	Total	
Single-Family Detached Housing (Current Residentially-Zoned Land)	2,786	529	1,560	2,089	1,783	1,031	2,814	26,662

Source: 2008 ITE Trip Generation Manual, 8th Edition.

As indicated in Table 5.2-9, development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area, which includes 2,089 new a.m. peak hour trips and 2,814 new p.m. peak hour trips.

Rezoned Land - Traffic Impact Analysis Study Area

Table 5.2-10, *Forecast Trip Generation – Traffic Impact Analysis Study Area*, summarizes the net trips forecast to be generated by implementation of the rezoning project.

As indicated in Table 5.2-10, development of the land proposed for rezoning is forecast to generate approximately 65,131 net new daily trips, which includes 4,997 net new a.m. peak hour trips and 6,052 net new p.m. peak hour trips.

Table 5.2-10
Forecast Trip Generation – Traffic Impact Analysis Study Area

Location	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trip Rate
	In	Out	Total	In	Out	Total	
Zone 1							
- 40 Single-Family Dwelling Units	-8	-22	-30	-26	-15	-41	-383
221 Apartment Dwelling Units	22	91	113	88	49	137	1,470
24 Townhouse Dwelling Units	2	9	11	8	4	12	139
Zone 1 Subtotal	16	78	94	70	38	108	1,226
Zone 2							
- 18 Single-Family Dwelling Units	-3	-10	-13	-12	-7	-19	-172
287 Apartment Dwelling Units	29	118	147	115	63	178	1,909
53 Townhouse Dwelling Units	4	20	24	19	9	28	308
Zone 2 Subtotal	30	128	158	122	65	187	2,045
Zone 3							
- 3 Single-Family Dwelling Units	-1	-2	-3	-2	-1	-3	-29
171 Apartment Dwelling Units	17	70	87	68	38	106	1,137
27 Townhouse Dwelling Units	2	10	12	9	5	14	157
Zone 3 Subtotal	18	78	96	75	42	117	1,265
Zone 4							
- 40 Single-Family Dwelling Units	-8	-22	-30	-26	-15	-41	-383
1,416 Apartment Dwelling Units	142	581	723	566	312	878	9,416
191 Townhouse Dwelling Units	13	71	84	67	32	99	1,110
- 31.714-tsf Recreational Center/VFW	-31	-20	-51	-17	-29	-46	-726
- 22.254-tsf Church	-8	-5	-13	-6	-6	-12	-203
Zone 4 Subtotal	108	605	713	584	294	878	9,214
Zone 5							
- 46 Single-Family Dwelling Units	-9	-26	-35	-29	-17	-46	-440
1,718 Apartment Dwelling Units	172	704	876	687	378	1,065	11,425
273 Townhouse Dwelling Units	19	101	120	96	46	142	1,586
Zone 5 Subtotal	182	779	961	754	407	1,161	12,571
Zone 6							
1,638 Apartment Dwelling Units	164	672	836	655	360	1,015	10,893
182 Townhouse Dwelling Units	13	67	80	64	31	95	1,057
Zone 6 Subtotal	177	739	916	719	391	1,110	11,950
Zone 7							
- 1 Single-Family Dwelling Units	0	-1	-1	-1	0	-1	-10
399 Apartment Dwelling Units	40	164	204	160	88	248	2,653
95 Townhouse Dwelling Units	7	35	42	33	16	49	552
Zone 7 Subtotal	47	198	245	192	104	296	3,195
Zone 8							
- 2 Single-Family Dwelling Units	0	-1	-1	-1	-1	-2	-19
564 Apartment Dwelling Units	56	231	287	226	124	350	3,751
105 Townhouse Dwelling Units	7	39	46	37	18	55	610
Zone 8 Subtotal	63	269	332	262	141	403	4,342

Table 5.2-10 [continued]
Forecast Trip Generation – Traffic Impact Analysis Study Area

Location	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trip Rate
	In	Out	Total	In	Out	Total	
Zone 9							
- 54 Single Family Dwelling Units	-10	-30	-40	-35	-20	-55	-517
2,680 Apartment Dwelling Units	268	1,099	1,367	1,072	590	1,662	17,822
375 Townhouse Dwelling Units	26	139	165	131	64	195	2,179
- 17.662-tsf Church	-6	-4	-10	-5	-5	-10	-161
Zone 9 Subtotal	278	1,204	1,482	1,163	629	1,792	19,323
Total Forecast Net Trip Generation of Project Zones 1-9	919	4,078	4,997	3,941	2,111	6,052	65,131

Note: tsf = thousand square feet.

EXISTING WITH PROJECT CONDITIONS

Trip Distribution and Assignment

Residentially-Zoned Land - General Plan Study Area

Development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area. As noted previously, there is no immediate physical development proposed. Thus, given the conceptual nature of this future development, the distribution of trips forecast to be generated by development of the residentially-zoned land would be addressed on a project-by-project basis and would be based on field reconnaissance, understanding of the surrounding circulation system, and City provided information.

Rezoned Land - Traffic Impact Analysis Study Area

The distribution of trips forecast to be generated by the rezoning project is based on field reconnaissance, understanding of the circulation system, and City provided information. Exhibit 6, Proposed Percent Trip Distribution, of the Traffic Impact Analysis (as provided in Appendix C) illustrates trip percent distribution of the trips generated for forecast existing with rezoning project conditions. Refinement of the trip distribution occurred locally where appropriate to account for the planned HDC/10th Street East interchange. Exhibit 7, Proposed Project ADT Assignment (Utilized for Forecast Existing With Project Conditions), of the Traffic Impact Analysis (as provided in Appendix C) illustrates the corresponding assignment of rezone project-generated daily trips assuming the trip percent distribution for forecast existing with rezoning project conditions.

Existing With Project Traffic Volumes

Residentially-Zoned Land - General Plan Study Area

Development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area. There is no immediate physical development proposed. Thus, given the conceptual nature of this future development, the

existing with project ADT volumes at the study roadways within the General Plan study area would be addressed on a project-by-project basis. These volumes would be derived by adding trips forecast to be generated by each respective development to existing conditions traffic volumes at the time of the proposal.

Rezoned Land – Traffic Impact Analysis Study Area

Exhibit 12, Forecast Existing With Project Conditions Roadway Segment ADT Volumes, of the Traffic Impact Analysis (as provided in Appendix C), illustrates the forecast existing with rezone project conditions ADT volumes at the study roadways derived by adding trips forecast to be generated by the proposed rezone project to existing conditions traffic volumes.

Existing With Project Roadway Segment Level of Service

Residentially-Zoned Land - General Plan Study Area

As indicated above, SOC Table 6.0-2, *Roadway Segments Operating Below LOS C*, outlines the roadways and segments operating below LOS C and indicates a total of 14 roadways (46 segments) studied operate at LOS D or worse at peak hour under existing conditions. Development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area, which would increase vehicular movement in the vicinity of the respective sites during a.m. and p.m. peak hour periods. These increases in traffic volumes could aggravate existing deficiencies and/or cause a roadway segment to operate at an unacceptable LOS. Such a reduction in LOS could conflict with the City's established target for peak hour roadway operations of LOS C or better; refer to Circulation Element Policies C1.4.1 and C1.4.2. Development of the residentially-zoned land could result in significant traffic impacts, if it would result in a roadway segment operating at or beyond LOS D or if it causes an increase in traffic volumes at a roadway segment, which is already operating at or beyond LOS D. The impacts would be dependent upon the specific site locations, intensity of development, and trip distribution characteristics. Compliance with General Plan goals and policies would reduce potential impacts to a less than significant level. Proposals would be evaluated on a case-by-case basis for their potential impacts to traffic and circulation. Due to the conceptual nature of the future residential development, proposals could require individual assessments of potential impacts. If necessary, additional mitigation would be recommended to further minimize potential impacts. Further, pursuant to Municipal Code Section 3.40.020, *Residential Traffic Impact Fees Required*, future residential development would be required to mitigate the impacts of development on the City's transportation system or to pay a traffic impact fee that would be used to mitigate the impacts by constructing transportation facilities pursuant to the most current transportation facilities plan. Thus, impacts would be less than significant in this regard.

Rezoned Land – Traffic Impact Analysis Study Area

Table 5.2-11, *Existing With Rezone Project Conditions Roadway Segment ADT and LOS*, summarizes the ADT volumes and corresponding LOS results at the traffic impact analysis study area roadway segments for existing with rezone project conditions.

Table 5.2-11
Existing With Rezone Project Conditions Roadway Segment ADT and LOS

Study Roadway Segment	LOS E Capacity	Forecast Existing With Project Conditions ADT	V/C Ratio	LOS
1. Division Street north of Avenue Q	18,000	208	0.01	A
2. Division Street between Avenue Q and Palmdale Boulevard	18,000	2,790	0.16	A
3. Division Street between Palmdale Boulevard and Avenue R	18,000	9,372	0.52	A
4. 5th Street East between Avenue Q and Palmdale Boulevard	18,000	3,347	0.19	A
5. 5th Street East between Palmdale Boulevard and Avenue R	18,000	14,174	0.79	C
6. 5th Street East between Avenue R and Avenue R-8	18,000	8,032	0.45	A
7. 6th Street East north of Avenue Q	18,000	6,037	0.34	A
8. 6th Street East between Avenue Q and Palmdale Boulevard	18,000	6,111	0.34	A
9. 6th Street East between Palmdale Boulevard and Avenue R	18,000	5,228	0.29	A
10. Sierra Highway north of Avenue Q	36,000	20,754	0.58	A
11. Sierra Highway between Avenue Q and Palmdale Boulevard	36,000	17,784	0.49	A
12. Sierra Highway between Palmdale Boulevard and Avenue R	36,000	15,172	0.42	A
13. Sierra Highway between Avenue R and Avenue R-8	36,000	13,223	0.37	A
14. 8th Street East north of Avenue Q	18,000	2,893	0.16	A
15. 10th Street East north of Avenue Q	18,000	8,884	0.49	A
16. 10th Street East between Avenue Q and Palmdale Boulevard	18,000	14,719	0.82	D
17. 10th Street East between Palmdale Boulevard and Avenue R	18,000	12,656	0.70	B
18. 10th Street East between Avenue R and Avenue R-8	18,000	8,931	0.50	A
19. 15th Street East north of Avenue R	18,000	3,904	0.22	A
20. 15th Street East between Avenue Q and Palmdale Boulevard	18,000	2,911	0.16	A
21. 15th Street East between Palmdale Boulevard and Avenue R	18,000	5,085	0.28	A
22. Avenue Q between Division Street and 5th Street East	18,000	4,034	0.22	A
23. Avenue Q between 5th Street East and 6th Street East	18,000	3,274	0.18	A
24. Avenue Q between Sierra Highway and 8th Street East	18,000	11,753	0.65	B
25. Avenue Q between 8th Street East and 10th Street East	18,000	8,808	0.49	A
26. Avenue Q between 10th Street East and 15th Street East	18,000	10,085	0.56	A
27. Palmdale Blvd between Division Street and 5th Street East	54,000	58,182	**1.08**	**F**
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	50,989	**0.94**	**E**
29. Palmdale Blvd between 6th Street East and 10th Street East	36,000	48,367	**1.34**	**F**
30. Palmdale Blvd between 10th Street East and 15th Street East	36,000	37,892	**1.05**	**F**
31. Avenue R between Division Street and 5th Street East	18,000	11,432	0.64	B
32. Avenue R between 5th Street East and 6th Street East	18,000	14,867	0.83	D
33. Avenue R between Sierra Highway and 10th Street East	36,000	22,645	0.63	B
34. Avenue R between 10th Street East and 15th Street East	36,000	25,834	0.72	C

Note: **Bold** indicates a deficient intersection.

As indicated in Table 5.2-11, with the addition of rezone project-generated trips, the following four roadway segments are forecast to operate at a deficient LOS according to City of Palmdale and Caltrans performance criteria for forecast existing with rezone project conditions:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;
- Palmdale Boulevard (SR-138) between 6th Street and 10th Street East; and
- Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East.

Recommended Improvements/Measures

The following measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient roadway segments (and intersections) for forecast existing with rezone project conditions:

- *Implement Project-Specific Transportation Demand Management Program* – As development occurs within the Traffic Impact Analysis study area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.

- *Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

- *Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a Project Study Report (PSR) is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

- *Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road.

- *Northbound SR-14 Ramps/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

- *Sierra Highway/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. Widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

- *10th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

- *12th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection.

- *15th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection.

It is noted that some of the aforementioned recommendations overlap with each other and may provide increased roadway segment (or intersection) capacity, which is required at a minimum to achieve the desired LOS.

The following recommended measures are identified to partially reduce the forecast traffic impacts at the deficient intersections and roadway segments for forecast existing with project conditions:

- *Palmdale Boulevard (SR-138) between Division Street and 5th Street East* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. However, in order to completely reduce the traffic impact at this study roadway segment to a less than significant level, widening and upgrading Palmdale Boulevard (SR-138) between Division Street and 5th Street East from the Major Arterial designation (6-lane roadway) to the Regional Arterial designation (8-lane roadway) would be required. This improvement has been deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of businesses along Palmdale Boulevard. The widening of this study roadway segment to eight lanes would also exceed the current General Plan designation.

- *5th Street East/Palmdale Boulevard (SR-138)* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. However, in order to completely reduce the traffic impact at this study intersection to a less than significant level, widening of the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one shared through/right-turn lane to one left-turn lane, three through lanes, and one shared through/right-turn lane would be required. This improvement has been deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of businesses along Palmdale Boulevard.

Exhibit 5.2-4, *Mitigated Existing With Project Study Roadway Segment Geometry*, shows the mitigated forecast existing with rezone project conditions roadway segment geometry.

Mitigated Forecast Existing With Rezone Project Conditions Roadway Segment LOS

Table 5.2-12, *Mitigated Forecast Existing With Rezone Project Conditions Roadway Segment ADT and LOS*, summarizes mitigated forecast existing with rezone project conditions roadway segment ADT volumes and corresponding LOS at affected locations assuming implementation of the feasible roadway segment improvements/measures.

As indicated in Table 5.2-12, assuming implementation of the feasible roadway segment improvements/measures, the study roadway segments are forecast to operate at an acceptable LOS according to agency performance criteria for mitigated forecast existing with rezone project conditions with the exception of the following study roadway segment:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East.

Table 5.2-12
Mitigated Forecast Existing With Rezone Project Conditions
Roadway Segment ADT and LOS

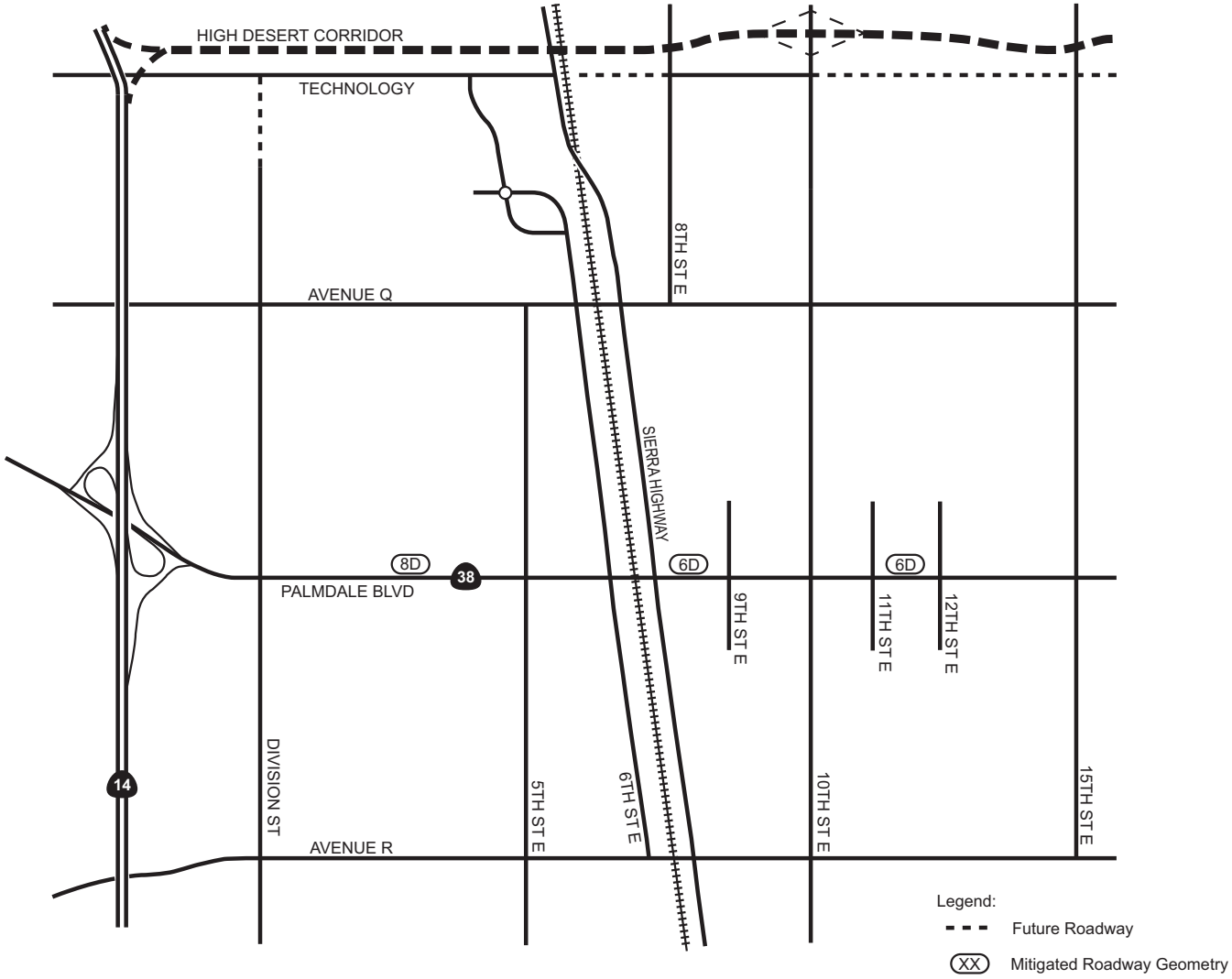
Study Roadway Segment	LOS E Capacity	Mitigated Forecast Existing With Project Conditions ADT	V/C Ratio	LOS
27. Palmdale Blvd between Division Street and 5th Street East	54,000	55,670	1.03	E*
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	48,629	0.90	D
29. Palmdale Blvd between 6th Street East and 10th Street East	54,000	46,056	0.85	D
30. Palmdale Blvd between 10th Street East and 15th Street East	54,000	36,729	0.68	B

* Only assumes implementation of feasible measures; project traffic impact is partially reduced, but the impact remains significant and unavoidable.

Existing With Project Intersection Level of Service

Residentially-Zoned Land - General Plan Study Area

The SOC analysis focused upon roadways; refer to the *Existing With Project Roadway Segment Level of Service - General Plan Study Area* Section above.



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Mitigated Existing With Project Study Roadway Segment Geometry

Exhibit 5.2-4

Rezoned Land – Traffic Impact Analysis Study Area

Table 5.2-13, *Existing With Rezone Project Conditions AM/PM Peak Hour Intersection LOS*, summarizes forecast existing with rezone project conditions a.m. peak hour and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-13
Existing With Rezone Project Conditions AM/PM Peak Hour Intersection LOS

Study Intersection	Existing Conditions		Forecast Existing With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
1. SB SR-14 Ramps/Palmdale Boulevard (SR-138)	7.8 – A	9.4 – A	9.4 – A	23.8 – C	No
2. NB SR-14 Ramps/Palmdale Boulevard (SR-138)	4.6 – A	5.2 – A	3.3 – A	71.0 – E	Yes
3. Division Street/Palmdale Boulevard (SR-138)	21.1 – C	19.2 – B	19.3 – B	22.7 – C	No
4. 5th Street East/Palmdale Boulevard (SR-138)	18.0 – B	18.2 – B	27.8 – C	47.5 – D	Yes
5. 6th Street East/Palmdale Boulevard (SR-138)	12.9 – B	16.1 – B	13.7 – B	22.0 – C	No
6. Sierra Highway/Palmdale Boulevard (SR-138)	25.2 – C	26.7 – C	32.7 – C	59.6 – E	Yes
7. 9th Street East/Palmdale Boulevard (SR-138)	8.2 – A	14.6 – B	11.7 – B	18.7 – B	No
8. 10th Street East/Palmdale Boulevard (SR-138)	17.0 – B	17.2 – B	28.8 – C	38.7 – D	Yes
9. 11th Street East/Palmdale Boulevard (SR-138)	28.0 – D	88.2 – F	OVRFL – F	OVRFL – F	No
10. 12th Street East/Palmdale Boulevard (SR-138)	23.0 – C	48.2 – E	OVRFL – F	OVRFL – F	Yes
11. 15th Street East/Palmdale Boulevard (SR-138)	17.8 – C	39.7 – E	282.1 – F	OVRFL – F	Yes

Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.

As indicated in Table 5.2-13, with the addition of rezone project-generated trips, the following seven study intersections are forecast to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for existing with rezone project conditions:

- Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) (p.m. peak hour only);
- 5th Street East/Palmdale Boulevard (SR-138) (p.m. peak hour only);
- Sierra Highway/Palmdale Boulevard (SR-138) (p.m. peak hour only);
- 10th Street East/Palmdale Boulevard (SR-138) (p.m. peak hour only);
- 11th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours);
- 12th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours); and
- 15th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours).

As also indicated in Table 5.2-13, based on Caltrans thresholds of significance, the addition of rezone project-generated trips is forecast to result in a significant impact at the following six study intersections for existing with rezone project conditions:

- Northbound SR-14 Ramps/Palmdale Boulevard (SR-138);
- 5th Street East/Palmdale Boulevard (SR-138);
- Sierra Highway/Palmdale Boulevard (SR-138);
- 10th Street East/Palmdale Boulevard (SR-138);

- 12th Street East/Palmdale Boulevard (SR-138); and
- 15th Street East/Palmdale Boulevard (SR-138).

Recommended Improvements/Measures

Since the proposed project does not cause deficient operations at the 11th Street East/Palmdale Boulevard (SR-138) intersection for forecast existing with project conditions, no significant impact is identified.

The measures outlined above (*Existing With Project Roadway Segment Level of Service - Rezoned Land – Traffic Impact Analysis Study Area* Section) are identified to reduce significant traffic impacts at the deficient intersections (and roadway segments) for forecast existing with rezone project conditions. It is noted that some of the above recommendations overlap with each other and may provide increased intersection (or roadway) capacity, which is required at a minimum to achieve the desired LOS. Exhibit 5.2-5, *Mitigated Existing With Project Study Intersection Geometry*, shows mitigated forecast existing with rezone project conditions study intersection geometry.

Mitigated Forecast Existing With Rezone Project Conditions Study Intersection LOS

Table 5.2-14, *Mitigated Forecast With Rezone Project Conditions Study Intersection LOS*, summarizes mitigated forecast existing with rezone project conditions a.m. peak hour and p.m. peak hour LOS at affected study intersections assuming implementation of the recommended improvements/measures; detailed LOS analysis sheets are contained in Appendix C.

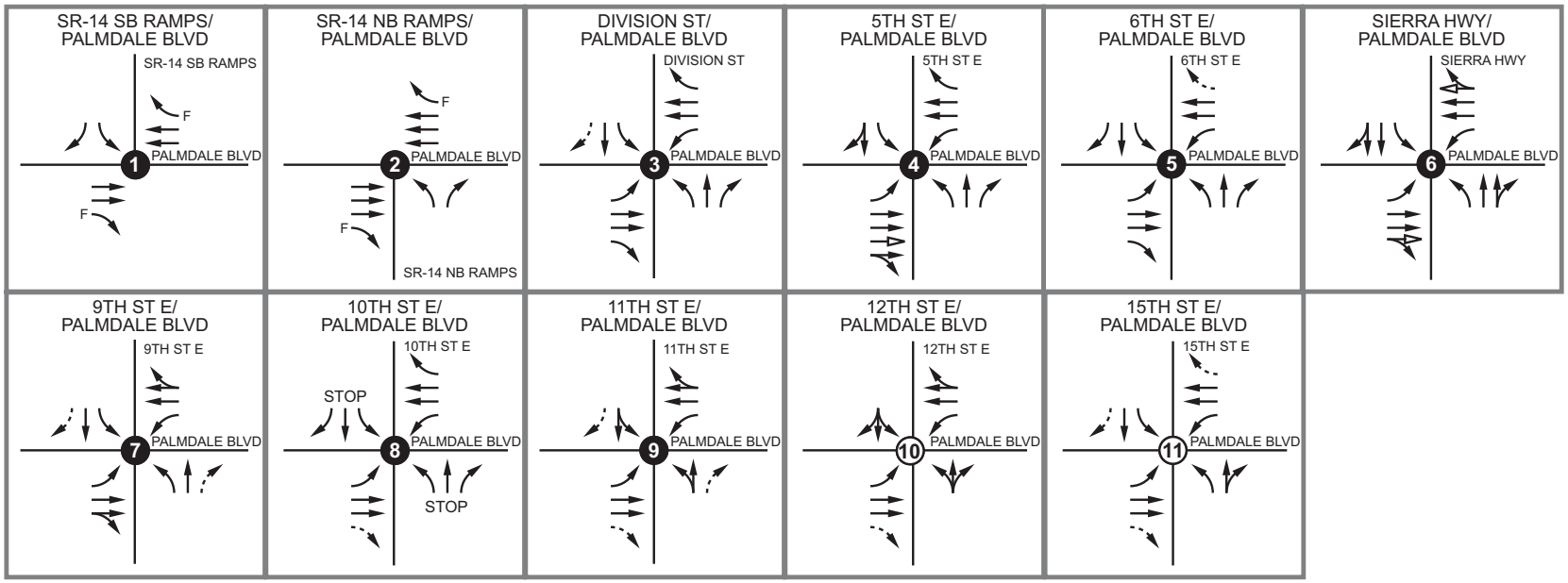
Table 5.2-14
Mitigated Forecast With Rezone Project Conditions Study Intersection LOS

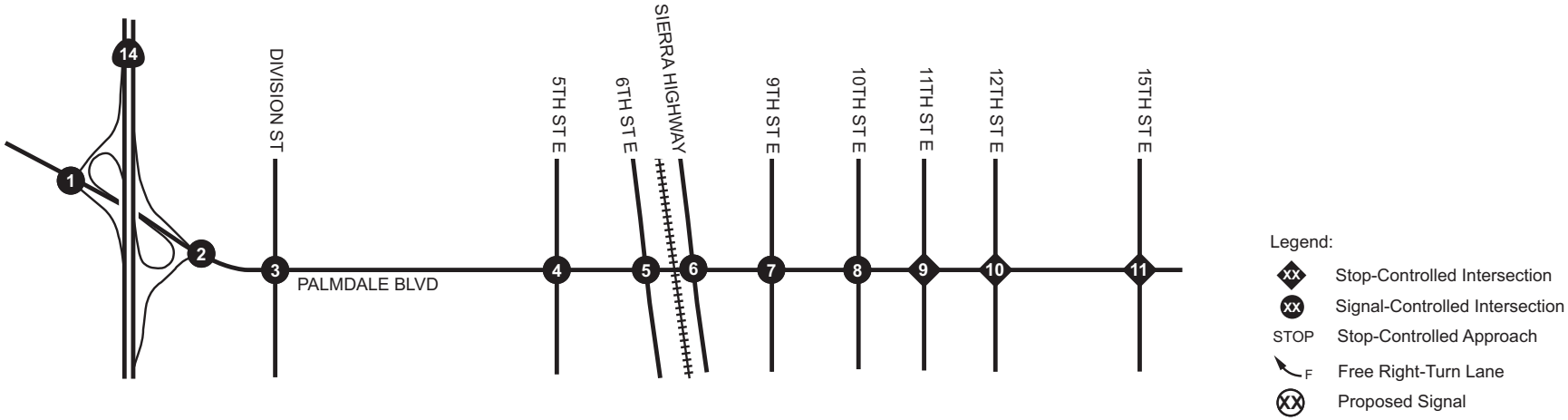
Study Intersection	Existing Conditions		Mitigated Forecast Existing With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
2. NB SR-14 Ramps/Palmdale Boulevard (SR-138)	4.6 – A	5.2 – A	3.4 – A	52.4 – D	No
4. 5th Street East/Palmdale Boulevard (SR-138)	18.0 – B	18.2 – B	25.9 – C	36.7 – D	**Yes**
6. Sierra Highway/Palmdale Boulevard (SR-138)	25.2 – C	26.7 – C	25.8 – C	32.5 – C	No
8. 10th Street East/Palmdale Boulevard (SR-138)	17.0 – B	17.2 – B	26.9 – C	33.3 – C	No
10. 12th Street East/Palmdale Boulevard (SR-138)	23.0 – C	48.2 – E	20.6 – C	16.8 – B	No
11. 15th Street East/Palmdale Boulevard (SR-138)	17.8 – C	39.7 – E	11.9 – B	9.7 – A	No

Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.

As indicated in Table 5.2-14, assuming implementation of the feasible intersection improvements/measures, no significant impacts are forecast at the study intersections according to agency performance criteria for mitigated forecast existing with rezone project conditions with the exception of the following study intersection:

- 5th Street East/Palmdale Boulevard (SR-138).





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Mitigated Existing With Project Study Intersection Geometry

Exhibit 5.2-5

It is noted that the Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) intersection is forecast to operate at LOS D with implementation of the recommended measures. Upon construction of the HDC in the vicinity of the rezone projects, more traffic would be diverted from Palmdale Boulevard (SR-138) to the HDC, achieving improved operations that would avoid the need for widening and costly improvements at the Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) intersection. Since the LOS D operation is temporary until construction of the HDC occurs, no further mitigation is required at the Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) intersection.

Mitigation Programs:

General Plan Policies:

Policy C1.1.3: Develop and maintain a computer traffic model based upon the designated network, and assess existing and projected levels of service on streets within the network in making land use decisions and formulating the Land Use Plan.

Policy C1.1.4: Periodically monitor levels of service within the existing street network to identify deficient street segments and intersections, and develop programs to improve service levels where needed.

Policy C1.1.5: Improve the existing street network based upon the adopted Circulation Plan, through implementation of the Capital Improvement Program and through requirements placed upon new development approvals.

Policy C1.1.7: Ensure that right-of-way is reserved wherever possible to implement the adopted Circulation Plan.

Policy C1.1.8: Evaluate all land use decisions to ensure consistency with the Circulation Plan.

Policy C.1.1.9: Ensure that the cumulative and regional impacts of new development on the circulation system are mitigated to the extent feasible, concurrent with development. Concurrent shall mean that required facilities are installed as needed during various stages of development.

Policy C1.2.1: Provide adequate system capacity and efficiency through exclusive turn lane additions at arterial intersections and other significant locations.

Policy C1.2.2: Assure safe and efficient arterial operations through careful control of access, signal spacing, median placement, and overall street and development design.

Policy C1.2.3: Protect and increase the capacity of arterial streets through the following measures:

1. No new direct residential driveway access will be permitted onto regional, major and secondary arterials or highways, except where no other feasible access is available.

2. For residential development, full intersections will generally be permitted at no less than one-quarter mile spacing along arterial streets. Where it is determined by the City Traffic Engineer that community-wide circulation will not be negatively impacted, full intersections (non-signalized) may be permitted at approximately one-eight mile spacing.

3. Except as specified in Policy C1.2.3.b, right turn only access will typically be permitted at approximately one-eighth mile spacing in residential developments, unless no other feasible access is available. Additional right-of-way may be required on arterials for right turn lanes onto local and collector streets, and significant private streets or driveways.

4. On-street parking will be prohibited on arterial roadways, unless otherwise approved by the City Traffic Engineer.

5. New arterial streets, and extensions of existing arterial streets, will be designed so as to eliminate jogs and discontinuities and facilitate regional traffic flow.

6. All secondary, major and regional arterials should be constructed with medians.

Policy C1.2.4: Promote development of regional arterial links within the community where needed to serve existing and future needs, including but not limited to the following:

1. Promote development of grade separations at railroad tracks, in particular, at Palmdale Boulevard.

2. Coordinate with Caltrans and other affected agencies to expedite rerouting of Highway 138 and widening of State Route 14.

3. Coordinate with affected agencies and jurisdictions to address the potential for establishing a regional north-south transportation corridor within the west side of the Antelope Valley.

Policy C1.3.1: Promote development of local street patterns, which create and unify neighborhoods, rather than divide them, through the following means:

1. Local street patterns should provide access between subdivisions within a neighborhood, with the exception of through traffic which should be directed onto major and secondary arterials.

2. The local street system should be logical and understandable for the user. Creation of circuitous and confusing travel paths between internal neighborhood areas and adjacent arterials should be avoided.

3. The street system should be designed to avoid creating local streets, which will ultimately function as collectors. A local street may be determined to function as a collector street when it is or will be used to collect traffic from local streets and convey it to an arterial street. This function of collecting traffic may be due to the street's length, alignment, design or the lack of other streets which may be used to convey traffic to nearby arterials. In general, local streets will be discouraged from extending more than one-half mile so as to avoid serving this function.

4. Direct residential driveway access onto collectors, or onto local streets, which function as collectors, is discouraged.

5. Local street design should provide efficient connection to the arterial highway system while discouraging excessive speeds and volumes within neighborhoods.

6. Maximum cul-de-sac length should be 700 feet. "Dog-leg" cul-de-sacs with one or more turns between the bulb and the outlet should be avoided.

7. To discourage excessive speed and through traffic, street width should not exceed that required for the level of use; right-of-way and pavement widths on local streets may be reduced when it can be demonstrated that such reduction will not negatively impact internal and external circulation. Where such reductions are proposed, the City Traffic Engineer shall make appropriate recommendations to the Planning Commission during review of the tentative map.

Policy C1.4.1: Strive to maintain a Level of Service (LOS) C or better to the extent practical; in some circumstances, a LOS D may be acceptable for a short duration during peak periods.

Policy C1.4.2: Ensure that approvals of new development are correlated with any roadway improvements that would be necessary to maintain the existing level of service or LOS C, whichever is less, and other performance characteristics applicable to the affected roadways. Development shall not be authorized until measures are in place to construct any necessary improvements; these measures may include, but not be limited to, payment of traffic impact fees or construction of street improvements as required in the conditions of approval.

Policy C1.4.3: Establish street design standards, which provide the capacities that are needed to adequately serve the projected travel demand.

Policy C1.4.5: Locate and design intersections so as to promote safe and efficient circulation, through the following means:

- Local to local street intersections should be spaced at least 150 feet apart (from centerline to centerline).

- Intersections, including knuckles, should generally be perpendicular. Public streets should intersect at a 90 degree angle plus or minus five degrees. Knuckles should be constructed at a 90 degree angle, plus or minus 10 degrees.

- Excessive grade variations, curves or other features which impair sight distance at intersections shall be avoided.

- Local to collector street intersections should be spaced no less than 300 feet apart, where necessary to provide adequate queuing room for left turn movements on to the collector street. Where left turn movements onto the collector street are not needed, this spacing requirement may be reduced to 150 feet.

- On local to local intersections, four-way intersections should be avoided.

- For intersections of collector or larger streets, four-way intersections are preferred over offset or "T" intersections.

Policy C1.4.6: Adopt standards for use of private streets, where appropriate; private streets, other than driveways and alleyways typically associated with multi-family development, should be constructed to City standards for public rights-of-way, and should be used only for gated communities.

Policy C1.5.2: Periodically monitor levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed through the Capital Improvement Program.

Policy C1.8.1: Cooperate with other agencies and jurisdictions, including Caltrans, Los Angeles County, and adjacent cities, to evaluate the proposed solutions to regional transportation issues relating to the City of Palmdale.

Policy C1.8.2: Coordinate with other jurisdictions to integrate circulation networks.

Policy C2.1.1: Require Transportation Demand Management Plans from major employers, as defined by the Air Quality Management District and the Congestion Management Plan.

Policy C2.1.2: Promote the use of ridesharing by providing safe and convenient park-and-ride facilities, accessible to mass transit facilities where available, and by providing public information programs for commuters.

Policy C2.1.3: Require residential developments to contribute towards City programs to reduce vehicle trips.

Policy C2.1.4: Provide incentives for trip reduction measures.

Policy C2.1.5: Ensure compliance with the County's Congestion Management Plan.

Policy C2.1.6: Promote alternative means of trip reduction, including telecommuting.

Policy C2.2.1: Promote public transit operations within the Planning Area, and work with transit operators to coordinate schedules, services, service routes, and fares.

Policy C2.2.2: Promote the use of public transit by facilitating dedication of access routes and construction of safe and convenient stops with sufficient parking.

Policy C2.2.3: Encourage location of bikeways and storage areas which are integrated with public transit facilities.

Policy C2.2.4: Encourage development of regional rail transit serving the Palmdale area.

Policy C2.2.5: Require provision of bus turnouts for new development, where deemed to be appropriate in consultation with the transit authority.

Policy C2.2.6: Establish a regional transportation center within the City, conveniently located to maximize access to downtown and major commercial centers, which will accommodate a variety of public transportation uses including rail, bus, and shuttle service.

Policy C3.1.1: Schools, parks and neighborhoods uses should be located within convenient walking distance to residential developments.

Policy C3.1.2: Land uses should be arranged in a manner which increases the opportunity to utilize alternate forms of transportation, such as transit systems, bikeways and pedestrian walkways.

Policy C3.1.3: Promote bicycle accessibility to all public facilities, including parks, schools, and centers of civic activity, to include secure bicycle storage areas.

Policy C3.1.4: Require residential subdivision designs to accommodate convenient pedestrian and bicycle access, both on- and off-site.

Policy C3.1.5: Adopt and implement a bikeway plan as a component of the Parks, Recreation and Trails Element.

Policy C4.2.2: Support regional efforts to provide commuter rail service from Palmdale to the Los Angeles basin.

Policy PRT1.6.1: Provide trail linkages through active park sites to connect nearby equestrian and multi-use trails, and bikeways.

Policy PRT5.1.1: Establish Class I, II and III bikeways throughout the planning area. Backbone Class I and II bikeways are shown on Exhibit PRT-2.

Policy PRT5.1.2: Focus additional planning efforts towards establishing local bikeway networks which connect with the city-wide backbone system.

Policy PRT5.1.3: Reserve right-of-way, require dedication when appropriate, and ensure construction of bikeways through the development review process and Capital Improvement Program.

Policy PRT5.1.4: Require residential subdivisions designs to accommodate convenient pedestrian and bicycle access, both on and off site, through measures which may include the following (Policy C3.1.4):

- Side-on cul-de-sacs, as opposed to standard cul-de-sacs, should be encouraged adjacent to major and secondary highways or pedestrian trails, to provide for pedestrian access through cul-de-sac ends.
- Subdivision design should consider bicycle and pedestrian access to nonresidential uses. These areas are best accessed through perimeter (single-loaded) streets. In addition, a logical travel path should be provided between these facilities and nearby arterials.

Policy PRT5.1.6: Provide for linkage of bikeways to the multi-use trails network within the Planning Area.

Policy PRT5.1.7: Provide for the designation and improvement of bicycle support facilities, including staging areas, parking facilities and bike lockers, at appropriate locations along the bikeway network, through the development review process and Capital Improvement Program.

Policy PRT5.2.1: Utilize the following criteria in designating bikeways:

- The bikeway network should be designed to suit the needs of all types of bike riding, including recreational, commuter, utilitarian and long-distance cycling.
- The bikeway system should form a continuous network, with dead-end spurs minimized.
- The bikeway network should interconnect public facilities, schools, parks, recreational areas, commuter facilities and major community, industrial, recreational, institutional, employment and commercial centers.
- Utilize open space easements, public land, flood control facilities, the California Aqueduct right-of-way and utility easements, where appropriate, to facilitate the objectives of the Bikeway Network and establish safe and continuous off-street bikeways.
- Where feasible, the bikeway system should be coordinated with bike routes in adjacent jurisdictions.

- The bikeway network should maximize opportunities for diverse recreational and scenic experiences.

- Bikeways should be located and designed to permit the cyclist to reach destination points with a minimum expenditure of time and energy.

- Off-street bikeways (Class I) shall be designed to accommodate pedestrian use, where appropriate.

Policy PRT5.2.2: Adopt the design standards, described in the State of California Highway Design Manual, Chapter 1000, which set forth minimum bikeway widths and clearances, maximum grades and road crossing details, among other things.

Policy PRT5.3.2: Require utilization of Class I bike paths in all master planned developments.

Policy CD 10.7.7: Facilities to accommodate alternate travel modes are encouraged. Transit facilities, including bus turnouts, benches, and/or shelters may be required, and should integrate with the overall site design. Convenient and secure bicycle parking areas will be required.

Rezone Project Mitigation Measures:

TR-1 *Implement Project-Specific Transportation Demand Management Program* – As development occurs within the rezone project area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.

TR-2 Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-3 Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/ Railroad crossing, preparation of a Project Study Report (PSR) is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

TR-4 Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair contribution to restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road.

TR-5 Northbound SR-14 Ramps/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-6 Sierra Highway/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. Widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

TR-7 10th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-8 12th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, the City shall identify and implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection.

TR-9 15th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection.

TR-10 Palmdale Boulevard (SR-138) between Division Street and 5th Street East – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-11 5th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

Level of Significance: Significant and unavoidable impact at the following roadway segment and intersection:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

FUTURE BUILDOUT WITH PROJECT CONDITIONS

- **POTENTIAL DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT AND GENERAL PLAN BUILDOUT WOULD RESULT IN SIGNIFICANT TRAFFIC IMPACTS.**

Impact Analysis:

FUTURE BUILDOUT WITH PROJECT TRAFFIC VOLUMES

Residentially-Zoned Land – General Plan Study Area

Development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area. There is no immediate physical development proposed. Thus, given the conceptual nature of this future development, the future buildout with project ADT volumes at the study roadways within the General Plan study area would be addressed on a project-by-project basis. These volumes would be derived by adding trips forecast to be generated by each respective development to buildout without project conditions traffic volumes.

Rezoned Land – Traffic Impact Analysis Study Area

Forecast year 2040 with rezone project conditions traffic volumes were derived by adding trips forecast to be generated by the proposed rezone project to forecast year 2040 without project conditions traffic volumes. Exhibit 16, Forecast Year 2040 With Project Conditions Roadway Segment ADT Volumes, of the Traffic Impact Analysis (as included in Appendix C) shows forecast year 2040 with rezone project conditions ADT volumes at the study roadways, which accounts for the future HDC.

FUTURE BUILDOUT WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE

Residentially-Zoned Land - General Plan Study Area

As indicated in GPEIR Table 4-13, the GPEIR concluded the majority of the General Plan study area roadways would operate at an acceptable LOS (C or better) under future buildout conditions. The GPEIR concluded nine roadways (14 segments) would operate at LOS D or worse under future buildout conditions. The GPEIR concluded a significant and unavoidable impact would occur involving these roadway segments, despite implementation of a citywide TDM Program, the assumed improvements, and compliance with Circulation Element Policies.

The SOC Report summarizes General Plan buildout statistics as updated to reflect annexations and development proposals that involved General Plan Amendments, since preparation of the GP/GPEIR. Table 6.0-6, *Roadway Segment Analysis General Plan Buildout Comparison With 1993 General Plan Buildout*, provides the predicted operating condition of roadway segments.

As indicated in SOC Report Table 6.0-6, eight roadways (24 segments) within the General Plan study area would operate at LOS D or worse at General Plan buildout. This assumes that all roadways are constructed to full General Plan Circulation Element standards. Depending on the roadway under consideration, these improvements could include an increase in the number of through lanes, additional turning lanes, channelization of various intersections, computerized traffic signal coordination measures, etc. The SOC Report predictions are generally similar to the predictions featured in the GPEIR.

Development of vacant land currently designated for residential uses in accordance with the General Plan was considered in the GPEIR and SOC Report analyses, since these assumed additional development within the area consistent with the Land Use Plan, and the project's impacts upon roadway segment LOS are a factor of the anticipated development's forecast traffic volumes. Project implementation would be consistent with the analyses presented in the GPEIR and SOC Report, and would result in no greater impacts to roadway segments than previously identified.

It is the City's goal to establish, maintain, and enhance a system of streets and highways, which would provide for the safe and efficient movement of people and goods throughout the City, while minimizing adverse impacts on the community (Goal C1). To this end, the City has adopted and implemented a street and highway plan designed to meet existing and future circulation needs. Additionally, the City maintains the arterial and regional roadway system to serve existing and future circulation needs. The City's goals, policies, and objectives for development of a transportation system that would meet future community needs are implemented through its Circulation Plan and Traffic Model. The City constructs or requires construction of roads and transportation facilities in conformance with the Circulation System. The City also regularly updates the Roadway Network and coordinates it with the Land Use Plan, to ensure provision of transportation facilities adequate to support permitted land uses throughout the study area. Additionally, the City maintains the Traffic Model on an ongoing basis to reflect changing conditions, as road improvements are constructed and new development takes place.

Compliance with General Plan goals and policies would reduce potential impacts to roadway segments to a less than significant level. Due to the conceptual nature of the future residential development, proposals could require individual assessments of potential impacts to traffic and circulation. If necessary, additional mitigation would be recommended to further minimize potential impacts. Further, pursuant to Municipal Code Section 3.40.020, *Residential Traffic Impact Fees Required*, future residential development would be required to mitigate the impacts of development on the City's transportation system or to pay a traffic impact fee that would be used to mitigate the impacts by constructing transportation facilities pursuant to the most current transportation facilities plan. Thus, impacts to roadway segments would be less than significant in this regard.

Rezoned Land – Traffic Impact Analysis Study Area

Table 5.2-15, *Forecast Year 2040 With Rezone Project Conditions Roadway Segment ADT and LOS*, summarizes forecast year 2030 with rezone project conditions roadway segment ADT volumes and corresponding LOS.

Table 5.2-15
Forecast Year 2040 With Rezone Project Conditions Roadway Segment ADT and LOS

Study Roadway Segment	LOS E Capacity	Forecast Year 2040 With Project Conditions ADT	V/C Ratio	LOS
1. Division Street north of Avenue Q	54,000	10,639	0.20	A
2. Division Street between Avenue Q and Palmdale Boulevard	54,000	17,160	0.32	A
3. Division Street between Palmdale Boulevard and Avenue R	18,000	12,612	0.70	B
4. 5th Street East between Avenue Q and Palmdale Boulevard	18,000	5,570	0.31	A
5. 5th Street East between Palmdale Boulevard and Avenue R	36,000	18,785	0.52	A
6. 5th Street East between Avenue R and Avenue R-8	36,000	19,101	0.53	A
7. 6th Street East north of Avenue Q	18,000	11,604	0.64	B
8. 6th Street East between Avenue Q and Palmdale Boulevard	18,000	9,050	0.50	A
9. 6th Street East between Palmdale Boulevard and Avenue R	18,000	11,065	0.61	B
10. Sierra Highway north of Avenue Q	36,000	21,654	0.60	A
11. Sierra Highway between Avenue Q and Palmdale Boulevard	36,000	15,266	0.42	A
12. Sierra Highway between Palmdale Boulevard and Avenue R	36,000	10,937	0.30	A
13. Sierra Highway between Avenue R and Avenue R-8	36,000	18,643	0.52	A
14. 8th Street East north of Avenue Q	18,000	4,398	0.24	A
15. 10th Street East north of Avenue Q	54,000	25,762	0.48	A
16. 10th Street East between Avenue Q and Palmdale Boulevard	18,000	19,317	1.07	F
17. 10th Street East between Palmdale Boulevard and Avenue R	18,000	9,617	0.53	A
18. 10th Street East between Avenue R and Avenue R-8	18,000	8,346	0.46	A
19. 15th Street East north of Avenue R	18,000	2,731	0.15	A
20. 15th Street East between Avenue Q and Palmdale Boulevard	18,000	8,314	0.46	A
21. 15th Street East between Palmdale Boulevard and Avenue R	18,000	13,375	0.74	C
22. Avenue Q between Division Street and 5th Street East	18,000	4,277	0.24	A
23. Avenue Q between 5th Street East and 6th Street East	18,000	2,650	0.15	A
24. Avenue Q between Sierra Highway and 8th Street East	18,000	7,699	0.43	A
25. Avenue Q between 8th Street East and 10th Street East	18,000	9,814	0.55	A
26. Avenue Q between 10th Street East and 15th Street East	18,000	12,237	0.68	B
27. Palmdale Blvd between Division Street and 5th Street East	54,000	58,964	1.09	F
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	51,329	0.95	E
29. Palmdale Blvd between 6th Street East and 10th Street East	36,000	55,798	1.55	F
30. Palmdale Blvd between 10th Street East and 15th Street East	36,000	49,033	1.36	F
31. Avenue R between Division Street and 5th Street East	18,000	12,035	0.67	B
32. Avenue R between 5th Street East and 6th Street East	18,000	12,815	0.71	C
33. Avenue R between Sierra Highway and 10th Street East	36,000	24,323	0.68	B
34. Avenue R between 10th Street East and 15th Street East	36,000	27,699	0.77	C

As indicated in Table 5.2-15, with the addition of rezone project-generated trips, the following five roadway segments are forecast to operate at a deficient LOS according to City of Palmdale and Caltrans performance criteria for forecast year 2040 with rezone project conditions:

- 10th Street East between Avenue Q and Palmdale Boulevard (SR-138);
- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;
- Palmdale Boulevard (SR-138) between 6th Street and 10th Street East; and
- Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East.

Recommended Improvements/Measures

The following measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient roadway segments (and intersections) for forecast year 2040 with rezone project conditions:

- *Implement Project-Specific Transportation Demand Management Program* – As development occurs within the Traffic Impact Analysis study area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc. (Same as recommendation for existing with project conditions).

- *10th Street East between Avenue Q and Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, widen/restripe 10th Street East between Avenue Q and Palmdale Boulevard (SR-138) from a 2-lane road to a 4-lane roadway. While most of the roadway is a 4-lane divided roadway, a portion near Palmdale Boulevard currently only provides one northbound lane.

- *Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road. (Same as recommendation for existing with project conditions).

- *11th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Signalize the 11th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desire, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection.

- *12th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection. (Same as recommendation for existing with project conditions).

- *15th Street East/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection. (Same as recommendation for existing with project conditions).

It is noted that some of the recommended improvements/measures overlap with each other and may provide increased roadway segment (or intersection) capacity, which is required at a minimum to achieve the desired LOS.

The following recommended measures are identified to partially reduce the forecast traffic impacts at the deficient intersections and roadway segments for forecast year 2040 with project conditions:

- *Palmdale Boulevard (SR-138) between Division Street and 5th Street East* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. However, in order to completely reduce the traffic impact at this study roadway segment to a less than significant level, widening and upgrading Palmdale Boulevard (SR-138) between Division Street and 5th Street East from the Major Arterial designation (6-lane roadway) to the Regional Arterial designation (8-lane roadway) would be required. This improvement has been deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of businesses along Palmdale Boulevard. The widening of this study roadway segment to eight lanes would also exceed the current General Plan designation. (Same as recommendation for existing with project conditions).

- *Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. However, in order to completely reduce the traffic impact at this study roadway segment to a less than significant level, widening and upgrading Palmdale Boulevard (SR-138) between 5th Street East and Sierra Highway from the Major Arterial Designation (6-lane roadway) to the Regional Arterial designation (8-lane roadway) would be required which is deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of the businesses along Palmdale Boulevard. The widening of this study roadway segment to eight lanes would also exceed the current General Plan designation.

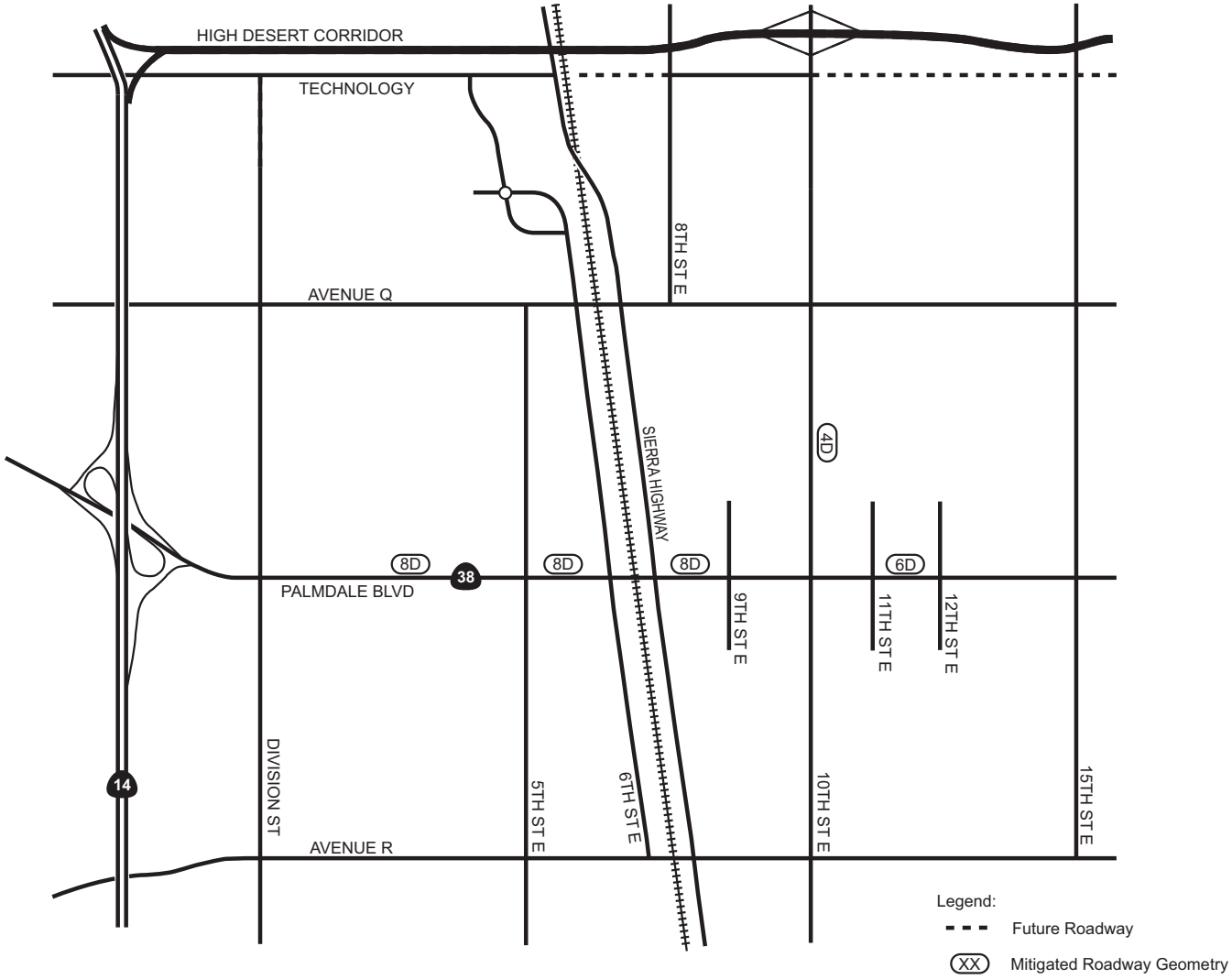
- *Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, consistent with the City of Palmdale Circulation Element, widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. However, in order to completely reduce the traffic impact at this study roadway segment to a less than significant level, widening and upgrading of Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from the Major Arterial Designation (6-lane roadway) to the Regional Arterial designation (8-lane roadway) would be required which is deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of the businesses along Palmdale Boulevard. The widening of this study roadway segment to eight lanes would also exceed the current General Plan designation. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

- *5th Street East/Palmdale Boulevard (SR-138)* – Partially reduce the significant traffic impact by implementing a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, widen the northbound 5th Street East approach from one left-turn lane, one through lane, and one right-turn lane to consist of two left-turn lanes, one through lane, and one right-turn lane. Implement protected traffic signal phasing for north-south movements. However, in order to completely reduce the traffic impact at this study roadway segment to a less than significant level, widening of the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one shared through/right-turn lane to one left-turn lane, three through lanes, and one shared through/right-turn lane would be required, which is deemed infeasible due to various constraints such as right-of-way impacts and potential impacts to the adjacent properties, which would involve elimination of the businesses along Palmdale Boulevard.

Exhibit 5.2-6, *Mitigated Forecast Year 2040 With Project Study Roadway Segment Geometry*, shows the mitigated forecast year 2040 with rezone project conditions roadway segment geometry.

Mitigated Forecast Year 2040 With Rezone Project Conditions Roadway Segment LOS

Table 5.2-16, *Mitigated Forecast Year 2040 With Rezone Project Conditions Roadway Segment ADT and LOS*, summarizes mitigated forecast year 2040 with rezone project conditions roadway segment ADT volumes and corresponding LOS at affected locations assuming implementation of the feasible roadway segment improvements/measures.



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Mitigated Forecast Year 2040 With Project Study Roadway Segment Geometry

Exhibit 5.2-6

Table 5.2-16
Mitigated Forecast Year 2040 With Rezone Project Conditions
Roadway Segment ADT and LOS

Study Roadway Segment	LOS E Capacity	Mitigated Forecast Year 2040 With Project Conditions ADT	V/C Ratio	LOS
16. 10th Street East between Avenue Q and Palmdale Boulevard	36,000	18,209	0.51	A
27. Palmdale Blvd between Division Street and 5th Street East	54,000	57,560	1.07	E*
28. Palmdale Blvd between 5th Street East and 6th Street East	54,000	50,077	0.93	E*
29. Palmdale Blvd between 6th Street East and 10th Street East	54,000	54,510	1.01	E*
30. Palmdale Blvd between 10th Street East and 15th Street East	54,000	48,035	0.89	D

* Only assumes implementation of feasible measures; project traffic impact is partially reduced, but the impact remains significant and unavoidable.

As indicated in Table 5.2-16, assuming implementation of the feasible roadway segment improvements/measures, the study roadway segments are forecast to operate at an acceptable LOS according to agency performance criteria for mitigated forecast year 2040 with rezone project conditions with the exception of the following study roadway segments:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street and 6th Street; and
- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East.

FUTURE BUILDOUT WITH PROJECT INTERSECTION LEVEL OF SERVICE

Residentially-Zoned Land – General Plan Study Area

Intersection capacities in the new Circulation Plan at General Plan buildout were also analyzed in the GPEIR. Although, the increased capacity of the new Circulation Plan would improve overall intersection traffic operations at buildout, the GPEIR anticipated that some intersections would operate beyond LOS D. The Circulation Element further concluded unacceptable levels of congestion are likely to occur without further specific capacity improvements at intersections or reduction of traffic demand through aggressive local TDM measures.

The SOC analysis focused upon roadways; refer to the *Future Buildout With Project Roadway Segment Level of Service - General Plan Study Area* Section above.

As concluded above, development of vacant land currently designated for residential uses in accordance with the General Plan was considered in the GPEIR and SOC Report analyses, since these assumed additional development within the area consistent with the Land Use Plan, and the project's impacts upon intersection LOS are a factor of the anticipated development's forecast traffic volumes, which are based upon the development permitted by the Land Use Plan. Project implementation would be consistent with the analyses presented in the GPEIR and SOC Report, and would result in no greater impacts to intersection LOS than previously identified.

Compliance with General Plan goals and policies would reduce potential impacts to intersections to a less than significant level. Due to the conceptual nature of the future residential development, proposals could require individual assessments of potential impacts to traffic and circulation. If necessary, additional mitigation would be recommended to further minimize potential impacts. Further, pursuant to Municipal Code Section 3.40.020, future residential development would be required to mitigate the impacts of development on the City's transportation system or to pay a traffic impact fee that would be used to mitigate the impacts by constructing transportation facilities pursuant to the most current transportation facilities plan. Thus, impacts to intersections would be less than significant in this regard.

Rezoned Land – Traffic Impact Analysis Study Area

Table 5.2-17, *Forecast Year 2040 With Rezone Project Conditions AM/PM Peak Hour Intersection LOS*, summarizes forecast year 2040 with rezone project conditions a.m. peak hour and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-17
Forecast Year 2040 With Rezone Project Conditions
AM/PM Peak Hour Intersection LOS

Study Intersection	Forecast Year 2040 Without Project Conditions		Forecast Year 2040 With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
1. SB SR-14 Ramps/Palmdale Boulevard (SR-138)	8.2 – A	12.6 – B	8.6 – A	16.0 – B	No
2. NB SR-14 Ramps/Palmdale Boulevard (SR-138)	5.7 – A	12.4 – B	4.6 – A	33.5 – C	No
3. Division Street/Palmdale Boulevard (SR-138)	23.8 – C	25.3 – C	24.1 – C	29.7 – C	No
4. 5th Street East/Palmdale Boulevard (SR-138)	24.7 – C	28.0 – C	**35.9 – D**	**99.6 – F**	Yes
5. 6th Street East/Palmdale Boulevard (SR-138)	16.4 – B	18.4 – B	16.1 – B	21.2 – C	No
6. Sierra Highway/Palmdale Boulevard (SR-138)	25.6 – C	27.0 – C	26.8 – C	39.3 – D	No
7. 9th Street East/Palmdale Boulevard (SR-138)	7.6 – A	14.0 – B	8.7 – A	15.6 – B	No
8. 10th Street East/Palmdale Boulevard (SR-138)	17.6 – B	18.0 – B	25.5 – C	30.6 – C	No
9. 11th Street East/Palmdale Boulevard (SR-138)	30.9 – D	107.2 – F	OVRFL – F	OVRFL – F	Yes
10. 12th Street East/Palmdale Boulevard (SR-138)	31.3 – D	383.9 – F	OVRFL – F	OVRFL – F	Yes
11. 15th Street East/Palmdale Boulevard (SR-138)	35.8 – E	OVRFL – F	OVRFL – F	OVRFL – F	Yes

Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.

As indicated in Table 5.2-17, with the addition of rezone project-generated trips, the following four study intersections are forecast to operate at a deficient LOS (LOS D or worse) according to Caltrans performance criteria for forecast year 2040 with rezone project conditions:

- 5th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours);
- 11th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours);
- 12th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours); and
- 15th Street East/Palmdale Boulevard (SR-138) (both a.m. and p.m. peak hours).

As also shown in Table 5.2-17, based on Caltrans thresholds of significance, the addition of rezone project-generated trips is forecast to result in a significant impact at the following four study intersections for forecast existing with rezone project conditions:

- 5th Street East/Palmdale Boulevard (SR-138) ;
- 11th Street East/Palmdale Boulevard (SR-138);
- 12th Street East/Palmdale Boulevard (SR-138); and
- 15th Street East/Palmdale Boulevard (SR-138).

Recommended Improvements/Measures

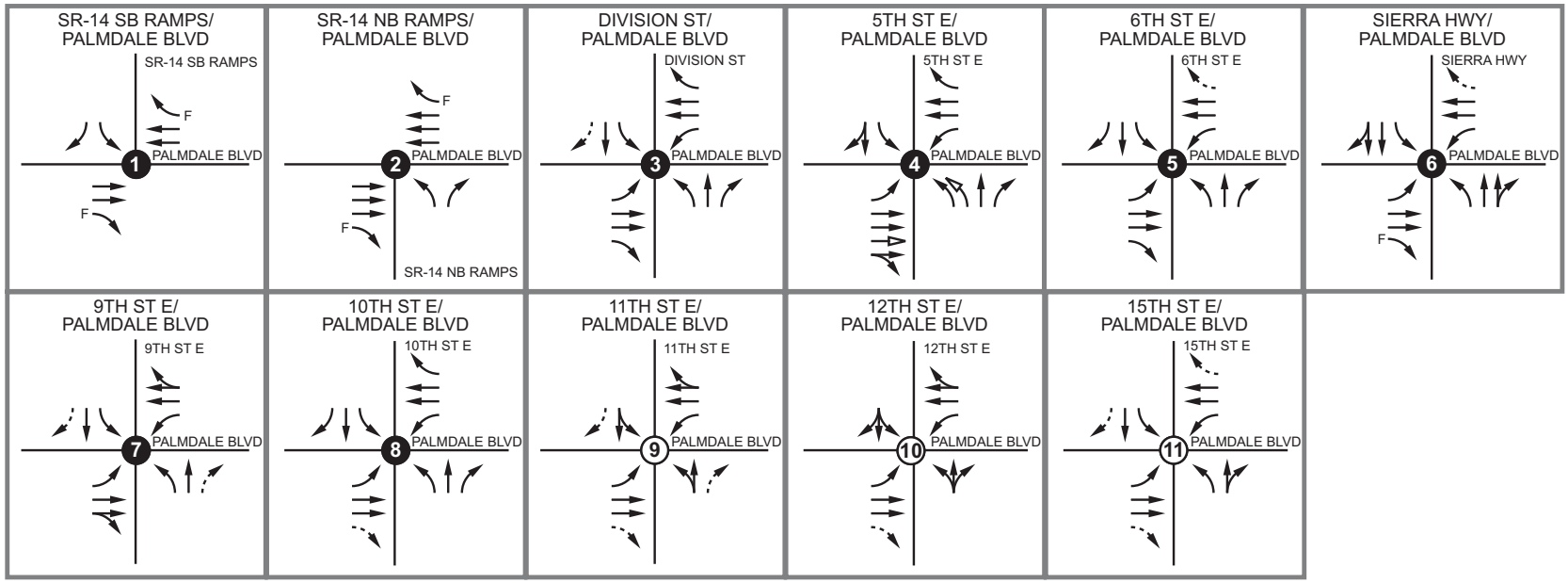
Measures have been identified to address significant impacts to provide acceptable operations at the study intersections (and roadway segments). Projects not already included in a fee program with financing and scheduling identified would require project and funding approvals to incorporate in City planning the improvement implementation. The measures outlined above (*Future Buildout With Project Roadway Segment Level of Service - Rezoned Land – Traffic Impact Analysis Study Area* Section) are identified to reduce significant traffic impacts at the deficient intersections (and roadway segments) for forecast year 2040 with rezone project conditions. It is noted that some of the recommended improvements/measures overlap with each other and may provide increased roadway or intersection capacity which is required at a minimum to achieve the desired LOS. Exhibit 5.2-7, *Mitigated Forecast Year 2040 With Project Study Intersection Geometry*, shows mitigated forecast year 2040 with rezone project conditions study intersection geometry.

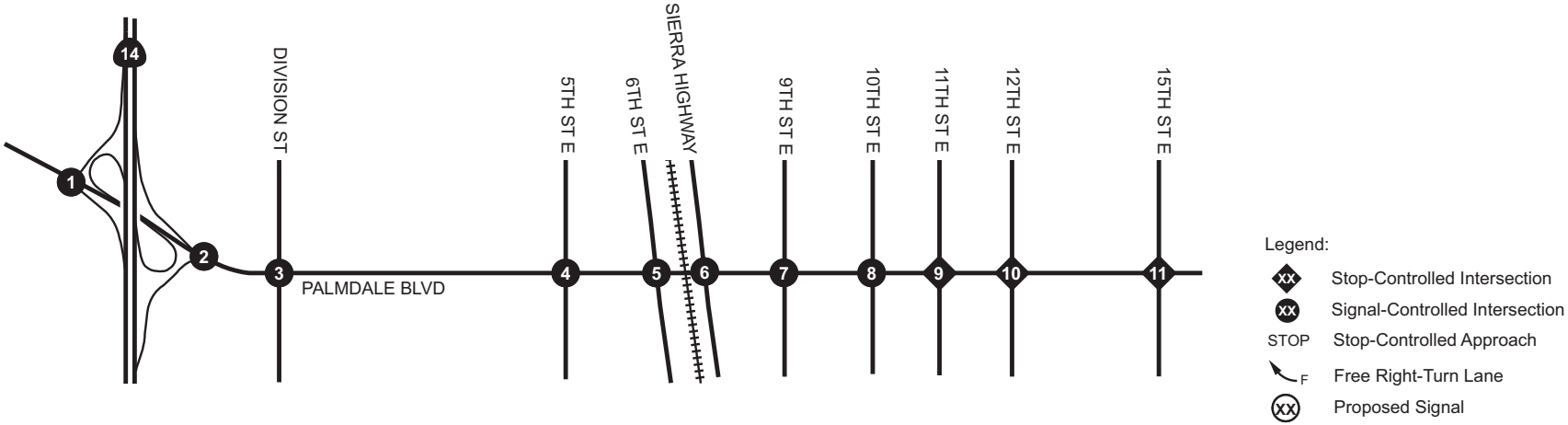
Mitigated Forecast Year 2040 With Rezone Project Conditions Study Intersection LOS

Table 5.2-18, *Mitigated Forecast Year 2040 With Rezone Project Conditions AM and PM Peak Hour Intersection LOS*, summarizes mitigated forecast year 2040 with rezone project conditions a.m. peak hour and p.m. peak hour LOS at affected study intersections assuming implementation of the feasible improvements/measures; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-18
Mitigated Forecast Year 2040 With Rezone Project Conditions
AM/PM Peak Hour Intersection LOS

Study Intersection	Forecast Year 2040 Without Project Conditions		Mitigated Forecast Year 2040 With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
4. 5th Street East/Palmdale Boulevard (SR-138)	13.0 – B	10.2 – B	28.3 – C	38.7 – D	Yes
9. 11th Street East/Palmdale Boulevard (SR-138)	8.0 – A	14.4 – B	14.4 – B	9.9 – A	No
10. 12th Street East/Palmdale Boulevard (SR-138)	17.1 – B	17.3 – B	17.8 – B	15.6 – B	No
11. 15th Street East/Palmdale Boulevard (SR-138)	28.7 – D	**89.6 – F**	16.0 – B	17.0 – B	No
Note: Delay shown in seconds; **bold** indicates a deficient intersection; SB = Southbound; NB = Northbound.					





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Mitigated Forecast Year 2040 With Project Study Intersection Geometry

Exhibit 5.2-7

As indicated in Table 5.2-18, assuming implementation of the feasible intersection improvements/measures, no significant impacts are forecast at the study intersections according to City of Palmdale and Caltrans performance criteria for mitigated forecast year 2040 with rezone project conditions with the exception of the following study intersection:

- 5th Street East/Palmdale Boulevard (SR-138).

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies: C1.1.3, C1.1.4, C1.1.5, C1.1.7, C1.1.8, C.1.1.9, C1.2.1, C1.2.2, C1.2.3, C1.2.4, C1.3.1, C1.4.1, C1.4.2, C1.4.3, C1.4.5, C1.4.6, C1.5.2, C1.8.1, C1.8.2, C2.1.1, C2.1.2, C2.1.3, C2.1.4, C2.1.5, C2.1.6, C2.2.1, C2.2.2, C2.2.3, C2.2.4, C2.2.5, C2.2.6, C3.1.1, C3.1.2, C3.1.3, C3.1.4, C3.1.5, C4.2.2, PRT5.1.1, PRT5.1.2, PRT5.1.3, PRT5.1.4, PRT5.1.6, PRT5.1.7, PRT5.2.1, PRT5.2.2, PRT5.3.2, and CD 10.7.7 is required.

Rezone Project Mitigation Measures:

TR-12 Implement Project-Specific Transportation Demand Management Program – As development occurs within the rezone project area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Palmdale Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc. (Same as Mitigation Measure TR-1).

TR-13 10th Street East between Avenue Q and Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe 10th Street East between Avenue Q and Palmdale Boulevard (SR-138) from a 2-lane road to a 4-lane roadway. While most of the roadway is a 4-lane divided roadway, a portion near Palmdale Boulevard currently only provides one northbound lane.

TR-14 Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to restripe Palmdale Boulevard (SR-138) between 10th Street East and 15th Street East from a four-lane road to a six-lane road. (Same as Mitigation Measure TR-4).

TR-15 11th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 11th Street East/Palmdale Boulevard (SR-138)

intersection. If avoidance of an additional traffic signal is desire, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection.

TR-16 12th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 12th Street East/Palmdale Boulevard (SR-138) intersection. If avoidance of an additional traffic signal is desired, implement alternative solutions which provide acceptable traffic operations in lieu of signalizing the study intersection. (Same as Mitigation Measure TR-8).

TR-17 15th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to signalize the 15th Street East/Palmdale Boulevard (SR-138) intersection. (Same as Mitigation Measure TR-9).

TR-18 Palmdale Boulevard (SR-138) between Division Street and 5th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-19 Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent.

TR-20 Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, consistent with the City of Palmdale Circulation Element, future development projects within the rezone project area shall make a fair share contribution to widen/restripe Palmdale Boulevard (SR-138) between Sierra Highway and 10th Street East from a four-lane road to a six-lane road. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate.

TR-21 5th Street East/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-12 to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. Additionally, future development projects within the rezone project area shall make a fair share contribution to widen the northbound 5th Street East approach from one left-turn lane, one through lane, and one right-turn lane to consist of two left-turn lanes, one through lane, and one right-turn lane. The City shall implement protected traffic signal phasing for north-south movements.

Level of Significance: Significant and unavoidable impacts for the following roadway segments and intersection:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;

- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

EXISTING WITH PROJECT CONDITIONS AT CMP FACILITIES

- **PROJECT IMPLEMENTATION WOULD NOT CAUSE A SIGNIFICANT INCREASE IN TRAFFIC AT A CMP FACILITY UNDER EXISTING WITH PROJECT CONDITIONS, WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE CMP FACILITY.**

Impact Analysis:

RESIDENTIALLY-ZONED LAND – GENERAL PLAN STUDY AREA

As concluded above, development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area, which would increase existing traffic volumes in the vicinity of the respective sites during a.m. and p.m. peak hour periods. These increases in traffic volumes could aggravate existing deficiencies and/or cause the CMP-monitored facilities within the General Plan study area, as identified above, to operate at an unacceptable LOS. The impacts would be dependent upon the specific site locations, intensity of development, and trip distribution characteristics. Due to the conceptual nature of the future residential development, proposals could require individual assessments of potential impacts to CMP facilities, if the proposed projects meet the evaluation criteria established by the CMP. Compliance with General Plan goals and policies, as well as Municipal Code Section 3.40.020, would reduce potential impacts to CMP facilities to a less than significant level.

REZONED LAND – TRAFFIC IMPACT ANALYSIS STUDY AREA

The proposed rezone project would not meet the evaluation criteria for roadways established by the CMP. Therefore, no CMP roadways would be impacted by the rezone project under existing with rezone project conditions.

Table 5.2-19, *Forecast Existing With Rezone Project Conditions AM/PM Peak Hour CMP Intersection LOS*, summarizes forecast existing with rezone project conditions a.m. peak hour and p.m. peak hour LOS of the CMP study intersection; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-19
Forecast Existing With Rezone Project Conditions
AM/PM Peak Hour CMP Intersection LOS

Study Intersection	Existing Conditions		Forecast Existing With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS	
6. Sierra Highway/Palmdale Boulevard (SR-138)	0.43 – A	0.59 – A	0.88 – D	1.03 – F	Yes
Note: V/C = volume to capacity ratio; delay shown in seconds; **bold** indicates a deficient intersection.					

As indicated in Table 5.2-19, based on the CMP threshold of significance, the addition of rezone project-generated trips is forecast to result in a significant impact at the CMP study intersection for forecast existing with rezone project conditions.

Recommended Improvement/Measure

The following measure is identified to reduce the significant impact at the CMP-monitored study intersection for forecast existing with rezone project conditions:

- *Sierra Highway/Palmdale Boulevard (SR-138)* – Implement a Project-Specific Transportation Demand Management Program to reduce daily and peak hour traffic generation by approximately minimum of ten (10) percent. Widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. Widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. (Same as recommendation for existing with project conditions).

Mitigated Forecast Existing With Rezone Project Conditions CMP Intersection LOS

Table 5.2-20, *Mitigated Forecast Existing With Rezone Project Conditions AM/PM Peak Hour CMP Intersection LOS*, summarizes mitigated forecast existing with rezone project conditions a.m. peak hour and p.m. peak hour LOS of the CMP study intersection; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-20
Mitigated Forecast Existing With Rezone Project Conditions
AM/PM Peak Hour CMP Intersection LOS

Study Intersection	Existing Conditions		Forecast Existing With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS	
6. Sierra Highway/Palmdale Boulevard (SR-138)	0.43 – A	0.59 – A	0.74 – C	0.85 – D	No
Note: V/C = volume to capacity ratio; delay shown in seconds; **bold** indicates a deficient intersection.					

As indicated in Table 5.2-20, assuming implementation of the recommended improvement at the roadway segment, based on the CMP threshold of significance, the addition of rezone project-generated trips is forecast to result in no significant impacts at the CMP study intersection for forecast existing with rezone project conditions.

Refer to the *Conflict With Policies, Plans, or Programs* section below for a discussion of potential CMP transit impacts.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies C1.1.3, C1.1.4, C1.1.5, C1.1.7, C1.1.8, C.1.1.9, C1.2.1, C1.2.2, C1.2.3, C1.2.4, C1.3.1, C1.4.1, C1.4.2, C1.4.3, C1.4.5, C1.4.6, C1.5.2, C1.8.1, C1.8.2, C2.1.1, C2.1.2, C2.1.3, C2.1.4, C2.1.5, C2.1.6, C2.2.1, C2.2.2, C2.2.3, C2.2.4, C2.2.5, C2.2.6, C3.1.1, C3.1.2, C3.1.3, C3.1.4, C3.1.5, C4.2.2, PRT5.1.1, PRT5.1.2, PRT5.1.3, PRT5.1.4, PRT5.1.6, PRT5.1.7, PRT5.2.1, PRT5.2.2, PRT5.3.2, and CD 10.7.7 is required.

Project Mitigation Measures:

TR-22 Sierra Highway/Palmdale Boulevard (SR-138) – Implement Mitigation Measure TR-1 to reduce daily and peak hour traffic generation by approximately minimum of ten (10) percent. Future development projects within the rezone project area shall make a fair share contribution to widen the eastbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane and to widen the westbound Palmdale Boulevard (SR-138) approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. In order to support increased vehicular and rail traffic at the Palmdale Boulevard (SR-138)/Railroad crossing, preparation of a PSR is recommended to comprehensively review goals for the local circulation network and to determine if a roadway/railroad grade separation, widening, or other improvements are appropriate. (Same as Mitigation Measure TR-6).

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

FUTURE BUILDOUT WITH PROJECT CONDITIONS AT CMP FACILITIES

- **PROJECT IMPLEMENTATION WOULD NOT CAUSE A SIGNIFICANT INCREASE IN TRAFFIC AT A CMP FACILITY UNDER FUTURE WITH PROJECT CONDITIONS, WHEN COMPARED TO THE TRAFFIC CAPACITY OF THE CMP FACILITY.**

Impact Analysis:

Residentially-Zoned Land - General Plan Study Area

The GPEIR concluded nine roadways (14 segments) would operate at LOS D or worse under future buildout conditions, including Sierra Highway and Palmdale Boulevard, which are CMP facilities. The GPEIR concluded a significant and unavoidable impact would occur involving these roadway segments, despite implementation of a citywide TDM Program, the assumed improvements, and compliance with Circulation Element Policies. Intersection capacities in the new Circulation Plan at General Plan buildout were also analyzed in the GPEIR. Although, the increased capacity of the new Circulation Plan would improve overall intersection traffic operations at buildout, the GPEIR anticipated that some intersections would operate beyond LOS D, including Sierra Highway/SR-138, which is a CMP facility. The Circulation Element

further concluded unacceptable levels of congestion are likely to occur without further specific capacity improvements at intersections or reduction of traffic demand through aggressive local TDM measures. As indicated in SOC Report Table 6.0-6, eight roadways (24 segments) within the General Plan study area would operate at LOS D or worse at General Plan buildout, including Sierra Highway and Palmdale Boulevard, which are CMP facilities.

Development of the current residentially-zoned land is forecast to generate approximately 26,662 new daily trips within the General Plan study area, which would increase future traffic volumes in the vicinity of the respective sites during a.m. and p.m. peak hour periods. These increases in traffic volumes could aggravate future buildout deficiencies and/or cause the CMP-monitored roadways located within the General Plan study area to operate at an unacceptable LOS.

However, development of vacant land currently designated for residential uses in accordance with the General Plan was considered in the GPEIR and SOC Report analyses, since these assumed additional development within the area consistent with the Land Use Plan, and the project's impacts upon roadway segments and intersection LOS are a factor of the anticipated development's forecast traffic volumes. Project implementation would be consistent with the analyses presented in the GPEIR and SOC Report, and would result in no greater impacts to CMP facilities than previously identified. The impacts would be dependent upon the specific site locations, intensity of development, and trip distribution characteristics. Due to the conceptual nature of the future residential development, proposals could require individual assessments of potential impacts to CMP facilities, if the proposed projects meet the evaluation criteria established by the CMP. Compliance with General Plan goals and policies, as well as Municipal Code Section 3.40.020, would reduce potential impacts to CMP facilities to a less than significant level.

Rezoned Land – Traffic Impact Analysis Study Area

The proposed rezone project would not meet the evaluation criteria for roadways established by the CMP. Therefore, no CMP roadways would be impacted by the rezone project under future with rezone project conditions.

Table 5.2-21, *Forecast Year 2040 With Rezone Project Conditions AM/PM Peak Hour CMP Intersection LOS*, summarizes forecast year 2040 with rezone project conditions a.m. peak hour and p.m. peak hour LOS of the CMP study intersection; detailed LOS analysis sheets are contained in Appendix C.

Table 5.2-21
Forecast Year 2040 With Rezone Project Conditions
AM/PM Peak Hour CMP Intersection LOS

Study Intersection	Forecast Year 2040 Without Project Conditions		Forecast Year 2040 With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	V/C – LOS	V/C – LOS	V/C – LOS	V/C – LOS	
6. Sierra Highway/Palmdale Boulevard (SR-138)	0.45 – A	0.63 – B	0.69 – B	0.92 – E	No
Note: V/C = volume to capacity ratio; delay shown in seconds; **bold** indicates a deficient intersection.					

As indicated in Table 5.2-21, based on the CMP threshold of significance, the addition of rezone project-generated trips is forecast to result in no significant impact at the CMP study intersection for forecast year 2040 with rezone project conditions.

Refer to the *Conflict With Policies, Plans, or Programs* section below for a discussion of potential CMP transit impacts.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies C1.1.3, C1.1.4, C1.1.5, C1.1.7, C1.1.8, C.1.1.9, C1.2.1, C1.2.2, C1.2.3, C1.2.4, C1.3.1, C1.4.1, C1.4.2, C1.4.3, C1.4.5, C1.4.6, C1.5.2, C1.8.1, C1.8.2, C2.1.1, C2.1.2, C2.1.3, C2.1.4, C2.1.5, C2.1.6, C2.2.1, C2.2.2, C2.2.3, C2.2.4, C2.2.5, C2.2.6, C3.1.1, C3.1.2, C3.1.3, C3.1.4, C3.1.5, C4.2.2, PRT5.1.1, PRT5.1.2, PRT5.1.3, PRT5.1.4, PRT5.1.6, PRT5.1.7, PRT5.2.1, PRT5.2.2, PRT5.3.2, and CD 10.7.7.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

CONFLICT WITH POLICIES, PLANS, OR PROGRAMS

- **PROJECT IMPLEMENTATION WOULD NOT RESULT IN A DECREASE OF THE PERFORMANCE OR SAFETY OF PUBLIC TRANSIT, BICYCLE, OR PEDESTRIAN FACILITIES AS A RESULT OF A CONFLICT WITH ADOPTED POLICIES, PLANS, OR PROGRAMS.**

Impact Analysis:

BUS AND COMMUTER RAIL SERVICE

The City is served by local and regional bus service, as well as a Metrolink commuter rail line, as discussed above. Implementation of the proposed project is anticipated to result in a net increase of approximately 13,000 dwelling units, with a resultant population growth of approximately 46,368 persons. The increased population resulting from project implementation would increase the demand for mass transit in the vicinity of each future development site.

Residentially-Zoned Land – General Plan Study Area

Development of approximately 2,786 dwelling units on vacant land currently zoned for residential uses that is dispersed throughout the City is forecast to generate an estimated 26,662 daily trips, which includes 2,089 new a.m. peak hour trips and 2,814 new p.m. peak hour trips. In accordance with CMP guidelines, person trips can be estimated using a 1.4 factor to convert total vehicle trips to person trips, which results in a total of approximately 2,925 a.m. peak hour person trips, approximately 3,940 p.m. peak hour person trips, and approximately 37,327 daily person trips generated by the project.

Based on CMP guidelines for determining trips assigned to transit, the following factor applicable to the proposed project is utilized:

- 3.5 percent of Total Person Trips Generated.

Table 5.2-22, *CMP Transit Trip Generation – Residentially Zoned Land*, shows the calculation of transit trips potentially generated from development of the currently residentially-zoned land, utilizing CMP guidelines.

Table 5.2-22
CMP Transit Trip Generation – Residentially-Zoned Land

CMP Transit Review	AM Peak Hour Trips	PM Peak Hour Trips	Daily Trips
Trip Generation of Proposed Project (Vehicles)	2,089	2,925	26,662
Person Trips Conversion Factor	1.4	1.4	1.4
Person Trips of Proposed Project	2,925	3,940	37,327
3.5% Transit Trips Conversion Factor	3.5%	3.5%	3.5%
Total Transit Trips of Proposed Project	102	138	1,306

As indicated in Table 5.2-22, based on the CMP guidelines, and the proximity of land uses in relation to available transit within the City, the additional 2,786 dwelling units is forecast to generate approximately 102 a.m. peak hour transit trips, approximately 296 p.m. peak hour transit trips, and approximately 3,191 daily transit trips.

Rezoned Land – Traffic Impact Analysis Study Area

The proposed rezone project is forecast to generate approximately 65,131 net new daily trips, which includes 4,997 net new a.m. peak hour trips and 6,052 net new p.m. peak hour trips. These trips result in a total of approximately 6,996 a.m. peak hour person trips, approximately 8,473 p.m. peak hour person trips, and approximately 91,183 daily person trips generated by the project.

Based on CMP guidelines for determining trips assigned to transit, the following factor applicable to the proposed project it utilized:

- 3.5 percent of Total Person Trips Generated.

Table 5.2-23, *CMP Transit Trip Generation*, shows the calculation of transit trips potentially generated from the project, utilizing CMP guidelines.

Table 5.2-23
CMP Transit Trip Generation

CMP Transit Review	AM Peak Hour Trips	PM Peak Hour Trips	Daily Trips
Trip Generation of Proposed Project (Vehicles)	4,997	60,52	65,131
Person Trips Conversion Factor	1.4	1.4	1.4
Person Trips of Proposed Project	6,996	8,473	91,183
3.5% Transit Trips Conversion Factor	3.5%	3.5%	3.5%
Total Transit Trips of Proposed Project	245	296	3,191

As indicated in Table 5.2-23, based on the CMP guidelines, and the proximity of the various project land uses in relation to available transit in the project vicinity, the proposed project is forecast to generate approximately 245 a.m. peak hour transit trips, approximately 296 p.m. peak hour transit trips, and approximately 3,191 daily transit trips. While the increased transit trips within the area would likely be accommodated by current AVTA provided transit service, the following mitigation measure is recommended to support increased transit demands within the rezone project area.

Implement Transit System Improvements – During development review of projects within the rezone project area, project applicants shall coordinate with the local transit agency and the City to identify transit-supportive infrastructure and the potential to contribute to transit system improvements, such as increased fixed route service frequency or implementation of a shuttle system linking the project area with the Palmdale Transportation Center and other key nodes of activity within the area such as the Civic Center, parks, and schools. Timing and implementation of improvements and/or contributions shall be identified and verification provided to the City.

Overall, as demand for transit services and ridership increases, additional bus routes, expanded services, and associated improvements would be provided in response to those increased demands. Physical improvements along identified bus routes may include the construction of bus shelters and bus turnouts and installation of additional signage. Increased public transit usage would expand access by City residents to employment and other resources and related services available throughout the region. Similarly, expanded transit systems increase regional access to local employment, commercial, and recreational opportunities, and services available within the City. It is noted that future rail service is anticipated to include the California High Speed Rail, a north-south rail line with initial linkage between the City of Burbank and the City of Merced (initial route under consideration). Additionally, future rail is anticipated to include the high speed DesertXpress connecting Las Vegas, Nevada to the City of Victorville, with a feeder line to the City of Palmdale. Increased use of public transit systems reduce dependency on private automobiles and have the potential to reduce congestion and mobile source emissions, producing both localized and regional benefits. Additionally, future residential development could temporarily interrupt service at existing bus stops, because relocation of the existing facilities may be required. The degree of impacts to transit facilities would be dependent upon the location and nature of the proposed residential development. New residential development projects would undergo environmental review pursuant to CEQA Guidelines on a project-by-project basis.

Additionally, it is the City's goal to reduce the number of trips and vehicle miles traveled by individuals within the Palmdale area, to meet regional transportation and air quality goals (Circulation Element Goal 2). To this end, the City proposes to "encourage development and implementation of a variety of measures to reduce trips and vehicle miles traveled by existing and future residents and workers within the Planning Area" (Objective C2.1). Such trip reduction measures address the availability of adequate bus and commuter rail service. Accordingly, the City has identified General Plan Polices, as outlined below, in order to meet the specified goals/objectives. All future residential development within the City would be required to comply with the GPEIR Policies outlined below, which would ensure conflicts with the Circulation Element's goals and policies involving bus and commuter rail service would not occur. Therefore, less than significant impacts would occur in this regard.

BICYCLE/PEDESTRIAN FACILITIES

As illustrated on Exhibit 5.2-3 and discussed above, existing and planned bikeways located throughout the City, including within Traffic Impact Analysis study area. The City's Circulation Element does not identify specific measures of effectiveness for the performance of the City's pedestrian/bicycle paths. Future Residential development according to the Housing Element would result in temporary disruptions to or increased usage of existing and proposed bicycle and pedestrian facilities. The degree of impacts to bicycle and pedestrian facilities would be dependent upon the location and nature of the proposed residential development. New residential development projects would undergo environmental review pursuant to CEQA Guidelines on a project-by-project basis.

However, all future roadway improvements would be implemented according to the City's adopted standards for typical street sections, as illustrated on General Plan Exhibit C-1 and Table C-1, and adopted Bikeways Plan. The streets would be designed as "complete streets," accommodating pedestrians, bicyclists, and motorists. Trail identification signs would be placed at street crossings and at locations determined necessary for the trail designation. Hazard signs would be placed wherever there is a potentially significant safety hazard to bicyclists. Additionally, consistent with Circulation Element Goal 3, the City would continue to encourage use of non-vehicular transportation such as bicycle facilities throughout the project area. To this end, the City would promote bicycle accessibility to all public facilities, including parks, schools, and centers of civic activity, to include secure bicycle storage areas (Policy C3.1.3). The City would also require residential subdivision designs to accommodate convenient bicycle access, both on- and off-site (Policy C3.1.4). Therefore, project implementation would result in less than significant impacts to existing and planned bicycle facilities.

Additionally, it is the City's goal to reduce the number of trips and vehicle miles traveled by individuals within the Planning Area, to meet regional transportation and air quality goals (Circulation Element Goal 2). To this end, the City proposes to encourage development and implementation of a variety of measures to reduce trips and vehicle miles traveled by existing and future residents and workers within the Planning Area (Objective C2.1). Such trip reduction measures address the availability of adequate bicycle trails. Accordingly, the City has identified the policies outlined below, in order to meet the specified goals/objectives. The City would require that provisions be made for bikeways in the site design, in accordance with the City's adopted bikeway plan (Policy CD 10.4.9). All future development and infrastructure/ transportation improvements within the project area would be required to comply with the General Plan Policies outlined below, which would ensure conflicts with the General Plan's goals and policies involving bicycle facilities would not occur. Therefore, Project implementation would not have a substantial adverse effect on bicycle and pedestrian facilities.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies C2.1.1, C2.1.2, C2.1.3, C2.1.6, C2.2.1, C2.2.2, C2.2.3, C2.2.4, C2.2.5, C3.1.2, C3.1.4, C3.1.5, C4.2.2, PRT1.6.1, 5.1.1, 5.1.2, 5.1.3, 5.1.4, 5.1.6, 5.1.7, 5.2.1, 5.2.2, 5.3.2, CD 10.7.7, and the following:

Policy PRT5.3.1: Bikeway safety shall be a primary consideration in the City's planning and design of the bikeway plan.

Policy PRT5.3.3: Establish maintenance levels and schedules for bicycle facilities, and implement on-going maintenance.

Policy PRT5.3.4: Locate and design bikeway facilities to promote safety through the avoidance of visually obstructive elements and the requirement of lighting, where appropriate.

Policy PRT5.3.5: Where feasible, bikeways should be physically separated from traffic lanes by landscaped areas, grade changes, or physical barriers to enhance bicyclist safety.

Policy CD 10.4.9: Provisions for bikeways should be made in the site design, in accordance with the City's adopted bikeway plan.

Rezone Project Mitigation Measures:

TR-23 Implement Transit System Improvements – As development occurs within the Traffic Impact Analysis study area, project applicants shall coordinate with the local transit agency and the City to identify transit-supportive infrastructure and the potential to contribute to transit system improvements, such as increased fixed route service frequency or implementation of a shuttle system linking the project area with the Palmdale Transportation Center and other key nodes of activity within the area such as the Civic Center, parks, and schools. Timing and implementation of improvements and/or contributions shall be identified and verification provided to the City.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

5.2.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT WOULD RESULT IN CUMULATIVELY CONSIDERABLE TRANSPORTATION AND CIRCULATION IMPACTS.**

Impact Analysis:

CUMULATIVE ROADWAY AND INTERSECTION OPERATIONS

As indicated in SOC Report Table 6.0-6, eight roadways (24 segments) within the General Plan study area would operate at LOS D or worse at General Plan buildout. Intersection capacities were analyzed in the GPEIR (the SOC analysis focused upon roadways rather than intersections). The GPEIR anticipated that some intersections would operate beyond LOS D under buildout conditions. Development of vacant land currently designated for residential uses in accordance with the General Plan was considered in the SOC Report and GPEIR analyses, since these assumed additional development within the City consistent with the Land Use Plan, and the project's impacts upon roadway and intersection LOS are a factor of the anticipated development's forecast traffic volumes. Project implementation would be consistent with the

analyses presented in the SOC Report and GPEIR, and would result in no greater impacts to roadways or intersections than previously identified.

As indicated in Table 5.2-15, with the addition of rezone project-generated trips, five roadway segments are forecast to operate at a deficient LOS according to City of Palmdale and Caltrans performance criteria for forecast year 2040 with rezone project conditions. As indicated in Table 5.2-17, with the addition of rezone project-generated trips, four study intersections are forecast to operate at a deficient LOS according to Caltrans performance criteria for forecast year 2040 with rezone project conditions. Assuming implementation of the feasible mitigation measures, no significant impacts are forecast at the study roadways or intersections according to City of Palmdale and Caltrans performance criteria for mitigated forecast year 2040 with rezone project conditions, with the exception of the following three roadway segments and one intersection; refer to Tables 5.2-16 and 5.2-18:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street and 6th Street;
- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

The increased traffic volumes resulting from development allowed by the Land Use Plan (i.e., residentially-zoned land) combined with the proposed rezone project could aggravate existing deficiencies and/or cause a roadway segment or intersection to operate at an unacceptable LOS. Such reductions in LOS could conflict with the City's established target for peak hour operations. The impacts would be dependent upon the specific site locations, intensity of development, and trip distribution characteristics. All future development within the City would be analyzed on a project-by-project basis, in order to determine whether preparation of an individual traffic impact assessment is warranted. If warranted, individual project-specific assessments of potential impacts to traffic and circulation would be conducted. If necessary, additional mitigation would be recommended to further minimize potential impacts. Compliance with General Plan Policies would also be required, in order to reduce potential impacts to roadways and intersections to less than significant levels. Further, pursuant to Municipal Code Section 3.40.020, future development would be required to mitigate the impacts of development on the City's transportation system or to pay a traffic impact fee, reducing cumulative impacts to roadway and intersection LOS. However, cumulative impacts associated with implementation of the proposed project within the rezone project area would be significant and unavoidable.

CUMULATIVE TRANSIT AND BICYCLE FACILITIES

Buildout of the City in accordance with the General Plan and combined with the rezone project would not significantly impact existing transit and bicycle facilities. Although ridership and use of the facilities are anticipated to increase with cumulative development, the increased demands would be accommodated commensurate with the increased residential densities and non-residential intensities anticipated by the General Plan. Impacts would be less than significant in this regard.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: Refer to Mitigation Measures TR-1 through TR-23.

Level of Significance: Significant and unavoidable impacts for the following roadway segments and intersection:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;
- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

5.2.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in the following significant unavoidable operational traffic impacts associated with implementation of the proposed project:

Existing With Project Conditions:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

Future Buildout With Project and Cumulative With Project Conditions:

- Palmdale Boulevard (SR-138) between Division Street and 5th Street East;
- Palmdale Boulevard (SR-138) between 5th Street East and 6th Street East;
- Palmdale Boulevard (SR-138) between 6th Street East and 10th Street East; and
- 5th Street East/Palmdale Boulevard (SR-138).

If the City of Palmdale approves the proposed Housing Element, the City shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

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5.3 Air Quality

5.3 AIR QUALITY

This section addresses the air emissions generated by the proposed project, and the potential impacts to air quality. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the Antelope Valley Air Quality Management District's (AVAQMD) *2004 Ozone Attainment Plan*. The analysis of air emissions focuses on whether the proposed project would cause an exceedance of an ambient air quality standard or AVAQMD significance threshold. Air quality technical data is included as Appendix D, Air Quality/ Greenhouse Gas Emissions Data.

5.3.1 EXISTING SETTING

MOJAVE DESERT AIR BASIN

The State of California is divided geographically into 15 different air basins. The City of Palmdale is located within the Mojave Desert Air Basin (MDAB), which includes the desert portions of Los Angeles and San Bernardino Counties, the eastern desert portion of Kern County, and the northeastern desert portion of Riverside County. The MDAB primarily contains pollutants from other air basins, dust raised by construction, travel on unpaved roads, and paved roads with silty debris.

The MDAB consists of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains throughout the MDAB rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These winds result from the proximity of the MDAB to the coastal and central regions of the State and the Sierra Nevada Mountains to the north. Additionally, air masses are pushed onshore in southern California by differential heating and are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California Valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered to the northwest by the Tehachapi Mountains, separated from the Sierra Nevada Mountains to the north by the Tehachapi Pass, and bordered to the south by the San Gabriel Mountains.

CLIMATE

During the summer a Pacific Subtropical High cell that is located off the coast inhibits cloud formation and encourages daytime solar heating in the MDAB. Desert moisture primarily arrives from infrequent warm, moist, and unstable air masses from the south. However, the Antelope Valley portion of the MDAB does not receive the extensive ocean breezes found in the South Coast Air Basin. Instead, an uplifting of wind masses occurs where warm moist air from Pacific Ocean storms is lifted upward by the San Gabriel Mountains and Sierra Palona. This uplifting creates heavier precipitation in the Los Angeles basin, and less precipitation with greater temperature variation throughout the year in the MDAB.

Summers are relatively hot and winters are relatively cold in the desert. This is a low average rainfall, with occasional summer thunderstorms, with larger storms occurring from late fall to spring. Annual precipitation varies from four to nine inches. The temperature in Palmdale ranges from two to 117 degrees Fahrenheit (°F), with an average temperature of 62°F. Milder temperatures with occasional storms or thundershowers occur in spring and fall.

WIND

One of the most important climatic factors is the direction and intensity of the prevailing winds. Winds in Palmdale occur from the west, west-southwest, and southwest. Although a portion of Palmdale's winds come from the Los Angeles basin, a significant amount is due to the phenomenon known as the "orographic effect." The air is forced over the mountain range, losing moisture as it rises and compressing and heating up when it descends. The speed of the wind is aided by the "desert heat lows" that routinely form over the eastern Mojave Desert area. During the fall, the regional wind pattern reverses, causing warm, dry air to blow into the Los Angeles basin from the desert. These "Santa Ana" winds are usually light and variable in the desert areas; however, they cause severe damage after they accelerate through the mountain passes and enter the coastal basins. These winds occur along the San Bernardino and San Gabriel mountains in a southwesterly pattern into the Los Angeles basin.

Prevailing winds are usually sufficient to dissipate locally produced air pollution. However, these winds often transport air pollutants from the Los Angeles basin and San Joaquin Valley into the desert basin.

PHOTOCHEMICAL SMOG

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of southern California.

TEMPERATURE INVERSIONS

The southern California region often experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. When the inversion layer is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over mountain slopes or passes. At a height of 1,200 feet, the inversion concentrates pollutants into a shallow layer. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight.

MONITORED AIR QUALITY LEVELS

The monitoring stations in the State are operated by the California Air Resources Board (CARB), local Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD), by private contractors, and by the National Park Service (NPS). These entities operate more than 250 air monitoring stations in California. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The Lancaster – Division Street

Monitoring Station is the air monitoring station located nearest the City of Palmdale. Air quality data from 2008 to 2010 for the Lancaster – Division Street Monitoring Station is provided in Table 5.3-1, *Local Air Quality Levels*. The following air quality information briefly describes the various types of pollutants monitored at the local stations.

Table 5.3-1
Local Air Quality Levels

Pollutant	Primary Standard		Year	Maximum[1] Concentration	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO) [2] (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2008 2009 2010	2.20 ppm 1.80 1.80	0/0 0/0 0/0
Carbon Monoxide (CO) [2] (8-Hour)	9 ppm for 8 hours	9 ppm for 8 hours	2008 2009 2010	1.04 ppm 1.00 1.23	0/0 0/0 0/0
Ozone (O_3) (1-Hour) [2]	0.09 ppm for 1 hour	NA[4]	2008 2009 2010	0.116 ppm 0.122 0.107	18/0 22/0 11/0
Ozone (O_3) (8-Hour) [2]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2008 2009 2010	0.103 ppm 0.102 0.096	59/34 70/44 78/45
Nitrogen Dioxide (NO_2) [2]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2008 2009 2010	0.062 ppm 0.065 0.056	0/NA 0/NA 0/NA
Particulate Matter (PM_{10}) [2,4,5]	50 μg/m^3 for 24 hours	150 μg/m^3 for 24 hours	2008 2009 2010	152.7 μg/m^3 199.0 829.0	1/0 1/1 1/0
Fine Particulate Matter ($PM_{2.5}$) [2,5]	No Separate State Standard	35 μg/m^3 for 24 hours	2007 2008 2009	24.0 μg/m^3 20.0 15.0	NM/0 NM/0 NM/0

ppm = parts per million
μg/m^3 = micrograms per cubic meter
NM = Not Measured
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
NA = Not Applicable

Notes:
1 – Maximum concentration is measured over the same period as the California Standard.
2 – Measurements taken at the Lancaster – Division Street Monitoring Station (located at 43301 Division Street, Lancaster, California).
3 – The United States Environmental Protection Agency revoked the Federal 1-hour Standard in June of 2005.
4 – PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5 – PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source: California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Air Quality Data Statistics*, http://www.arb.ca.gov/adam/welcome.html, accessed on April 9, 2012.

Ozone. Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_X) and sunlight to form; therefore, VOCs and NO_X are ozone precursors. VOCs and NO_X are emitted from various sources throughout the City. Significant O_3 formation generally requires an adequate amount of precursors in the

atmosphere and several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. O_3 also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some man-made materials (such as rubber, paint and plastics). Societal costs from O_3 damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

SOURCES OF AIR EMISSIONS

The City's greatest sources of emissions are mobile sources, consisting of motor vehicles, trains, and aircraft. Stationary sources include utilities, natural gas consumption, electricity generation, heating/cooling equipment, dry cleaning equipment, gasoline pumps, and restaurant equipment. Emissions are also generated from construction activities, including the transport of workers and equipment to construction sites, the operation of heavy equipment on the site, fugitive dust, and reactive organic compounds.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (or sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors located within the project area include several residences, places of worship, schools, libraries, and parks.

5.3.2 REGULATORY SETTING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for implementing the Federal Clean Air Act, which was first enacted in 1955 and was amended numerous times. The Federal Clean Air Act established Federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) (which is a form of nitrogen oxides [NO_X]), Sulfur Dioxide (SO_2) (which is a form of sulfur oxides [SO_X]), Particulate Matter (PM_{10}), Fine Particulate Matter ($PM_{2.5}$), and Lead (Pb); refer to Table 5.3-2, *National and California Ambient Air Quality Standards*.

Table 5.3-2
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	Nonattainment	NA[5]	NA[5]
	8 Hours	0.07 ppm (137 μg/m³)	Unclassified	0.075 ppm (147 μg/m³)	Nonattainment
Particulate Matter (PM_{10})	24 Hours	50 μg/m³	Nonattainment	150 μg/m³	Nonattainment
	Annual Arithmetic Mean	20 μg/m³	Nonattainment	NA[6]	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m³	Unclassified
	Annual Arithmetic Mean	12 μg/m³	Nonattainment	15 μg/m³	Nonattainment
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment
	8 Hours	9 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 μg/m³)	Attainment	0.100 ppm	NA
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	NA	0.053 ppm (100 μg/m³)	Attainment
Lead (Pb)	30 days average	1.5 μg/m³	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 μg/m³	Attainment
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 μg/m³)	Attainment	75 ppb	NA
	3 Hours	N/A	NA	N/A	Attainment
	24 Hours	0.04 ppm (105 μg/m³)	Attainment	0.14 ppm (365 μg/m³)	Attainment
	Annual Arithmetic Mean	N/A	NA	0.03 ppm (80 μg/m³)	Attainment
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m³)	Unclassified		

μg/m³ = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable.

Notes:

1 – California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} 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. In 1990, CARB identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.

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. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For $PM_{2.5}$, 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.

3 – Concentration is 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 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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

5 – The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas.

6 – The Environmental Protection Agency revoked the annual PM_{10} standard in 2006 (effective December 16, 2006).

Source: California Air Resources Board and United States Environmental Protection Agency, February 7, 2012.

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 5.3-2, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

STATE AIR TOXICS PROGRAM

Toxic air contaminants are another group of pollutants of concern in Southern California. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to toxic air contaminants can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the *Health and Safety Code* (*Health and Safety Code* Section 39660 et seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (Health and Safety Code Section 44300 et seq.). CARB, working in conjunction with the State Office of Environmental Health Hazard Assessment, identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air contaminant to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through use of best available control technology (BACT) for toxics. The program is administered by CARB. Air quality control agencies, including the AVAQMD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

ANTELOPE VALLEY AIR QUALITY MANAGEMENT DISTRICT

Air districts have the primary responsibility to control air pollution from all sources other than those directly emitted from motor vehicles, which are the responsibility of the CARB and the EPA. Air districts adopt and enforce rules and regulations to achieve State and Federal ambient air quality standards and enforce applicable State and Federal law.

Initially, the desert portion of Los Angeles County, within the MDAB, was under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). However, on July 1, 1997, this area was established as the Antelope Valley Air Pollution Control District (later known as the Antelope Valley Air Quality Management District [AVAQMD]). On January 1, 2002, the AVAQMD became a successor district to SCAQMD.

The AVAQMD was previously included by the SCAQMD in the SCAQMD 1994 Air Quality Management Plan (AQMP), as well as the 1997 AQMP revision. The AQMP set forth a comprehensive program that would lead the area into compliance with all Federal and State air quality standards. The AVAQMD adopted its own *2004 Ozone Attainment Plan* (April 20, 2004). The document demonstrates that the AVAQMD would meet the primary Federal and State ozone planning milestones, attainment of the ozone NAAQS and CAAQS, by the end of 2007.

The AVAQMD CEQA and Federal Conformity Guidelines establish thresholds for pollutant emissions generated both during and following construction. For purposes of this air quality analysis, actions that violate Federal standards for criteria pollutants (i.e., primary standards designed to safeguard the health of people considered to be sensitive receptors, and outdoor and secondary standards designed to safeguard human welfare) are considered significant impacts. Additionally, actions that violate State standards developed by the CARB or criteria developed by the AVAQMD, including thresholds for criteria pollutants, are considered significant impacts. Table 5.3-3, *Antelope Valley Air Quality Management District Emissions Thresholds*, provides the thresholds set forth by the AVAQMD.

Table 5.3-3
Antelope Valley Air Quality Management District Emissions Thresholds

Criteria Pollutant	Annual Threshold (Tons/year)	Daily Thresholds (lbs/day)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOCs)	25	137
Oxides of Sulfur (SO_X)	25	137
Particulate Matter (PM_{10})	15	82

Source: Antelope Valley Air Quality Management District, *California Environmental Quality Act and Federal Conformity Guidelines*, May 2008.

According to *AVAQMD California Environmental Quality Act and Federal Conformity Guidelines*, a project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable AVAQMD rules and regulations, complies with all proposed control measures that are not adopted from applicable plans, and is consistent with the growth forecasts in the applicable plan(s). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast (i.e., City of Palmdale General Plan).

In addition, the significance of localized project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and Federal CO standards. If the project causes an exceedance of either the State one-hour or eight-hour CO concentrations, the project would be considered to have a significant local impact. If ambient levels already exceed a State or Federal standard, then project emissions would be considered significant if they increase one-hour CO concentrations by 1.0 ppm or more, or eight-hour CO concentrations by 0.45 ppm or more. Refer to Table 5.3-4, *Federal and State Carbon Monoxide Standards*, for the applicable standards.

Table 5.3-4
Federal and State Carbon Monoxide Standards

Jurisdiction	Averaging Time	Carbon Monoxide (CO) Standard (parts per million)
Federal	1 Hour	35
	8 Hours	9
State	1 Hour	20
	8 Hours	9

Source: Antelope Valley Air Quality Management District, *California Environmental Quality Act and Federal Conformity Guidelines*, May 2008.

5.3.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to air quality. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people (refer to Section 8.0, Effects Fount Not To Be Significant).

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

5.3.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION AIR EMISSIONS

- **SHORT-TERM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD RESULT IN AIR POLLUTANT EMISSION IMPACTS OR EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.**

Impact Analysis: The proposed Housing Element anticipates new development of 16,039 new housing units and potential removal of 3,038 housing units and 71,630 s.f. of non-residential uses within the City, the construction of which would generate short-term air quality impacts from the following activities.

Fugitive Dust. Construction activities are a source of fugitive dust (PM_{10} and $PM_{2.5}$) emissions that may have a substantial, temporary impact on local air quality. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust (PM_{10}) poses a serious health hazard alone or in combination with other pollutants. Fine Particulate Matter ($PM_{2.5}$) is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. $PM_{2.5}$ components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Exhaust. Exhaust emissions would be generated by the operation of vehicles and equipment on future construction sites, such as tractors, dozers, scrapers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower CO and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_X, SO_X, and particulates per hour of activity. The transportation of equipment and materials to and from project sites, as well as construction workers traveling to and from the sites would also generate vehicle emissions during construction.

Grading/Hauling. Depending on the amount of over-excavation and re-compaction that may be necessary to create a suitable building pad, future housing development facilitated by the proposed project may require the import/export of fill material. Although these activities may create additional dust and PM_{10} and $PM_{2.5}$, as well as truck-related emissions, they would be mitigated to less than significant levels through implementation of standard dust control practices required as part of the grading permit (periodic site watering, covering laden trucks with tarps, and periodic street sweeping).

Asbestos. It is possible that asbestos-containing materials may be present within existing buildings that may be modified or demolished within the re-zone project area. Therefore, the possibility exists that asbestos fibers may be released into the air should no asbestos assessment or removal (if needed) take place prior to demolition. Standard practice would be to conduct an asbestos assessment for candidate buildings to determine the presence of asbestos. If identified, an asbestos abatement contractor would be retained to develop an abatement plan and remove the asbestos containing materials, in accordance with local, State,

and Federal requirements. After removal, demolition may proceed without significant concern to the release of asbestos fibers into the air.

Construction-related air quality impacts would be short-term and temporary, lasting only as long as the construction phase of each future development project. Nonetheless, construction impacts have the potential to violate Federal and State ambient air quality standards and may harm nearby sensitive receptors. It is assumed that some of the proposed housing developments could individually exceed the AVAQMD thresholds based on the magnitude of development. Adherence to AVAQMD Rule 401, Visible Emissions, and Rule 403, Fugitive Dust, would reduce fugitive dust emissions generated at future construction sites by requiring dust abatement measures (Mitigation Measure AQ-1). Implementation of Mitigation Measure AQ-2 would require all trucks hauling excavated or graded material to comply with State Vehicle Code Section 23114 regarding the prevention of such material spilling onto public streets. To reduce vehicle exhaust emissions during future construction activities, future development projects would be required to implement Mitigation Measure AQ-3. Implementation of Mitigation Measure AQ-4 would require future construction contractors to adhere to AVAQMD District Rule 1113 (Architectural Coatings) to limit volatile organic compounds from architectural coatings. Finally, Mitigation Measure AQ-5 would require all building demolition activities to adhere to AVAQMD District Rule 1403. Further, compliance with General Plan Policy ER5.2.1 would require measures to be taken at construction sites to prevent deposition of soil onto public rights-of-way. Additionally, erosion control and fugitive dust measures are required by General Plan Policy ER5.2.3 for new development (i.e., covering soil with straw mats, use of chemical soil and dust binders, and seeding and watering) immediately after grading. However, due to the unknown nature of future construction activities associated with implementation of the Housing Element, the potential exists that AVAQMD thresholds may be exceeded. Therefore, construction-related air quality impacts would be considered significant and unavoidable due to the potential magnitude of construction that could occur from implementation of the Housing Element.

Mitigation Programs:

General Plan Policies:

Policy ER5.2.1: Reduce dust from unpaved roads and parking lots by requiring paving or vegetative stabilization of the unpaved areas; require that measures be taken at construction sites to prevent deposition of soil onto public rights-of-way.

Policy ER5.2.3: Require erosion control measures on new development, including covering soil with straw mats or use of chemical soil and dust binders, followed by seeding and watering as soon as possible after grading to prevent fugitive dust.

Project Mitigation Measures:

AQ-1 During clearing, grading, earth-moving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified by the AVAQMD, including but not limited to AVAQMD Rule 401, Visible Emissions, and Rule 403 Fugitive Dust:

- On-site vehicle speed shall be limited to 15 miles per hour;
- All on-site construction roads with vehicle traffic shall be watered periodically;
- Streets adjacent to the Project's reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust;
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day;
- All clearing, grading, earth-moving, or excavation activities shall cease during periods of high winds (i.e., greater than 35 miles per hour averaged over one hour) so as to prevent excessive amounts of dust;
- All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust;
- The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and
- These control techniques shall be indicated on project grading plans. Compliance with this measure shall be subject to periodic site inspections by the City of Palmdale.

AQ-2 All trucks hauling excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4), as amended, regarding the prevention of such material spilling onto public streets.

AQ-3 During construction activities, excessive construction equipment and vehicle exhaust emissions shall be controlled by implementing the following procedures, as specified by the AVAQMD:

- Properly and routinely maintain all construction equipment, as recommended by manufacturer manuals, to control exhaust emissions;
- Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling engines;
- Encourage ride sharing and use of transit transportation for construction employee commuting to the project sites;
- Use electric equipment for construction whenever possible in lieu of fossil fuel-fired equipment; and

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak-hour of vehicular traffic on adjacent roadways.

AQ-4 The construction contractor shall adhere to AVAQMD District Rule 1113 (Architectural Coatings) to limit volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up and labeling requirements.

AQ-5 All building demolition activities shall adhere to AVAQMD District Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities) and Regulation X (National Emissions Standards for Hazardous Air Pollutants). Additionally, the demolished material shall be transported off-site expeditiously after demolition of the structure.

Level of Significance: Significant and Unavoidable Impact.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

- **POTENTIAL DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT IMPACTS PERTAINING TO OPERATIONAL AIR EMISSIONS.**

Impact Analysis:

MOBILE SOURCES

Mobile source emissions are emissions from vehicle trips that are generated by the operation of a project. Mobile source emissions include tailpipe and evaporative emissions. Implementation of the Housing Element would allow for the net development of approximately 13,000 dwelling units. The development of these dwelling units would generate long-term air emissions. Implementation of the proposed GPA 11-03, ZC 11-01, and SPA 11-01 may also result in the removal of 1,714 square feet of Veterans of Foreign Wars (VFW) hall, 30,000 square feet of recreation center, and 39,916 square feet of religious facilities.

Development of the approximately 13,000 dwelling units that could occur with project implementation is estimated to generate approximately 91,793 net average daily trips (ADT). The net project-related vehicle emissions associated with the 13,000 dwelling units have been estimated using the California Emissions Estimator Model (CalEEMod). This model predicts ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from motor vehicle traffic associated with new or modified land uses. Table 5.3-5, *Long-Term Operational Air Emissions*, presents the anticipated net mobile source emissions.

STATIONARY SOURCES

Development of the additional 13,000 housing units would generate increased area and energy source emissions. Stationary source emissions would be generated as a result of an increased demand for electrical energy and natural gas associated with implementation of the proposed project. This assumption is based on the supposition that those power plants supplying electricity to the site are utilizing fossil fuels. Electric power generating plants are distributed throughout the Basin and western United States, and their emissions contribute to the total

regional pollutant burden. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products, and landscaping. Table 5.3-5 presents the net area and energy source emissions that could result from the proposed project.

Table 5.3-5
Long-Term Operational Air Emissions

Source[2]	Estimated Annual Average Emissions (pounds/day)[1]				
	ROG	NO_X	CO	SO_X	PM_{10}
EXISTING/DISPLACED EMISSIONS					
Area Sources	1,709.17	31.63	2,630.09	2.25	345.65
Energy Sources	1.53	13.06	5.71	0.08	1.05
Mobile Sources	232.96	1,258.09	2,078.33	2.18	267.49
Total Existing Emissions	*1,943.66*	*1,302.78*	*4,714.13*	*4.51*	*614.19*
PROPOSED EMISSIONS					
Area Sources	9,046.37	165.70	13,826.07	11.88	1,825.07
Energy Sources	9.58	81.83	34.82	0.52	6.62
Mobile Sources	449.46	2,843.63	3,924.55	11.99	1,241.80
Total Proposed Emissions	*9,505.41*	*3,091.16*	*17,785.44*	*24.39*	*3,073.49*
Net Increase Over Existing/Displaced	*7,561.75*	*1,788.38*	*13,071.31*	*19.88*	*2,459.30*
AVAQMD Threshold	*137*	*137*	*548*	*137*	*82*
Is Threshold Exceeded? (Significant Impact)	Yes	Yes	Yes	No	Yes

Notes:
1 – Based on CalEEMod modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.

Refer to Appendix D, Air Quality/Greenhouse Gas Emissions Data, for assumptions used in this analysis.

As shown in Table 5.3-5, the net emissions generated by mobile, area, and energy sources associated with implementation of the Housing Element (allowing for approximately 13,000 residential dwelling units) would exceed established AVAQMD thresholds for ROG, NO_X, CO, and PM_{10}. Mobile source emissions would be reduced with implementation of Policy ER5.6.1 which ensure project-related vehicle miles traveled (VMT) are reduced. Policies C2.1.3 and C2.1.4, C2.2.1, C3.1.1, C3.1.2, C3.1.4, and Implementation Program ER-D would reduce VMT through a variety trip of reduction strategies. Policies ER5.4.1, ER5.5.1, and ER5.5.3, and Implementation Programs ER-X and ER-D address energy conservation and alternative energy. However, due to the magnitude of the increase in emissions as a result of implementation of the Housing Element, mobile source and stationary source emissions are considered to be significant.

LOCALIZED CO HOTSPOTS

Carbon monoxide (CO) emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels (i.e., adversely affect residents, school children, hospital patients, the elderly, etc.). To identify CO hotspots, the AVAQMD follows the SCAQMD criterion, which requires a CO microscale hotspot analysis when a project

increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service (LOS) D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations. However, projected intersection capacity/queuing analyses are unknown, as no specific development proposals have yet been formulated.

The City is located in the MDAB, which is designated as an attainment area for State and Federal CO standards. There has been a decline in CO emissions even though VMT on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed carbon monoxide analysis was conducted in the Federal Attainment Plan for Carbon Monoxide (CO Plan) for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the South Coast Air Basin, and would likely experience the highest CO concentrations. Of these locations, the Wilshire Boulevard/Veteran Avenue intersection experienced the highest CO concentration (4.6 ppm), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As a CO hotspot was not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any locations within the City of Palmdale due to the volume of traffic that would occur as a result of future development associated with the Housing Element. Therefore, impacts would be less than significant in this regard.

Conclusion

Implementation of the proposed Housing Element would allow for the development of approximately 13,000 additional housing units citywide. Development of these additional housing units would generate increased operational air emissions. Due to the substantial amount of development that would be accommodated by the proposed Housing Element, long-term operational impacts would be significant and unavoidable.

Mitigation Programs:

General Plan Policies:

Policy ER5.4.1: Promote community awareness of the effects of global warming and ozone depleting gases, as well as methods to minimize the creation of those gases, by preparing and distributing educational materials, and cooperating with AVAQMD in establishing regional programs.

Policy ER5.5.1: Encourage energy conservation from all sectors of the community by promoting the use of energy efficient appliances, processes and equipment, and promoting energy audits of existing structures.

Policy ER5.5.3: Require that new construction promote the use of solar energy systems by providing maximum solar access.

Policy ER5.6.1: Ensure that new development reduces project-related vehicle miles traveled to the maximum extent feasible.

Policy C2.1.3: Require residential developments to contribute towards City programs to reduce vehicle trips.

Policy C2.1.4: Provide incentives for trip reduction measures.

Policy C2.2.1: Promote public transit operations within the Planning Area, and work with transit operators to coordinate schedules, services, service routes, and fares.

Policy C3.1.1: Schools, parks and neighborhoods uses should be located within convenient walking distance to residential developments.

Policy C3.1.2: Land uses should be arranged in a manner which increases the opportunity to utilize alternate forms of transportation, such as transit systems, bikeways and pedestrian walkways.

Policy C3.1.4: Require residential subdivision designs to accommodate convenient pedestrian and bicycle access, both on- and off-site.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

CONSISTENCY WITH REGIONAL PLANS

- **POTENTIAL DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT WOULD NOT BE CONSISTENT WITH REGIONAL PLANS.**

Impact Analysis: A potentially significant impact to air quality would occur if the project would conflict with or obstruct implementation of the applicable Air Quality Plan. Although the project would represent an incremental negative impact to air quality in the MDAB, of primary concern is that project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the project's consistency with the *2004 Ozone Attainment Plan* as well as the City's General Plan and growth forecasts. The purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with Federal and State air quality standards. It is important to note that even if a project is found consistent it could still have a significant impact on air quality under CEQA. Consistency with plans means that a project is consistent with the goals,

objectives and assumptions in the respective plan to achieve the Federal and State air quality standards.

The AVAQMD *CEQA and Federal Conformity Guidelines* notes the following with respect to conformity impacts:

> *According to AVAQMD California Environmental Quality Act (CEQA) and Federal Conformity Guidelines a project is consistent with applicable air quality plans if it complies with all applicable AVAQMD rules and regulations, complies with all proposed control measures that are not adopted from applicable plans, and is consistent with the growth forecasts in the applicable plan(s). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast.*

RESIDENTIALLY-ZONED LAND – GENERAL PLAN STUDY AREA

The 2,786 dwelling units proposed would occur on existing residentially-zoned vacant land within the City. These dwelling units are consistent with uses and densities permitted by the existing General Plan and Zoning Ordinance. Therefore, project implementation would be consistent with the goals and policies provided within the City's General Plan. Thus, as 2002 was the base year utilized in the formulation of the *2004 Ozone Attainment Plan*, and the project is consistent with the City's General Plan (adopted in 1993), the project is consistent with the growth forecasts utilized in the development of the applicable Air Quality Plan. Additionally, as noted in the construction impact analysis above, the proposed 2,786 dwelling units would be required to comply with all AVAQMD rules and regulations. Impacts in this regard would be less than significant.

RE-ZONE PROJECT AREA

Implementation of the proposed Housing Element would allow for the development of an additional 13,253 housing units within the Land Use Change Area (as a result of the proposed GPA 11-03, ZC 11-01, and SPA 11-01). The City's General Plan currently designates the Land Use Change Area as Single-Family Residential; Multi-Family Residential; and Public Facility. Implementation of the Housing Element would require a GPA (GPA 11-03) to amend the Land Use Element and Land Use Map, a Zone Change (ZC 11-01) to amend the City's Zoning Map, and a Zoning Ordinance Amendment (ZOA 11-05). These amendments would be required to allow for higher density residential development to accommodate the housing units required by the City's RHNA allocation. However, as the proposed 13,253 dwelling units within the re-zone project area would not be consistent with the growth forecasts utilized in the development of the applicable Air Quality Plan, a significant impact would occur. Additionally, as noted in the construction impact analysis above, future housing development would be required to comply with all AVAQMD rules and regulations.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.3.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **POTENTIAL DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD IMPACT EXISTING REGIONAL AIR QUALITY LEVELS ON A CUMULATIVE BASIS.**

Impact Analysis: According to the *AVAQMD CEQA & Federal Conformity Guidelines*, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact. If a project impact is individually less than significant, the impacts of the surrounding past, present and future projects must be taken into account. The thresholds of significance for cumulative impacts are the same as those for the project related impacts used in this analysis.

Cumulative Short-Term Construction

As previously discussed, implementation of the proposed Housing Element would accommodate the construction of approximately 16,039 new dwelling units. It was determined that the construction of the approximately 16,039 dwelling units would result in substantial construction activities that could potentially exceed the AVAQMD emissions thresholds, which could result in a significant contribution to emissions on a cumulative basis. Even with implementation of General Plan Policies and mitigation measures, cumulative construction-related emissions would likely still be significant. Although project-specific details (i.e., timing and amount of construction occurring concurrently) are unknown at this time, due to the amount of potential development, significant and unavoidable cumulative construction impacts would occur.

Cumulative Long-Term Operational Impacts

With regard to daily operational emissions and the cumulative net increase of any criteria pollutant for which the region is nonattainment, this is considered to be a potentially significant cumulative impact, due to nonattainment of O_3 and PM_{10} standards in the MDAB. Future net development of the 13,000 dwelling units throughout the City, combined with other anticipated future development in the City and the region would contribute to a cumulative annual increase in regional air pollutant emissions. As previously stated, the emissions from development of the additional dwelling units throughout the City would likely exceed the AVAQMD operational thresholds. In accordance with AVAQMD methodology, any project that cannot be mitigated to a level of less than significant is also significant on a cumulative basis. Therefore, the cumulative operational emissions associated with the proposed project are significant.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-5. No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.3.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in significant unavoidable construction, operational, and cumulative air quality impacts with implementation of the GPEIR policies and programs. If the City of Palmdale approves the proposed Housing Element, the City shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

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5.4 Greenhouse Gas Emissions/Climate Change

5.4 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

This section evaluates the potential global climate change impacts associated with the proposed project. The proposed project's potential direct and cumulative contribution to greenhouse gas (GHG) emissions and global climate change are analyzed. Climate change modeling and mitigation guidance is taken from numerous sources noted in the text, including the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change White Paper* (January 2008) and the California Attorney General recommended mitigation measures.

5.4.1 EXISTING SETTING

GLOBAL CLIMATE CHANGE GASES

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[1] The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short wave radiation emitted by the Sun is absorbed by the Earth; the Earth then emits a portion of this absorbed energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit it into space and back toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs normally associated with the proposed project include the following:[2]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

  The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- *Carbon Dioxide (CO_2)*. Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the

[1] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

[2] All Global Warming Potentials are given as 100 year GWP. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

atmosphere has increased 35 percent.[3] Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

- *Nitrous Oxide (N_2O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.[4]

- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi conductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[5] The GWP of PFCs range from 6,500 to 9,200.

- *Sulfur hexafluoride (SF_6)*. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the Intergovernmental Panel on Climate Change with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[6]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

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[3] United States Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2004*, April 2006.

[4] United States Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#hfc

[5] United States Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#pfc

[6] United States Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#sf6

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The GWPs of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.[7]

- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 110 times that of carbon dioxide.[8]

- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency's (EPA) Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with GWPs ranging from 4,600 for CFC 11 to 14,000 for CFC 13.[9]

5.4.2 REGULATORY SETTING

FEDERAL

The Federal government is extensively engaged in international climate change activities in areas such as science, mitigation, and environmental monitoring. The EPA actively participates in multilateral and bilateral activities by establishing partnerships and providing leadership and technical expertise. Multilaterally, the United States is a strong supporter of activities under the United Nations Framework Convention on Climate Change (UNFCCC) and the Intergovernmental Panel on Climate Change (IPCC).

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus around the evidence that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

In December 2007, Congress passed the first increase in corporate average fleet fuel economy (CAFE) standards. The new CAFE standards represent an increase to 35 miles per gallon (mpg) by 2020. In March 2009, the Obama Administration announced that for the 2011 model year, the standard for cars and light trucks will be 27.3 mpg, the standard for cars will be 30.2

[7] United States Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, dated November 7, 2006. http://www.epa.gov/EPA-AIR/1996/January/Day-19/pr-372.html

[8] Ibid.

[9] United States Environmental Protection Agency, *Class I Ozone Depleting Substances*, March 7, 2006. http://www.epa.gov/ozone/ods.html

mpg; and standard for trucks would be 24.1 mpg. Additionally, in May 2009 President Barack Obama announced plans for a national fuel-economy and GHG emissions standard that would significantly increase mileage requirements for cars and trucks by 2016. The new requirements represent an average standard of 39 mpg for cars and 30 mpg for trucks by 2016.

In September 2009, the EPA finalized a GHG reporting and monitoring system that began on January 1, 2010. In general, this national reporting requirement will provide the EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons (MT) or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost-effective emissions reduction strategies. This new program covers approximately 85 percent of the nation's GHG emissions and applies to approximately 10,000 facilities. The reporting system is intended to provide a better understanding of where GHGs are coming from and will guide development of the best possible policies and programs to reduce emissions.

Currently, the EPA is moving forward with two key climate change regulatory proposals, one to establish a mandatory GHG reporting system and one to address the 2007 Supreme Court decision in *Massachusetts v. EPA* (Supreme Court Case 05-1120) regarding the EPA's obligation to make an endangerment finding under Section 202(a) of the FCAA with respect to GHGs. *Massachusetts v. EPA* was argued before the United States Supreme Court on November 29, 2006. A coalition of 12 U.S. states and cities (including New York and California), in conjunction with several environmental organizations, challenged the EPA's refusal to regulate GHGs as a pollutant under the FCAA. The plaintiffs contended that the FCAA gives the EPA the necessary authority, and the mandate, to address GHGs in light of the scientific evidence on global climate change. The EPA had concluded that it had no authority under existing law to regulate GHGs, and for a variety of policy reasons, it would not use that authority even if it possessed it. The U.S. Supreme Court held that the EPA has statutory authority to regulate GHG emissions from new motor vehicles. Under the FCAA, the EPA is now obligated to issue rules regulating global warming pollution from all major sources. In April 2009, the EPA concluded that GHGs are a danger to public health and welfare, establishing the basis for GHG regulation. However, as of March 2012 there are no Federal regulations or policies regarding GHG emissions applicable to the proposed project.

Under the endangerment finding, the EPA Administrator found that the current and projected atmospheric concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) threaten the public health and welfare of current and future generations. Under the cause of contribute finding, the EPA Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Based on these findings, on April 1, 2010, the EPA finalized the light-duty vehicle rule controlling GHG emissions. This rule confirmed that January 2, 2011, is the earliest date that a 2012 model year vehicle meeting these rule requirements may be sold in the United States. On May 13, 2010, the EPA issued the final GHG Tailoring Rule. This rule set thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. Currently, EPA rules do not cover residential construction projects. Implementation of the Federal rules is expected to reduce the level of emissions from new motor vehicles and large stationary sources.

STATE OF CALIFORNIA

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA, which was adopted in 1988. Various statewide and local initiatives to reduce the State's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term.

ASSEMBLY BILL 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is noncommercial personal transportation in the State. The bill required that CARB set the GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. In setting these standards, CARB must consider cost effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. CARB adopted the standards in September 2004. (See Title 13, Cal. Code of Regs., § 1900, 1961.) Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37 percent lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions would be reduced approximately 24 percent between 2009 and 2016. These standards are intended to reduce emissions of carbon dioxide and other GHGs (i.e., nitrous oxide and methane). Some currently used technologies that achieve GHG reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drive.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al*.). The automobile-makers' suit in the U.S. District Court for the Eastern District of California, contended California's implementation of regulations that, in effect, regulate vehicle fuel economy, violates various Federal laws, regulations, and policies.

On December 12, 2007, the court found that if California receives appropriate authorization from the EPA (the last remaining factor in enforcing the standard), then these regulations would be consistent with and have the force of Federal law, thus, rejecting the automobile-makers' claim. This authorization to implement more stringent standards in California was requested in the form of a FCAA Section 209(b), waiver in 2005. Since that time, the EPA failed to act on granting California authorization to implement the standards. Then Governor Schwarzenegger

and then Attorney General Edmund G. Brown filed suit against EPA for the delay. In December 2007, EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions," and the emissions reductions that would be achieved through the Energy Independence and Security Act of 2007 as the reasoning for the denial.

The State of California filed suit against the EPA for its decision to deny the FCAA waiver. The change in presidential administration resulted in the EPA reexamining its position for denial of California's FCAA waiver and for its past opposition to GHG emissions regulation. California received the waiver on June 30, 2009.

ASSEMBLY BILL 32

The Legislature enacted AB 32 (AB 32, Nuñez), the California Global Warming Solutions Act of 2006, which was signed on September 27, 2006 to further the goals of Executive Order S-3-05. (Health & Safety Code, § 38500 et seq.) AB 32 requires CARB to adopt statewide GHG emissions limits to achieve statewide GHG emissions levels realized in 1990 by 2020. A longer-range goal requires an 80 percent reduction in GHG emissions from 1990 levels by 2050. CARB adopted the 2020 statewide target and mandatory reporting requirements in December 2007, and a statewide scoping plan in December 2008 (the AB 32 Scoping Plan). AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries, with penalties for noncompliance. CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. The foremost objective of CARB is to adopt regulations that require the reporting and verification of statewide GHG emissions. This program would be used to monitor and enforce compliance with the established standards.

CARB is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. In December 2008, CARB adopted a Scoping Plan to achieve reductions in GHG emissions in California. The plan indicates how reductions in significant GHG sources would be achieved through regulations, market mechanisms, and other actions.

On December 16, 2010, CARB endorsed the long-awaited regulation implementing California's GHG cap-and-trade program. Pursuant to AB 32, and subject to a variety of final actions by the Executive Director and approval by the Office of Administrative Law (OAL), the regulations will be included within Title 17 of the California Code of Regulation, sections 95800-96022, entitled "California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms."

The cap-and-trade program covers approximately 80 percent of the State's total GHG emissions and is considered a key element in achieving the overall strategy set forth in the Scoping Plan. The program, as implemented through the regulation, "caps" GHG emissions by issuing annual allowances (each covering the equivalent of one metric ton of carbon dioxide equivalent [$MTCO_2eq$[10]]) to regulated entities. Covered entities include those that meet the inclusion threshold of 25,000 $MTCO_2eq$ per year ($MTCO_2eq/yr$) and engage in: cement production;

[10] Carbon Dioxide Equivalent (CO_2eq) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

cogeneration; glass production; hydrogen production; iron and steel production; lime manufacturing; nitric acid production; oil and natural gas systems; petroleum refining; paper and pulp manufacturing; electricity generating facilities (including operators located in California or electricity importers); and natural gas suppliers. The regulation also allows entities that engage in the above production and manufacturing activities to opt-in even if they do not meet the 25,000 metric ton inclusion threshold. Others may also voluntarily associate into the program. By opening the program to non-covered entities, CARB hopes to create a trading market in which investment banks, citizens groups and the general public would be allowed to hold allowances and would be subject to the registration and reporting requirements. The first compliance phase begins on January 1, 2012 and runs through December 31, 2014, and will cover all major industrial sources, including the electricity industry and large industrial plants that manufacture glass, paper, concrete, and other products. The second compliance phase begins on January 1, 2015 and runs through December 31, 2017, and will cover distributors of transportation fuels, natural gas, and other fuels. A third compliance period starts on January 1, 2018 through December 31, 2020.

As noted above, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. In order to advise the Board, CARB staff convened an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee.

EXECUTIVE ORDER S-3-05

The Executive Order S-3-05 established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of the California Environmental Protection Agency (the Secretary) is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agencies involved in the GHG reduction plan include Secretary of Business, Transportation, and Housing Agency, Secretary of Department of Food and Agriculture, Secretary of Resources Agency, Chairperson of CARB, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary is required to submit a biannual progress report to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets.

EXECUTIVE ORDER S-1-07

On January 18, 2007, California further solidified its dedication to reducing GHGs by setting a new Low Carbon Fuel Standard for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least ten percent by 2020. The Low Carbon Fuel Standard applies to refiners, blenders, producers, and importers of transportation fuels and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle” using the most economically feasible methods.

SENATE BILL 97

Senate Bill (SB) 97 of 2007 requires the California Office of Planning and Research (OPR) to develop CEQA guidelines for analysis and, if necessary, the mitigation of effects of GHG emissions to the Resources Agency. These guidelines for analysis and mitigation must address, but are not limited to, GHG emissions effects associated with transportation or energy consumption. On December 30, 2009, the Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010. These new guidelines require a survey of existing climate change analyses performed by various lead agencies under CEQA.[11]

SENATE BILL 375

SB 375 requires metropolitan planning organizations (MPOs) to include sustainable communities strategies in their regional transportation plans. The purpose of SB 375 is to reduce GHG emissions from automobiles and light trucks, require CARB to provide GHG emission reduction targets from the automobile and light truck sector for 2020 and 2035 by January 1, 2010, and update the regional targets until 2050. SB 375 requires certain transportation planning and programming activities to be consistent with the sustainable communities strategies contained in the regional transportation plan. The bill also requires affected regional agencies to prepare an alternative planning strategy to the sustainable communities strategies if the sustainable communities strategy is unable to achieve the GHG emissions reduction targets. Governor Schwarzenegger signed and approved SB 375 on September 30, 2008.

SB 375 includes the ability to streamline certain projects which are consistent with an MPO's Sustainable Communities Strategy. CARB released its staff report on proposed regional GHG reduction targets for passenger cars and light trucks as well as its CEQA Functional Equivalent Document on August 9, 2010.

SENATE BILLS 1078 AND 107 AND EXECUTIVE ORDER S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. Executive Order S-14-08 was signed in November 2008, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020.

CARB SCOPING PLAN

December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations.[12] CARB's Scoping Plan contains the main strategies California will implement to

[11] http://ceres.ca.gov/ceqa/docs/Adopted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf. Accessed March 2010.

[12] California Air Resources Board, *Climate Change Scoping Plan, A Framework for Change*, December 2008.

reduce CO_2eq emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO_2eq under a business as usual (BAU)[13] scenario (This is a reduction of 42 MMT CO_2eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020).

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

In *Association of Irritated Residents, et al. v. California Air Resources Board, et al*., the Superior Court of California for the County of San Francisco (Superior Court) issued a Final Order on May 20, 2011 that prevents CARB from implementing a statewide GHG regulatory program. Although the court upheld the impact analysis contained in the environmental document for the Scoping Plan, the court found that the analysis of project alternatives was not sufficient for informed decision-making and public review under CEQA. The court found that CARB violated CEQA by failing to fully evaluate possible alternatives to the measures described in the Scoping Plan, and focused specifically on the cap and trade program. The court noted that CEQA requires that CARB undertake a similar analysis of the impacts of each alternative so that the public may know not only why cap and trade was chosen, but also why the alternatives were not.

It should be noted that the Superior Court held in the favor of CARB on all substantive challenges to the State's compliance with AB 32 mandates. The Court stated that "as the agency with technical expertise and the responsibility for the protection of California's air resources, CARB has substantial discretion to determine the mix of measures needed to 'facilitate' the achievement of GHG reductions."[14]

On June 1, 2011, CARB filed a notice of appeal with the Court of Appeal, First Appellate District and followed up its appeal with a Petition for a Writ of Supersedeas, asking the First Appellate District to stay the Superior Court's decision. CARB's intent was to clarify the scope of the order, which enjoins CARB's implementation of all measures in the Scoping Plan, including programs like improved energy efficiency, clean car standards, and low-carbon fuel regulations. The First Appellate District granted CARB's Petition for Writ of Supersedeas, staying the Superior Court's injunction and allowing CARB to move forward with Scoping Plan implementation until the Court of Appeal renders a decision or issues another order. As a result of the lawsuit, CARB has adjusted the implementation schedule for the cap and trade program and compliance obligations have been pushed back.

[13] "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

[14] Superior Court of California, County of San Francisco, *Statement of Decision: Association of Irritated Residents, et al v. California Air Resources Board*, March 18, 2011.

CARB also released a *Supplement to the AB 32 Scoping Plan Functional Equivalent Document* on June 13, 2011, which is designed to address the CEQA flaws first identified by Superior Court. The Supplement provides an expanded analysis of the five alternatives to the Scoping Plan, including a no project alternative, a variation of the proposed combination of reduction measures proposed in the Scoping Plan, and three alternatives based on specific programs including cap-and-trade, source-specific regulatory requirements, and a carbon fee or tax.

5.4.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

CEQA SIGNIFICANCE CRITERIA

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance. That being said, several options are available to lead agencies.

First, lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change (see *CEQA Guidelines* Section 15064.7(c)). However, to date, neither CARB nor AVAQMD have adopted significance thresholds for GHG emissions for residential or commercial development under CEQA.[15] Accordingly, this option (i.e., reliance on an adopted threshold) is not viable.

Second, lead agencies may elect to conclude that the significance of GHG emissions under CEQA is too speculative. However, this option is not viable due to the important focus on global climate change created by the various regulatory schemes and scientific determinations cited in this section.

Third, lead agencies may elect to use a zero-based threshold, such that any emission of GHGs is significant and unavoidable. However, this type of threshold may indirectly truncate the analysis provided in CEQA documents and the mitigation commitments secured from new development, and could result in the preparation of extensive environmental documentation for even the smallest of projects, thereby inundating lead agencies and creating an administrative burden. Moreover, because the GHG analysis is a cumulative analysis, a zero based threshold would be inconsistent with *CEQA Guidelines* Section 15130(a)(3), which requires that cumulatively significant impacts, such as GHG emissions, be “cumulatively considerable”, as defined by *CEQA Guidelines* Section 15065(a)(3).

[15] Of note, in December 2009, the San Joaquin Valley Unified Air Pollution Control District adopted guidance for use by lead agencies in the valley, in assessing the significance of a project's GHG emissions under CEQA. The guidance relies on the use of performance-based standards, and requires that projects demonstrate a 29 percent reduction in GHG emissions, from business-as-usual, to determine that a project would have a less than significant impact. The guidance is for valley land use agencies and not applicable to areas outside the district. The Bay Area Air Quality Management District (BAAQMD) adopted its own GHG thresholds of significance on June 2, 2010. The threshold is based on quantitative standards including a per capita emission standard and project emission standard as well as a qualitative standard based on compliance with a qualified GHG reduction strategy. The BAAQMD thresholds are based on an analysis of local inventories of GHG emissions and local reduction programs; therefore, they would not be an appropriate basis for a GHG significance threshold in the City of Fullerton.

Fourth, lead agencies may elect to utilize their own significance criteria, so long as such criteria are informed and supported by substantial evidence. Recent amendments to the *CEQA Guidelines*, and specifically the addition of *CEQA Guidelines* Section 15064.4, subdivision (b), support the selection of this significance criterion:

> *"A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:*
>
> *(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;*
>
> *(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;*
>
> *(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project".*

Appendix G of the *CEQA Guidelines* also has been revised to provide some guidance regarding the criteria that may be used to assess whether a project's impacts on global climate change are significant. The Appendix G environmental checklist form asks whether a project would: (i) generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or (ii) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Based on the above factors (and particularly the adopted addition of *CEQA Guidelines S*ection 15064.4, subdivisions [b][2] and [b][3]), it has been determined that it is appropriate to rely on AB 32 implementation guidance as a benchmark for purposes of this EIR and use the statute to inform the City's judgment as to whether the proposed project's GHG emissions would result in a significant impact (refer to *CEQA Guidelines* Section 15064, subdivision [f][1]). Accordingly, the following significance criterion is used to assess impacts:

> *Will the project's GHG emissions impede compliance with the GHG emissions reductions mandated in AB 32?*

The GHG emission levels will be analyzed to determine whether project approval would impede compliance with the GHG emissions reduction mandate established by the AB 32, which requires that California's GHG emissions limit be reduced to 1990 levels by 2020. As noted in the Scoping Plan,[16] a reduction of 28.5 percent below the "business as usual" scenario is

[16] California Air Resources Board, *Climate Change Proposed Scoping Plan: A Framework for Change*, adopted December 2008.

required to meet the goals of AB 32.[17] Therefore, should the project reduce its GHG emissions by 28.5 percent or greater, impacts would be less than significant.

The Initial Study Environmental Checklist form in *CEQA Guidelines* Appendix G serve as the thresholds for determining the significance of impacts relating to GHG emissions. As such, a project would be considered to have a significant environmental impact if it would result in the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

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

5.4.5 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS

- **GREENHOUSE GAS EMISSIONS GENERATED BY THE PROJECT COULD HAVE A SIGNIFICANT IMPACT ON GLOBAL CLIMATE CHANGE.**

Impact Analysis: The proposed Housing Element anticipates the development of an additional 16,039 housing units within the City. Implementation of the additional housing units is expected to result in increased GHG emissions; largely due to increased vehicle miles traveled (VMT), as well as from construction activities, area sources, energy consumption, water supply, and solid waste generation. Increased GHG emissions could contribute to global climate change patterns and the adverse global environmental effects thereof. GHG emissions associated with future developments include CO_2, N_2O, and CH_4. Implementation of the additional housing units is not anticipated to generate other forms of GHG emissions in quantities that would facilitate a meaningful analysis.

PROJECT-RELATED GREENHOUSE GAS EMISSIONS

The "business as usual" GHG emissions that could occur as a result of implementation of the Housing Element (additional 16,039 residential dwelling units) have been calculated. As previously stated, "business as usual" refers to emissions that would be expected to occur in the absence of GHG reduction measures. Implementation of the proposed Housing Element may also result in displacement of up to 2,834 apartment units, 204 single-family units, 1,714 square feet of Veterans of Foreign Wars (VFW) hall, 30,000 square feet of recreation center, and

[17] "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

39,916 square feet of religious facilities. Table 5.4-1, *Business As Usual Greenhouse Gas Emissions*, presents the estimated CO_2, N_2O, and CH_4 emissions associated with the existing/displaced uses, the proposed 16,039 residential dwelling units, as well as the net increase in GHG emissions. As noted in Table 5.4-1, the majority of GHG emissions are attributable to mobile sources. The total net "business as usual" GHG emissions that could occur as a result of implementation of the proposed Housing Element are 224,140.19 $MTCO_2eq/yr$.

Due to the amount of development that could occur in the City with implementation of the Housing Element, it is anticipated that the sum of direct and indirect GHG emissions would conflict with the requirements of AB 32 to reduce statewide GHG emissions. However, the City's General Plan includes polices which inherently relate to the reduction of GHG emissions within the City. General Plan Policies ER4.3.1 and ER4.3.4 and Implementation Program ER-S promote water conservation and recycling measures. Policies ER5.4.1, ER5.5.1, and ER5.5.3, and Implementation Programs ER-X and ER-D address energy conservation and alternative energy. Policy ER5.5.2 requires recycling in accordance with State law. Implementation of General Plan Policy ER5.6.1 would result in reduced vehicle trips by ensuring new development reduce project-related VMT. Policies C2.1.3 and C2.1.4, C2.2.1, C3.1.1, C3.1.2, C3.1.4, and Implementation Program ER-D would reduce VMT through a variety trip of reduction strategies.

Table 5.4-1
Business As Usual Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq[3]
	Metric Tons/yr[1]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	
Existing/Displaced GHG Emissions						
Mobile Source	39,730.22	2.25	47.15	0.00	0.00	39,777.37
Area Source	7,123.64	2.99	62.80	0.30	91.44	7,277.88
Energy	6,275.22	0.21	4.40	0.11	34.43	6,314.05
Water Demand	1,177.05	6.19	130.00	0.17	53.43	1,360.48
Waste	396.03	23.40	491.00	0.00	0.00	887.52
Total Emissions[3]	*55,617.30 $MTCO_2eq/yr$*					
Proposed Business As Usual GHG Emissions						
Mobile Source	193,170.77	4.52	94.90	0.00	0.00	193,265.70
Area Source	37,608.99	15.74	331.00	1.56	482.55	38,422.54
Energy	36,532.10	1.20	25.20	0.65	200.62	36,757.92
Water Demand	6,098.59	32.17	676.00	0.90	277.24	7,051.83
Waste	1,900.66	112.23	2,358.84	0.00	0.00	4,259.50
Total Project-Related Emissions[3]	*279,757.49$MTCO_2eq/yr$*					
TOTAL NET GHG EMISSIONS	*224,140.19$MTCO_2eq/yr$*					

Notes:
1 – Emissions calculated using CalEEMod computer model.
2 – CO_2 Equivalent values calculated using the U.S. EPA Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/cleanenergy/energy-resources/calculator.html, accessed April 2012.
3 – Totals may be slightly off due to rounding.

Refer to Appendix D, Air Quality/Greenhouse Gas Emissions Data, for detailed model input/output data.

ATTORNEY GENERAL RECOMMENDED MEASURES

The California Office of the Attorney General has established recommended measures for projects to reduce GHG emissions.[18] The proposed project would be consistent with the goals and policies of the City's General Plan. The General Plan includes several goals and policies related to the reduction of GHG emissions. The California Attorney General's recommendations comprehensively outline the various categories of reduction measures and provide a framework for the GHG analysis. It is noted that the measures are not necessarily exhaustive, and are not utilized as thresholds. Table 5.4-2, *Project Consistency with the Attorney General's Recommendations*, further describes how General Plan Policies would reduce future development's GHG emissions.

Table 5.4-2
Project Consistency with the Attorney General's Recommendations

Attorney General's Recommended Measures	Project Compliance
Smart growth, jobs/housing balance, transit-oriented development, and infill development through land use designations, incentives and fees, zoning, and public-private partnerships.	Compliant. Implementation of the Housing Element anticipates the development of additional dwelling units. General Plan Policies C3.1.1 and C3.1.2 promote smart land use patterns which inherently results in reduced vehicle trips. Policy L1.1.2 provides incentives to promote infill development to consolidate development patterns.
Create transit, bicycle, and pedestrian connections through planning, funding, development requirements, incentives and regional cooperation; create disincentives for auto use.	Compliant. General Plan Policies C2.1.2 through C2.1.6 would reduce VMT by promoting rideshare and providing incentives for trip reduction measures, requiring projects to contribute to City trip reduction programs. Policies C2.2.1 through C2.2.6 promote public transit operations (including rail, bus, and shuttle) to reduce vehicle reliance. Policy C3.1.4 promotes bicycle and pedestrian accessibility to decrease vehicle use. General Plan Implementation Program ER-D would implement a trip reduction ordinance and adopt other ordinances related to nonmotorized transportation, rideshare, and transit incentives.
Energy- and water-efficient buildings and landscaping through ordinances, development fees, incentives, project timing prioritization, and other implementing tools.	Compliant. General Plan Policy ER5.4.1 promotes community awareness of the effects of climate change as well as methods to minimize generation of GHG emissions. Policy ER5.5.1 encourages energy conservation by promoting energy efficient appliances, processes, and equipment, and promotes energy audits of existing structures. Policy ER5.5.3 requires new construction to promote the use of solar energy systems by providing buildings with maximum solar access. Implementation Program ER-X supports energy consumption reduction and encourages alternative energy sources. Implementation Program ER-D would incorporate energy-efficient design when retrofitting existing City buildings and develop a public information program on energy conservation. General Plan Policies ER4.3.1 and ER4.3.4 would consider the use of reclaimed water for landscape irrigation on a City-wide basis and encourage residents and businesses to recycle water where feasible. Implementation Program ER-S examines the expansion of water reuse programs including incentives to use recycled water for irrigation. Chapter 14.05, *Water Efficient Landscape*, of the City's Municipal Code establishes water conservation standards regarding landscaping for the City.

[18] California Office of the Attorney General, *The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level*, updated May 21, 2008.

Table 5.4-2 [continued]
Project Consistency with the Attorney General's Recommendations

Attorney General's Recommended Measures	Project Compliance
Waste diversion, recycling, water efficiency, energy efficiency and energy recovery in cooperation with public services districts and private entities.	**Compliant.** General Plan Policy ER5.5.2 requires recycling in accordance with State law.
Urban and rural forestry through tree planting requirements and programs; preservation of agricultural land and resources that sequester carbon; heat island reduction programs.	**Compliant.** General Plan Policy CD4.2.17 promotes the use of street trees to provide shade.
Regional cooperation to find cross-regional efficiencies in GHG reduction investments and to plan for regional transit, energy generation, and waste recovery facilities.	**Compliant.** Refer to responses above.

Source: California Office of the Attorney General, *Sustainability and General Plans: Examples of Policies to Address Climate Change*, updated January 22, 2010.

CONCLUSION

The City's process for the evaluation of discretionary projects includes environmental review and documentation pursuant to CEQA, as well as analysis of those projects for consistency with the goals, policies, and recommendations of the General Plan. In general, implementation of the policies in the General Plan, as well as compliance with Federal, State, and local regulations would avoid or reduce their incremental contribution to the significant worldwide increase in GHG emissions. However, for some projects it is possible that adherence to General Plan policies may not adequately avoid or reduce incremental impacts, and such projects would require additional mitigation measures. For each future discretionary project requiring mitigation (i.e., measures that go beyond what is required by existing programs, plans, and regulations), project specific measures would be identified with the goal of reducing incremental project level impacts to less than significant or the incremental contributions of a project may remain significant and unavoidable where no feasible mitigation exists. Where mitigation is determined necessary and feasible, these measures would be included in a Mitigation Monitoring and Reporting Program for the project. The measures may be updated, expanded, and refined when applied to specific future projects based on project specific design and changes in existing conditions, and local, State, and Federal laws.

Although implementation of General Plan policies would result in reduced GHG emissions, GHG reductions as a result of these policies have not been quantified. Currently, there are no specific development proposals associated with the proposed Housing Element. Therefore, the degree and extent of future project compliance with the General Plan policies and implementation measures is not yet known and the project details necessary to calculate emission reductions are not available at this time. Future development associated with implementation of the Housing Element would need to be analyzed on a project-by-project basis to determine the extent of each project's potential contribution to global climate change and appropriate mitigation measures specific to each project. Thus, at this stage of analysis, GHG impacts associated with implementation of the Housing Element would be significant and unavoidable.

Mitigation Programs:

General Plan Policies:

Policy ER4.3.1: Assess the feasibility of utilizing reclaimed water for landscape irrigation on a city-wide basis. Factors to be considered include the potential quantities of reclaimed water as determined by the Sanitation Districts, and costs associated with developing infrastructure and delivery systems to facilitate utilization. Within those areas in which it is determined to be feasible to utilize reclaimed water, consider establishment of an ordinance requiring installation of secondary water delivery systems to service landscaped areas.

Policy ER4.3.4: Encourage residents and businesses to recycle water where feasible, and where water recycling does not result in health and safety concerns, within their homes and/or businesses.

Implementation Program ER-S: The City should continue to monitor, along with the Los Angeles County Sanitation District, the feasibility of expanding water reuse programs. Treated wastewater is currently used to irrigate some agricultural areas growing non-food crops. With the growing population, supplies of treated water will increase. Treated wastewater might be used to irrigate roadside and commercial landscaping, in addition to agricultural lands, to help conserve Palmdale's limited fresh water resources. The City may offer incentives to agricultural, commercial, and residential developments that use recycled water for irrigation. (General Plan Amendment 04-01, adopted by City Council April 14, 2004.)

Policy ER5.4.1: Promote community awareness of the effects of global warming and ozone depleting gases, as well as methods to minimize the creation of those gases, by preparing and distributing educational materials, and cooperating with AVAQMD in establishing regional programs. (General Plan Amendment 04-01, adopted by City Council April 14, 2004.)

Policy ER5.5.1: Encourage energy conservation from all sectors of the community by promoting the use of energy efficient appliances, processes and equipment, and promoting energy audits of existing structures.

Policy ER5.5.3: Require that new construction promote the use of solar energy systems by providing maximum solar access.

Implementation Program ER-X: The City shall support programs designed to reduce energy consumption and to utilize alternative energy sources.

Policy ER5.5.2: Require local government, Palmdale citizens, and local businesses and industries to recycle, as mandated by state law, and to otherwise recycle to the extent possible.

Policy ER5.6.1: Ensure that new development reduces project-related vehicle miles traveled to the maximum extent feasible.

Policy C2.1.3: Require residential developments to contribute towards City programs to reduce vehicle trips.

Policy C2.1.4: Provide incentives for trip reduction measures.

Policy C2.2.1: Promote public transit operations within the Planning Area, and work with transit operators to coordinate schedules, services, service routes, and fares.

Policy C3.1.1: Schools, parks and neighborhoods uses should be located within convenient walking distance to residential developments.

Policy C3.1.2: Land uses should be arranged in a manner which increases the opportunity to utilize alternate forms of transportation, such as transit systems, bikeways and pedestrian walkways.

Policy C3.1.4: Require residential subdivision designs to accommodate convenient pedestrian and bicycle access, both on- and off-site.

Implementation Program ER-S: The City should continue to monitor, along with the Los Angeles County Sanitation District, the feasibility of expanding water reuse programs. Treated wastewater is currently used to irrigate some agricultural areas growing non-food crops. With the growing population, supplies of treated water will increase. Treated wastewater might be used to irrigate roadside and commercial landscaping, in addition to agricultural lands, to help conserve Palmdale's limited fresh water resources. The City may offer incentives to agricultural, commercial, and residential developments that use recycled water for irrigation.

Policy CD4.2.17 Promote the use of street trees and front yard landscaping to create a pleasant neighborhood environment, by providing shade, wind breaks, visual interest and a buffer between residences and streets, through the following means:

1. On residential subdivisions having a lot size of one half acre or less, require that the developer or builder install front yard landscaping.

2. Require the developer to install street trees in all single family neighborhoods.

Policy L1.1.2 Provide incentives to promote infill development, in order to foster more cohesive neighborhoods, maximize use of infrastructure, consolidate development patterns and enhance community appearance.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

- **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT CONFLICT WITH AN APPLICABLE GREENHOUSE GAS REDUCTION PLAN, POLICY, OR REGULATION.**

Impact Analysis: The City adopted an *Energy Action Plan* on August 3, 2011. The *Energy Action Plan* was developed to achieve energy independence, energy efficiency and conservation, and land uses that reduce transportation time and costs, to encourage jobs creation, and to identify strategies to increase investment in the local economy. The measures within the *Energy Action Plan* implement the General Plan policies. The following community-wide measures within the *Energy Action Plan* are applicable to the proposed Housing Element: 1.3 (exceed Title 24 requirements), 1.6 (energy efficiency), 2.3 (water conservation), 3.3 (on-site renewable energy sources), 5.1 (housing near transit), and 6.2 (recycling). The future development of 13,001 dwelling units would be required to comply with the applicable measures of the *Energy Action Plan*. Therefore, the proposed project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs. Thus, a less than significant impact would occur in this regard.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.4.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **GREENHOUSE GAS EMISSIONS RESULTING FROM IMPLEMENTATION OF THE PROPOSED PROJECT AND RELATED DEVELOPMENT WITHIN THE CITY COULD IMPACT GREENHOUSE GAS LEVELS ON A CUMULATIVELY CONSIDERABLE BASIS.**

Impact Analysis: As stated above, implementation of the Housing Element would result in a significant impact regarding GHG emissions due to the amount of development that would occur in the City. Additionally, the Housing Element's GHGs in combination with GHG emissions from other known and reasonably foreseeable projects would result in a much greater amount of GHG emissions. Therefore, the amount of cumulative GHG emissions would be cumulatively considerable, and would potentially hinder the intent and statewide reduction goals of AB 32. Impacts in this regard would be significant and unavoidable.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.4.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in significant unavoidable project related and cumulative GHG impacts. If the City of Palmdale approves the proposed Housing Element, the City shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

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5.5 Noise

5.5 NOISE

The purpose of this section is to evaluate noise source impacts on-site and to surrounding land uses as a result of implementation of the proposed project. This section evaluates short-term construction-related impacts, as well as future buildout conditions. Mitigation measures are also recommended to avoid or lessen the project's noise impacts. Information in this section was obtained from the *Palmdale General Plan* (General Plan) and the *Palmdale Municipal Code* (Municipal Code). For the purposes of mobile source noise modeling and contour distribution for the Re-Zone Project Area, traffic information contained in the *Palmdale Housing Element Project Traffic Analysis*, prepared by RBF Consulting, dated April 11, 2012 (refer to Appendix C, Traffic Impact Analysis) was used.

5.5.1 EXISTING SETTING

NOISE SCALES AND DEFINITIONS

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, and 20 dBA higher four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud).

Many methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time;
- The influence of periodic individual loud events; and
- The community response to changes in the community noise environment.

Numerous methods have been developed to measure sound over a period of time; refer to Table 5.5-1, *Noise Descriptors*.

HEALTH EFFECTS OF NOISE

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many factors also influence people's response to noise. The factors can include the noise character, variability of the sound level, presence of tones or impulses, and time of day of the occurrence. Additionally, non-acoustical factors, such as a person's opinion of the noise source, ability to adapt to the noise, attitude towards the source and those associated with it, and predictability of the noise, all influence a person's response. As such, response to noise varies widely from one person to

another and with any particular noise, individual responses range from "not annoyed" to "highly annoyed."

Table 5.5-1
Noise Descriptors

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 PM to 10:00 PM, and +10 dBA for the night, 10:00 PM to 7:00 AM
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq}. The L_{dn} is calculated by averaging the L_{eq}'s for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.
Source: Cyril M. Harris, *Handbook of Noise Control*, dated 1979.	

The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-induced hearing loss;
- Interference with communication;
- Effects of noise on sleep;
- Effects on performance and behavior;
- Extra-auditory health effects; and
- Annoyance.

Although it often causes discomfort and sometimes pain, noise-induced hearing loss usually takes years to develop. Noise-induced hearing loss can impair the quality of life through a reduction in the ability to hear important sounds and to communicate with family and friends. Hearing loss is one of the most obvious and easily quantified effects of excessive exposure to

noise. While the loss may be temporary at first, it could become permanent after continued exposure. When combined with hearing loss associated with aging, the amount of hearing loss directly caused by the environment is difficult to quantify. Although the major cause of noise-induced hearing loss is occupational, substantial damage can be caused by non-occupational sources.

According to the United States Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individuals in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.

Interference with communication has proved to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition, and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern, or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and non-occupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high, and the task sufficiently complex for effects on performance to occur.

Recent research indicates that more moderate noise levels can produce disruptive after-effects, commonly manifested as a reduced tolerance for frustration, increased anxiety, and decreased incidence of “helping” behavior and increased incidence of “hostile” behavior. Noise has been implicated in the development or exacerbation of a variety of health problems, ranging from hypertension to psychosis. As with other categories, quantifying these effects is difficult due to the amount of variables that need to be considered in each situation. As a biological stressor, noise can influence the entire physiological system. Most effects seem to be transitory, but with continued exposure some effects have been shown to be chronic in laboratory animals.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one’s peace of mind and the enjoyment of one’s environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the United States Department of Transportation, the effects of annoyance to the community were quantified. In areas where noise levels were consistently above 60 dBA CNEL, approximately nine percent of the community was highly annoyed. When levels exceeded 65 dBA CNEL, the percentage rose to 15 percent. Although evidence for the various effects of noise has differing levels of certainty, it is evident that noise can affect human health. Most of the effects are, to a varying degree, stress related.

NOISE SENSITIVE RECEPTORS

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders. Noise, or the lack of it, is a factor in the aesthetic perception of some settings, particularly those with religious or cultural significance. Certain land uses are particularly sensitive to noise. According to the Palmdale General Plan, these uses include residential (single and multi-family dwellings, mobile home parks, dormitories, and similar uses); transient lodging (including hotels, motels, and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; public or private educational facilities, libraries, churches, and places of public assembly. Sensitive receptors located within the project area include several residences, places of worship, schools, libraries, and parks.

NOISE ENVIRONMENT

Mobile Noise Sources

VEHICULAR NOISE

Residentially-Zoned Land - General Plan Study Area

The City's noise environment is dominated by vehicular traffic, including vehicular generated noise along Sierra Highway and State Route 138 (SR-138), as well as State Route 14 (SR-14) and other arterials. Major arterials include, but are not limited to, Avenue M, Avenue, P/Rancho Vista Boulevard, Avenue Q, Avenue R, Avenue S, 10th Street West, 25th Street East and Division Street. During peak travel hours, heavy traffic on these roadways causes higher noise levels compared to noise levels during non-peak hours. These roadways have been designed to specifically carry large volumes, although long-established land use patterns have placed residential uses along some portions of these roadways.

As part of the GPEIR, vehicular noise levels in the Palmdale area were analyzed using the Federal Highway Administration's Highway (FHWA) traffic noise model for each study area roadway segment. The results of the analysis are summarized in GPEIR Table 3-38, *Existing Roadway Noise Levels*, and illustrated in GPEIR Exhibit 3-52, *Existing Transportation Noise Contours*. As indicated in GPEIR Table 3-38 and Exhibit 3-52, sensitive noise receptors within the City are presently exposed to vehicular noise sources in excess of 65 CNEL.

The State of the City Report (SOC) provides updated roadway noise levels along major arterial roadways in the City, utilizing the FHWA-RD-77-108 noise prediction model. SOC Table 5.0-2, *Noise Levels of Major Arterials in Palmdale 1993 and 2005 CNEL at 50 feet*, indicates that the overall noise pattern along local roadways remains similar to that experienced in 1993. Certain segments have experienced a substantial change in noise exposure over time; both decreased noise exposure as well as increased. The fluctuations are normally attributed to roadway improvements, introduction of new land uses, and other factors that influence the number and distribution of vehicle trips.

Rezone Project Area

The existing roadway noise levels in the vicinity of the rezone project area were projected based upon the rezoned land *Traffic Impact Analysis* study area. Noise models were run using the noise prediction model together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (such as the number of lanes), roadway width, average daily traffic (ADT), vehicle travel speed, percentages of auto and truck traffic, roadway grade, angle-of-view, and site conditions ("hard" or "soft"). The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadway and adjacent land uses. Noise projections are based on modeled vehicular traffic as derived from the *Traffic Impact Analysis*.

A 25- to 55-mile per hour (mph) average vehicle speed was assumed for existing conditions based on empirical observations and posted maximum speeds along the adjacent roadways. Existing modeled traffic noise levels can be found in Table 5.5-2, *Existing Traffic Noise Levels – Rezone Area*. As shown in Table 5.5-2, noise within the rezone area from mobile noise ranges from 42.3 dBA to 70.2 dBA at 100 feet from the roadway centerline.

Table 5.5-2
Existing Traffic Noise Levels – Rezone Area

Roadway Segment	Existing Conditions				
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
Division Street					
North of Avenue Q	208	42.3	2	1	0
Avenue Q to Palmdale Boulevard	1,922	51.9	17	5	2
Palmdale Boulevard to Avenue R	8,198	64.9	331	105	33
5th Street East					
Avenue Q to Palmdale Boulevard	1,703	54.4	29	9	3
Palmdale Boulevard to Avenue R	6,258	60.1	108	34	11
Avenue R to Avenue R-8	5,190	59.3	89	28	9
6th Street East					
North of Avenue Q	3,433	58.6	80	25	8
Avenue Q to Palmdale Boulevard	4,115	59.4	96	31	10
Palmdale Boulevard to Avenue R	3,578	60.1	111	35	11
Sierra Highway					
North of Avenue Q	17,364	68.9	892	282	89
Avenue Q to Palmdale Boulevard	12,678	67.5	652	206	65
Palmdale Boulevard to Avenue R	11,852	67.2	609	192	61
Avenue R to Avenue R-8	7,947	65.5	409	129	41
8th Street East					
North of Avenue Q	1,195	52.9	21	6	2
10th Street East					
North of Avenue Q	4,500	62.3	182	57	18
Avenue Q to Palmdale Boulevard	4,897	61.2	152	48	15
Palmdale Boulevard to Avenue R	6,112	62.3	190	60	19
Avenue R to Avenue R-8	5,779	62.3	180	57	18

Table 5.5-2 [continued]
Existing Traffic Noise Levels – Rezone Area

Roadway Segment	Existing Conditions				
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
15th Street East					
North of Avenue Q	2,802	61.2	144	46	14
Avenue Q to Palmdale Boulevard	1,683	59.2	86	27	9
Palmdale Boulevard to Avenue R	1,549	58.7	80	25	8
Avenue Q					
Division Street to 5th Street East	3,708	60.2	115	36	12
5th Street East to 6th Street East	2,666	58.7	83	26	8
Sierra Highway to 8th Street East	11,237	65.1	349	111	35
8th Street East to 10th Street East	7,626	63.5	237	75	24
10th Street East to 15th Street East	8,619	64.0	268	85	27
Palmdale Boulevard					
Division Street to 5th Street East	33,064	70.2	1,334	422	133
5th Street East to 6th Street East	27,389	69.3	1,104	349	110
Sierra Highway to 10th Street East	25,257	69.2	1,019	322	102
10th Street East to 15th Street East	26,264	69.5	1,061	336	106
Avenue R					
Division Street to 5th Street East	8,374	64.9	338	107	34
5th Street East to 6th Street East	12,867	64.3	302	95	30
Sierra Highway to 10th Street East	17,455	65.6	409	129	41
10th Street East to 15th Street East	18,350	65.9	430	136	43

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.

Source: Noise modeling is based upon traffic data within the *Palmdale Housing Element Traffic Analysis,* prepared by RBF Consulting, dated April 11, 2012.

RAILROAD NOISE

The Union Pacific Railroad (UPRR) Company operates two rail lines through the City, which create additional mobile noise sources in the City: the Valley Mainline and the Colton/Palmdale Cutoff. Additionally, two privately-owned spurs exist within the City, branching off the Valley Mainline in the vicinity of Avenues P-4 and P-8, and extending east to 15th Street East.

The Valley Mainline runs north/south and operates adjacent to Sierra Highway and bisects the City. The Valley Mainline is utilized by both freight and commuter trains. The Southern California Regional Rail Authority (SCRRA) operates Metrolink, a regional rail system that includes commuter and other passenger services, on UPRR's Valley Mainline. Metrolink's Antelope Valley Line (Los Angeles Union Station to Lancaster) links communities to employment and activity centers.

The Colton/Palmdale Cutoff branches from the Valley Mainline south of Avenue R and runs east. The Colton/Palmdale Cutoff is utilized by freight trains. Freight and commuter rail traffic passing through the City can generate substantial noise impacts to residents located along these railroad corridors.

As part of the GPEIR, railroad noise levels in the Palmdale area were analyzed using the U.S. Department of Housing and Urban Development Noise Assessment Guidelines. GPEIR Exhibit 3-52 illustrates the noise contours associated with the UPRR lines. As indicated in GPEIR Exhibit 3-52, sensitive noise receptors within the City are presently exposed to railroad-related noise sources in excess of 65 CNEL. It is noted that GPEIR Exhibit 3-52 is based on the noise data that was available at the time of document preparation.

AIRCRAFT NOISE

The U.S. Air Force Plant 42 (Plant 42) is located in the northern portion of the City, east of Sierra Highway and north of Avenue P. Aircraft takeoff, flyovers/over flights, and approach/landings contribute to the City's noise environment.

As part of the GPEIR, aircraft noise data for Plant 42 was provided by the Department of the Air Force[1]. GPEIR Exhibit 3-52 illustrates the noise contours associated with Plant 42 operations. As indicated in GPEIR Exhibit 3-52, sensitive noise receptors within the City may experience noise impacts from Plant 42 operations. The SOC includes updated noise contours for Plant 42. The SOC indicates that noise exposure due to operations at Plant 42 has decreased since 1990. The areas experiencing the greatest noise reduction are north and east of the airfield and west/northwest of the airfield beyond Sierra Highway. The noise reduction is attributed to a different mix in aircraft, as well as the introduction of newer aircraft at Plant 42.

Stationary Noise Sources

The primary noise sources associated with commercial and industrial land uses are caused by delivery trucks, heavy machinery, air compressors, generators, outdoor loudspeakers, and gas venting. Commercial and industrial land uses located near noise-sensitive receptors such as residences, schools, and hospitals currently generate occasional noise impacts. Fire and police department operations, park facilities, school sites, and residential uses can also contribute to the ambient noise environment. Other significant stationary noise sources in the project area include noise from street sweepers and gas-powered leaf blowers. Ongoing noise from construction activities throughout the City also adds to the City's ambient noise environment. These types of stationary noise sources have the potential to affect noise-sensitive receptors.

Existing Noise Levels

The SOC includes a comparison of the community noise measurements conducted for the General Plan/GPEIR and updated measurements for the SOC; refer to Table 5.5-3, *Community Noise Measurements – 1993 and 2006*. As shown, the L_{50} remains similar at each monitoring location. All measured levels were below the 65 dBA threshold established by the General Plan.

[1] Department of the Air Force, *Air Force Safety Center Master Plan Air Installation Compatible Use Zone Map*, August 1990.

Table 5.5-3
Community Noise Measurements – 1993 and 2006

Site No.	Land Use	Year	Lmax	L50
1	Commercial	1993	99	63.5
		2006	96.8	-
2	Agricultural/ Industrial	1993	92	68
		2006	94.5	61.5
3	Commercial	1993	72	57.5
		2006	96.6	61.6
4	Residential/ Open Space	1993	79.5	59.5
		2006	97.7	54.6
5	Residential	1993	53.5	51
		2006	94.9	56.4

Source: Impact Sciences, *City of Palmdale State of the City Report Table 5.0-1 (Community Noise Measurements 1993 and Current)*, June 2009.

5.5.2 REGULATORY SETTING

STATE OF CALIFORNIA GUIDELINES

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services, as shown in Table 5.5-4, *Noise and Land Use Compatibility Matrix*.

The guidelines rank noise land use compatibility in terms of “normally acceptable”, “conditionally acceptable”, “normally unacceptable”, and “clearly unacceptable” noise levels for various land use types. Single-family homes are “normally acceptable” in exterior noise environments up to 60 CNEL and “conditionally acceptable” up to 70 CNEL. Multiple-family residential uses are “normally acceptable” up to 65 CNEL and “conditionally acceptable” up to 70 CNEL. Schools, libraries and churches are “normally acceptable” up to 70 CNEL, as are office buildings and business, commercial and professional uses.

CITY OF PALMDALE GENERAL PLAN

The Noise Element is intended to comply with the state mandate, to provide an easily understood discussion of noise and its impacts, and to set guidelines to prevent noise and land use conflicts. Goal N1 of the Noise Element is to minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process. To this end, the City intends to utilize appropriate land use planning as the primary method of achieving noise compatibility among adjacent land uses (Objective N1.1). The City also intends to protect and maintain those areas having acceptable noise environments (Objective N1.2).

Table 5.5-4
Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70-75	75-85
Residential – Multiple Family	50 - 65	60 - 70	70 - 75	70 – 85
Transient Lodging - Motel, Hotels	50 - 65	60 - 70	70 - 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 - 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 - 80	80 – 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	NA

Source: Office of Planning and Research, California, *General Plan Guidelines*, October 2003.

NA: Not Applicable

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – 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.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable – New construction or development should generally not be undertaken.

CITY OF PALMDALE MUNICIPAL CODE

Pursuant to Municipal Code Chapter 9.18, *Disturbing, Excessive, Loud, or Offensive Noise*, it shall be unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The City does not yet have a Noise Ordinance; therefore, the State land use compatibility noise standards identified in Table 5.5-4 are utilized by the City.

Also, according to Municipal Code Chapter 8.28, *Building Construction Hours of Operation and Noise Control*, no person shall perform any construction or repair work on Sunday, or any other day between the hours of 8:00 PM and 6:30 AM, in any residential zone, or within 500 feet of any residence, hotel, motel, or recreational vehicle park, unless permission is granted by the City Engineer. However, the City does not have a significance threshold to assess noise impacts during construction for CEQA determinations of noise impacts. Construction noise is a short-term temporary event, occurs mostly during daytime hours (such as 6:00 AM to 3:00 PM), and is considered a common necessity for new development.

5.5.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to noise. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels (refer to Section 8.0, Effects Found Not To Be Significant); and/or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels (refer to Section 8.0, Effects Found Not To Be Significant).

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

5.5.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION NOISE

- **GRADING AND CONSTRUCTION WITHIN THE AREA COULD RESULT IN SIGNIFICANT TEMPORARY NOISE IMPACTS TO NEARBY NOISE SENSITIVE RECEIVERS.**

Impact Analysis: The Housing Element anticipates the development of 16,039 new dwelling units. The potential removal of existing uses (3,038 dwelling units and 71,630 square feet of non-residential development) and construction of these additional units would generate short-term noise impacts. Construction activities have a short and temporary duration, lasting from a few days to a period of several months. Groundborne noise and other types of construction-related noise impacts would typically occur during the initial site preparation, which can create

the highest levels of noise. Generally, site preparation has the shortest duration of all construction phases. Activities that occur during this phase include earthmoving and soils compaction. High groundborne noise levels can occur during this phase due to haul trucks, backhoes, and other heavy-duty construction equipment. Construction activities have the potential to expose adjacent sensitive land uses (nearby residential, institutional, and park uses) to noise levels between 70 and 90 decibels at 50 feet from the noise source. The degree of noise impact would be dependent upon the distance between the construction activity and the noise sensitive receptor.

Future development associated with the Housing Element would be subject to compliance with the Municipal Code. According to Municipal Code Chapter 8.28, *Building Construction Hours of Operation and Noise Control*, no person shall perform any construction or repair work on Sunday, or any other day between the hours of 8:00 PM and 6:30 AM, in any residential zone, or within 500 feet of any residence, hotel, motel, or recreational vehicle park, unless permission is granted by the City Engineer. General Plan Policy N1.2.2 restricts construction hours during the evening, early morning, and Sundays. Additionally, implementation of Mitigation Measure NOI-1 would reduce construction noise associated with future development through the use of a site-specific noise reduction features. Specifically, NOI-1 would require the use of the best available noise control techniques as well as requiring alternatives to pneumatic power tools. Mitigation Measure NOI-2 includes a list of measures to respond to and track complaints related to construction noise. With implementation of Mitigation Measure NOI-1 and NOI-2, as well as compliance with the Municipal Code, short-term construction noise impacts would be reduced to less than significant levels.

Mitigation Programs:

General Plan Policies:

Policy N1.2.2: Restrict construction hours during the evening, early morning and Sundays.

Project Mitigation Measures:

NOI-1 To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes the following measures, ongoing through demolition, grading, and/or construction:

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible).

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of

five dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and incorporate insulation barriers, or other measures to the extent feasible.

NOI-2 Prior to the issuance of each grading permit, project applicants shall submit to the Community Development Department a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following:

- A procedure and phone numbers for notifying the City Public Works Department staff and Palmdale Sheriff's Department (during regular construction hours and off-hours);

- A sign posted on-site pertaining the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours); and

- A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

VIBRATION IMPACTS

- **PROJECT IMPLEMENTATION COULD RESULT IN SIGNIFICANT VIBRATION IMPACTS TO NEARBY SENSITIVE RECEPTORS.**

Impact Analysis:

Short-Term Construction

The Housing Element anticipates the development of 16,039 new dwelling units. The potential removal of existing uses (3,038 dwelling units and 71,630 square feet of non-residential development) and construction of these additional units would generate short-term vibration impacts. Construction activities can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 25 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. Construction activities that may result under the proposed Housing Element have the potential to generate low levels of groundborne vibration. Table 5.5-5, *Typical Vibration Levels For Construction Equipment*, identifies various vibration velocity levels for types of construction equipment.

Table 5.5-5
Typical Vibration Levels for Construction Equipment

Equipment	Approximate ground velocity in decibels at 25 feet (inches/second)	Approximate ground velocity in decibels at 50 feet (inches/second)
Pile Driver (impact)	104	98
Large Bulldozer	87	81
Loaded Trucks	86	80
Jackhammer	79	73
Small Bulldozer	58	52
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.		
Notes: Root mean square amplitude ground velocity in decibels (VdB) referenced to 1 micro-inch/second.		

Similar to noise, groundborne vibration would attenuate at a rate of approximately six velocity decibels (VdB) per doubling of distance. The groundborne vibration generated during construction activities would primarily impact existing sensitive uses that are located adjacent to or within the vicinity of specific projects. Based upon the information provided in Table 5.5-5, vibration levels could reach up to 81 VdB for typical construction activities (and up to 98 VdB if pile driving activities were to occur) at sensitive uses located within 50 feet of construction. However, Mitigation Measure NOI-3 also requires that alternative methods be utilized should future pile driving activities take place within 50 feet of an occupied or designated historic structure. Compliance with Mitigation Measure NOI-3 would reduce the generation and/or exposure of persons or structures to excessive groundborne vibration to less than significant levels.

Long-Term Operations

Residential uses are not anticipated to generate excessive groundborne vibration or groundborne noise. Therefore, no excessive groundborne vibration or noise would be created from the residential development anticipated by the Housing Element. Impacts would be less than significant.

Mitigation Programs:

General Plan Policies:

Policy N1.2.2: Restrict construction hours during the evening, early morning and Sundays.

Project Mitigation Measures:

NOI-3 The City shall require future developments to implement the following measures to reduce the potential for human annoyance and architectural/structural damage resulting from elevated groundborne noise and vibration levels.

- Pile driving within a 50-foot radius of occupied units or designated historic structures shall utilize alternative installation methods where possible (e.g., pile cushioning, jetting, predrilling, cast-in-place systems, resonance-free vibratory pile drivers).

- The preexisting condition of all designated historic buildings within a 50-foot radius of proposed construction activities shall be evaluated during a preconstruction survey. The preconstruction survey shall determine conditions that exist before construction begins for use in evaluating damage caused by construction activities. Fixtures and finishes within a 50-foot radius of construction activities susceptible to damage shall be documented (photographically and in writing) prior to construction. All damage shall be repaired back to its preexisting condition.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

LONG-TERM (MOBILE) NOISE IMPACTS

- **TRAFFIC GENERATED BY THE PROPOSED PROJECT COULD SIGNIFICANTLY CONTRIBUTE TO EXISTING TRAFFIC NOISE IN THE AREA OR EXCEED THE CITY'S ESTABLISHED STANDARDS.**

Impact Analysis:

OFF-SITE TRAFFIC NOISE IMPACTS

Residentially-Zoned Land – General Plan Study Area

The additional 2,786 dwelling units proposed as part of the Housing Element would occur on existing residentially-zoned vacant land throughout the City. The development of these dwelling units would generate long-term mobile noise emissions. Given the conceptual nature of the anticipated residential development, future development of these units would undergo further environmental review on a project-by-project basis. However, it is noted that these dwelling units are consistent with uses and densities permitted by the existing General Plan and Zoning Ordinance, and therefore, have been considered in the General Plan EIR.

The traffic volumes associated with development of the 2,786 dwelling units would permanently increase the ambient noise levels within the City. Depending on the size and location of future development, the increase in traffic may or may not create significant impacts for noise sensitive receptors. To determine noise levels and project-related impacts, specific information is needed for a particular project. However, it is not anticipated that traffic noise associated with development of the 2,786 dwelling units would exceed the City's Land Use Compatibility Standards. The traffic noise levels associated with development of the 2,786 dwelling units would likely not exceed the "normally acceptable" land use compatibility thresholds (either 60 dB CNEL at single-family uses or 65 db CNEL at multi-family residential uses) along several roadway segments. Additionally, with adherence to General Plan Policy N1.2.3, which requires the use of sound insulation, double paned windows, or other architectural techniques (intended to maintain acceptable noise levels), traffic noise levels associated with development of the 2,786 dwelling units would likely not exceed the "conditionally acceptable" land use compatibility threshold (70 dB CNEL for all residential uses) along other roadway segments. Further, per the GPEIR, the City would require acoustical analysis reports for future residential development projects within the City that would be located within existing or future 60 CNEL impact areas or as deemed necessary by the City to ensure interior noise levels are below 45 dB. The acoustical analysis reports would evaluate the project's impact upon the existing noise environment, and where appropriate, the City would require the reports to include appropriate acoustical recommendations for residential development adjacent to major arterials. Thus, off-site traffic noise impacts would be less than significant.

Rezone Project Area

Implementation of the proposed Housing Element would allow for the development of an additional 13,253 housing units within the proposed rezone project area (as a result of the proposed GPA 11-03, ZC 11-01, and SPA 11-01). Development of these additional housing units would generate increased mobile noise impacts. Net development associated with the additional housing units is estimated to generate approximately 65,131 net average daily trips (ADT). The project's forecast traffic volumes would permanently increase the ambient noise levels within the rezone project area and surrounding community. Table 5.5-6, *Future Traffic Noise Levels*, outlines the future roadway noise levels in the rezone project area as a result of implementation of the Housing Element. The following is a summary of the calculated traffic noise levels associated with buildout under Housing Element:

- Four of the roadway segments modeled (along Palmdale Boulevard) would generate noise levels above 70 dBA CNEL at 100 feet from centerline.

- Fourteen of the roadway segments modeled (along Division Street, 6th Street East, Sierra Highway, 10th Street East, 15th Street East, Avenue Q, and Avenue R) would generate noise levels between 65 dBA CNEL and 70 dBA CNEL at 100 feet from the centerline.

- Twelve modeled roadway segments (along Division Street, 6th Street East, 10th Street East, 15th Street East, Avenue Q, and Avenue R) would generate noise levels between 60 dBA CNEL and 65 dBA CNEL at 100 feet from the centerline.

- Four modeled roadway segments (along Division Street, 5th Street East, 8th Street East, and Avenue Q) would generate noise levels below 60 dBA CNEL at 100 feet from the centerline.

An off-site traffic noise impact typically occurs when there is a discernable increase in traffic and the resulting noise level exceeds an established noise standard. In community noise considerations, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB will not be discernible to local residents. A 5 dB change is generally recognized as a clearly discernable difference. Thus, the project would result in a significant noise impact when a permanent increase in ambient noise levels of 3 dB occurs upon project implementation and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use. As depicted in Table 5.5-6, three segments along 10th Street East would experience a 3 dB increase or more between the 2040 No Project and 2040 Plus Project conditions. Thus, residential uses proposed along 10th Street East would likely notice an increase in traffic noise conditions.

Table 5.5-6
Future Traffic Noise Levels

Roadway Segment	2040 No Project					2040 Plus Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
Division Street											
North of Avenue Q	10,265	59.2	88	28	9	10,639	59.4	91	29	9	0.2
Avenue Q to Palmdale Boulevard	16,292	61.2	140	44	14	17,160	61.4	147	47	15	0.2
Palmdale Boulevard to Avenue R	11,438	66.4	462	146	46	12,612	66.8	509	161	51	0.4
5th Street East											
Avenue Q to Palmdale Boulevard	3,926	58.1	68	21	7	5,570	59.6	96	30	10	1.5
Palmdale Boulevard to Avenue R	10,869	62.5	187	59	19	18,785	64.9	324	102	32	2.4
Avenue R to Avenue R-8	16,259	64.2	280	89	28	19,101	64.9	329	104	33	0.7
6th Street East											
North of Avenue Q	9,000	62.8	211	67	21	11,604	63.9	272	86	27	1.1
Avenue Q to Palmdale Boulevard	7,054	61.7	165	52	17	9,050	62.8	212	67	21	1.1
Palmdale Boulevard to Avenue R	9,415	64.3	293	93	29	11,065	65.0	344	109	34	0.7
Sierra Highway											
North of Avenue Q	18,264	69.1	938	297	94	21,654	69.9	1,113	352	111	0.8
Avenue Q to Palmdale Boulevard	10,898	66.9	560	177	56	15,266	68.3	784	248	78	1.4
Palmdale Boulevard to Avenue R	7,725	65.4	397	126	40	10,937	66.9	563	178	56	1.5
Avenue R to Avenue R-8	13,367	67.7	686	217	69	18,643	69.2	958	303	96	1.5
8th Street East											
North of Avenue Q	2,700	56.4	46	15	5	4,398	58.5	76	24	8	2.1

Table 5.5-6 [continued]
Future Traffic Noise Levels

Roadway Segment	2040 No Project					2040 Plus Project					Difference In dBA @ 100 Feet from Roadway
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour	
10th Street East											
North of Avenue Q	10,298	65.9	415	131	42	25,762	69.9	1,041	329	104	4.0
Avenue Q to Palmdale Boulevard	8,237	63.4	256	81	26	19,317	67.1	600	190	60	3.7
Palmdale Boulevard to Avenue R	2,965	59.2	92	29	9	9,617	64.3	299	95	30	5.1
Avenue R to Avenue R-8	5,194	61.8	162	51	16	8,346	63.9	260	82	26	2.1
15th Street East											
North of Avenue Q	1,629	58.8	84	26	8	2,731	61.1	140	44	14	2.3
Avenue Q to Palmdale Boulevard	6,700	65.2	344	109	34	8,314	66.1	427	135	43	0.9
Palmdale Boulevard to Avenue R	9,839	66.7	506	160	51	13,375	68.1	688	217	69	1.4
Avenue Q											
Division Street to 5th Street East	3,951	60.4	123	39	12	4,277	60.8	133	42	13	0.4
5th Street East to 6th Street East	2,042	57.5	63	20	6	2,650	58.7	82	26	8	1.2
Sierra Highway to 8th Street East	7,183	63.2	224	71	22	7,699	63.5	240	76	24	0.3
8th Street East to 10th Street East	7,620	63.4	237	75	24	9,814	64.5	305	96	31	1.1
10th Street East to 15th Street East	7,869	63.6	245	77	24	12,237	65.5	381	120	38	1.9
Palmdale Boulevard											
Division Street to 5th Street East	44,928	71.5	1,812	573	181	58,964	72.7	2,377	752	238	1.2
5th Street East to 6th Street East	38,809	70.9	1,567	496	157	51,329	72.1	2,071	655	207	1.2
Sierra Highway to 10th Street East	42,922	71.5	1,731	548	173	55,798	72.6	2,251	712	225	1.1
10th Street East to 15th Street East	39,049	71.2	1,577	499	158	49,033	72.2	1,980	626	198	1.0
Avenue R											
Division Street to 5th Street East	8,977	65.2	362	115	36	12,035	66.4	486	154	49	1.2
5th Street East to 6th Street East	11,815	63.9	277	88	28	12,815	64.3	300	95	30	0.4
Sierra Highway to 10th Street East	19,133	66.0	449	142	45	24,323	67.0	570	180	57	1.0
10th Street East to 15th Street East	20,601	66.4	482	153	48	27,699	67.7	649	205	65	1.3

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level

Source: Noise modeling is based upon traffic data within the *Palmdale Housing Element Traffic Analysis,* prepared by RBF Consulting, dated April 11, 2012.

It is noted that the computer noise model used to project the potential ambient noise levels within the rezone project area that could occur with implementation of the Housing Element does not consider existing noise attenuating features such as sound walls, buildings, landscaping, or topography. As such, the roadway noise contours may not reflect true noise conditions. Intervening structures or other noise-attenuating obstacles between the roadway and sensitive receptors may reduce roadway noise levels at the receiving receptor. However, there would almost certainly be receptors that would experience roadway noise levels very similar to those indicated by the noise contours. As depicted in Table 5.5-4, three segments along 10th Street East would exceed the 3 dB increase. All of these three segments would exceed the City's Noise and Land Use Criteria Compatibility Criteria for "normally acceptable" noise levels (either 60 dB CNEL at single-family uses or 65 db CNEL at multi-family residential uses). However, these three segments would not exceed the "conditionally acceptable" noise level of 70 db CNEL (for both single- and multi-family uses). With adherence to General Plan Policy N1.2.3, which requires the use of sound insulation, double paned windows, or other architectural techniques (intended to maintain acceptable noise levels), the conditions for the use of the "conditionally acceptable" land use compatibility threshold (70 db CNEL) would be fulfilled. Thus, off-site traffic noise would be less than significant.

ON-SITE TRAFFIC NOISE IMPACTS

The additional 2,786 dwelling units proposed as part of the Housing Element would occur on existing residentially-zoned vacant land throughout the City. A review of GPEIR Exhibit 3-52 indicates that, depending on their proposed location, development of sensitive noise receptors within the City may expose people to severe noise levels from existing traffic volumes, due to their proximity to roadways. Additionally, with implementation of the Housing Element, some future residential uses within the rezone project area may experience noise levels that would exceed the City's Noise and Land Use Criteria Compatibility Criteria due to the increase in roadway noise (refer to Table 5.5-4).

To determine project-related impacts, specific information is needed for a particular project. Depending on the size and location of the future housing development within the City, the increase in traffic may or may not create significant impacts for noise sensitive receptors. Per the GPEIR, the City would require acoustical analysis reports for future development projects within the City that would be located within existing or future 60 CNEL impact areas or as deemed necessary by the City. The acoustical analysis reports would consider existing and future ambient and project related noise levels. Acoustical analysis reports would evaluate the impacts of the existing and forecast noise levels on a proposed project, as well as the project's impact upon the existing noise environment. The Planning Department would evaluate the housing projects to ensure that these noise sensitive land uses would not be located adjacent to significant noise sources. Where appropriate, the City would require acoustical analysis reports to include acoustical design for residential development adjacent to roadways in order to achieve the appropriate interior and exterior noise levels through sound insulation, or other means, as indicated in General Plan Table N-3.

It is noted that a separate project is under consideration in the area called the High Desert Corridor (HDC). The HDC project is under environmental review, and proposes a freeway/ expressway facility connecting Palmdale between SR-14 to State Route 18 in the Apple Valley area. The HDC would pass through the City in an east/west direction, and would result in the expansion of existing roadways as well as construction of new roadway segments. Therefore, any future residential developments in the vicinity of the HDC could be impacted by associated

traffic noise. Environmental review of the HDC is expected to be completed in Spring 2013. As the proposed 2,786 dwelling units would be constructed on existing residentially-zoned land, the potential traffic noise impacts from the HDC on nearby residential uses will be addressed in the environmental document for the HDC.

Forecast year 2040 traffic scenarios for the rezone project area in Table 5.5-6 account for the future HDC. However, the proposed HDC would be at least 1,600 feet from the nearest parcel within the rezone project area, and traffic noise associated with the HDC would not be perceptible within the re-zone project area.

Future development would be subject to compliance with the GPEIR Policies outlined below, which are intended to minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process (Noise Element Goal N1). Therefore, project implementation would result in less than significant impacts involving the exposure of people to severe noise levels.

Mitigation Programs:

General Plan Policies:

Policy N1.1.1: Locate noise compatible land uses near existing and future air, rail and highway transportation noise sources.

Policy N1.1.2: Restrict noise sensitive land uses near existing or future air, rail or highway transportation noise sources unless mitigation measures have been incorporated into the design of the project to reduce the noise levels at the noise sensitive land use to less than 65 dBA CNEL at all exterior living spaces including but not limited to, single-family yards and multi-family patios, balconies, pool areas, cook-out areas and related private recreation areas.

Policy N1.1.4: Consider the noise environment when making land use decisions with respect to the guidelines contained in Table N-1, and require noise standards consistent with the criteria listed on Table N-3. The State Recommended Acceptable Noise Guidelines, listed in [General Plan] Table N-1, are provided as guidelines only, and are not represented as standards.

Policy N1.2.3: Utilize any or all of the following measures in order to maintain acceptable noise environments throughout the City:

1. Control of noise at its source, including noise barriers and other muffling devices built into the noise source.

2. The provision of buffer areas and/or wide setbacks between the noise source and other development.

3. The reduction of densities, where practical, adjacent to the noise source (freeway, airport, railroad).

4. The use of sound insulation, blank walls, double paned windows and other design or architectural techniques to reduce interior noise levels.

5. Designation of appropriate land uses adjacent to known noise sources.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

RAILROAD NOISE

- **THE PROPOSED PROJECT WOULD NOT EXPOSE PEOPLE TO SEVERE NOISE LEVELS ASSOCIATED WITH RAILROAD NOISE.**

Impact Analysis: The Housing Element anticipates the net development of 13,001 housing units. Portions of the City and locations of proposed housing under the Housing Element are located adjacent to the UPRR lines. GPEIR Exhibit 3-52 illustrates the existing noise contours associated with the UPRR lines (at the time of document preparation). Noise sources associated with the railroad and Sierra Highway have overlapping noise contours resulting in substantial noise impacts. Project implementation would facilitate additional residential dwelling units throughout the City and within the rezone project area. A review of GPEIR Exhibit 3-52 indicates that noise sensitive receptors developed within the eastern and southern portions of the City may be exposed to existing railroad-related noise sources in excess of 65 dB CNEL. Additionally, future rail is anticipated to include the high speed DesertXpress connecting Las Vegas, Nevada to the City of Victorville, with a feeder line to the City of Palmdale. Therefore, future development under the Housing Element may expose residential uses to severe future noise levels associated with railroad operations.

As previously noted, the City would require acoustical analysis reports for future development projects that would be located within existing or future 60 CNEL impact areas or as deemed necessary by the City. Where appropriate, the City would require acoustical analysis reports to include acoustical design for residential development adjacent to railroads, in order to achieve the appropriate interior and exterior noise levels through sound insulation, or other means, as indicated in General Plan Table N-3. Future development would be required to comply with City and State guidelines regarding railroad noise, and noise abatement and insulation standards. This would ensure that noise levels in the project and surrounding areas are maintained within acceptable standards that prevent excessive disturbance, annoyance, or disruption. Additionally, future development would be subject to compliance with the GPEIR Policies outlined below, which are intended to minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process (Noise Element Goal N1). Therefore, following compliance with State and local standards and GPEIR Policies, project implementation would result in less than significant impacts involving the exposure of people to severe noise levels because their proximity to rail lines.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies N1.1.1, N1.1.2, N1.1.4, N1.2.3 outlined above, and the following:

Policy N1.2.4: Where deemed appropriate based upon available information, acoustical analysis and appropriate mitigation for noise-sensitive land uses should be required in areas which may be adversely impacted by significant intermittent noise sources. Such noise sources may include but not be limited to railroads, racetracks, stadiums, aircraft overflights and similar uses.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

LONG-TERM (STATIONARY) NOISE IMPACTS

- **THE PROPOSED PROJECT WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN LONG-TERM STATIONARY AMBIENT NOISE LEVELS.**

Impact Analysis: The Housing Element anticipates the net development of 13,001 housing units. Future development of these residential units as a result of the Housing Element would create stationary noise typical of any new residential development. Noise that is typical of residential areas includes children playing, pets, amplified music, pool and spa equipment operation, mechanical equipment, woodworking, car repair, and home repair. Noise from residential stationary sources would primarily occur during the "daytime" activity hours and typically do not substantially increase ambient noise conditions. Further, future residential uses would be required to adhere to Municipal Code Section 9.18.101, *Noise*, which prohibits loud, unnecessary, and unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance. Stationary noise sources as a result of the Housing Element are anticipated to result in less than significant impacts.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact.

5.5.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **POTENTIAL DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT THROUGHOUT THE CITY COULD RESULT IN CUMULATIVELY CONSIDERABLE NOISE IMPACTS FROM MOBILE (VEHICULAR AND RAILROAD) AND STATIONARY NOISE SOURCES.**

Impact Analysis:

CUMULATIVE MOBILE NOISE SOURCES

Residentially-Zoned Land – General Plan Study Area

The proposed 2,786 housing units would be located on existing residentially-zoned land within the City, and are consistent with the General Plan. Therefore, the GPEIR included the

evaluation of potential environmental impacts associated with the 2,786 housing units in conjunction with buildout of the City, as well as regional development. The cumulative impact analysis pertaining to noise is presented in GPEIR Section 8.8 (Cumulative Impacts) on page 8-18. The analysis concluded that cumulative noise impacts associated with development buildout under the General Plan and related projects would be reduced to a less than significant level with the use of buffers and other mitigations.

GPEIR Table 4-23 (Future Roadway Noise Levels) and General Plan Exhibit N-5 (Future Noise Contours), as well as SOC Table 5.0-3 (Predicted Noise Contours for Major Arterials 2005 and 2035 CNEL at 50 feet) and SOC Figure 5.0-2 (Roadway Noise Contours) present the projected noise levels for various roadway segments at General Plan buildout. As indicated in GPEIR Table 4-23, General Plan Exhibit N-5, SOC Table 5.0-3, and SOC Figure 5.0-2, various modeled roadway segments would generate noise levels greater than or equal to 65 CNEL at 50 feet from centerline. The GPEIR concluded that noise level impacts on residential and other noise sensitive land uses located adjacent to major arterials and rail lines would be considered significant. The GPEIR also concluded implementation of mitigation measures would reduce noise impacts from General Plan buildout to a less than significant level for most areas. However, existing and proposed sensitive land uses located near major roadways and rail lines may be exposed to significant noise impacts. Implementation of the proposed project would be consistent with the analysis presented in the GPEIR, and would result in no greater impacts involving mobile noise sources than previously identified. Therefore, cumulative noise impacts from mobile noise sources would be considered less than significant.

Rezone Project Area

Implementation of the proposed Housing Element would allow for the development of an additional 13,253 housing units within the proposed rezone project area (as a result of the proposed GPA 11-03, ZC 11-01, and SPA 11-01). Development of these additional housing units would generate increased mobile noise impacts within the area.

The cumulative mobile noise analysis is conducted in a two step process. First, the combined effects from both the proposed project and other projects are compared. Second, for combined effects that are determined to be cumulatively significant, the project's incremental effects then are analyzed. The project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the "cumulative with project" condition to "existing" conditions. This comparison accounts for the traffic noise increase from the project generated in combination with traffic generated by projects in the cumulative projects list. The following criteria have been utilized to evaluate the combined effect of the cumulative noise increase.

<u>Combined Effects</u>. The cumulative with project noise level ("2040 Plus Project") would cause a significant cumulative impact if a 3 dBA increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use.

Although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project. The following criteria have been utilized to evaluate the incremental effect of the cumulative noise increase.

Incremental Effects. The "2040 Plus Project" causes a 1 dBA increase in noise over the "2040 No Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Consequently, only proposed projects and growth due to occur in the general vicinity of the project site would contribute to cumulative noise impacts. Table 5.5-7, *Cumulative Traffic Noise Scenario*, lists the traffic noise effects along roadway segments in the project vicinity for "Existing", "2040 No Project", and "2040 Plus Project", including incremental and net cumulative impacts.

Table 5.5-7
Cumulative Traffic Noise Scenario

Roadway Segment	Existing	2040 No Project	2040 Plus Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference in dBA Between Existing and 2040 Plus Project	Difference in dBA Between 2040 No Project and 2040 Plus Project	
Division Street						
North of Avenue Q	42.3	59.2	59.4	17.1	0.2	No
Avenue Q to Palmdale Boulevard	51.9	61.2	61.4	9.5	0.2	No
Palmdale Boulevard to Avenue R	64.9	66.4	66.8	1.9	0.4	No
5th Street East						
Avenue Q to Palmdale Boulevard	54.4	58.1	59.6	5.2	1.5	Yes
Palmdale Boulevard to Avenue R	60.1	62.5	64.9	4.8	2.4	Yes
Avenue R to Avenue R-8	59.3	64.2	64.9	5.6	0.7	No
6th Street East						
North of Avenue Q	58.6	62.8	63.9	5.3	1.1	Yes
Avenue Q to Palmdale Boulevard	59.4	61.7	62.8	3.4	1.1	Yes
Palmdale Boulevard to Avenue R	60.1	64.3	65.0	4.9	0.7	No
Sierra Highway						
North of Avenue Q	68.9	69.1	69.9	1	0.8	No
Avenue Q to Palmdale Boulevard	67.5	66.9	68.3	0.8	1.4	No
Palmdale Boulevard to Avenue R	67.2	65.4	66.9	-0.3	1.5	No
Avenue R to Avenue R-8	65.5	67.7	69.2	3.7	1.5	Yes
8th Street East						
North of Avenue Q	52.9	56.4	58.5	5.6	2.1	Yes

Table 5.5-7 [continued]
Cumulative Traffic Noise Scenario

Roadway Segment	Existing	2040 No Project	2040 Plus Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference in dBA Between Existing and 2040 Plus Project	Difference in dBA Between 2040 No Project and 2040 Plus Project	
10th Street East						
North of Avenue Q	62.3	65.9	69.9	7.6	4	Yes
Avenue Q to Palmdale Boulevard	61.2	63.4	67.1	5.9	3.7	Yes
Palmdale Boulevard to Avenue R	62.3	59.2	64.3	2	5.1	No
Avenue R to Avenue R-8	62.3	61.8	63.9	1.6	2.1	No
15th Street East						
North of Avenue Q	61.2	58.8	61.1	-0.1	2.3	No
Avenue Q to Palmdale Boulevard	59.2	65.2	66.1	6.9	0.9	No
Palmdale Boulevard to Avenue R	58.7	66.7	68.1	9.4	1.4	Yes
Avenue Q						
Division Street to 5th Street East	60.2	60.4	60.8	0.6	0.4	No
5th Street East to 6th Street East	58.7	57.5	58.7	0	1.2	No
Sierra Highway to 8th Street East	65.1	63.2	63.5	-1.6	0.3	No
8th Street East to 10th Street East	63.5	63.4	64.5	1	1.1	No
10th Street East to 15th Street East	64.0	63.6	65.5	1.5	1.9	No
Palmdale Boulevard						
Division Street to 5th Street East	70.2	71.5	72.7	2.5	1.2	No
5th Street East to 6th Street East	69.3	70.9	72.1	2.8	1.2	No
Sierra Highway to 10th Street East	69.2	71.5	72.6	3.4	1.1	Yes
10th Street East to 15th Street East	69.5	71.2	72.2	2.7	1	No
Avenue R						
Division Street to 5th Street East	64.9	65.2	66.4	1.5	1.2	No
5th Street East to 6th Street East	64.3	63.9	64.3	0	0.4	No
Sierra Highway to 10th Street East	65.6	66.0	67.0	1.4	1	No
10th Street East to 15th Street East	65.9	66.4	67.7	1.8	1.3	No

Notes: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level

Source: Noise modeling is based upon traffic data within the *Palmdale Housing Element Traffic Analysis*, prepared by RBF Consulting, dated April 11, 2012.

First, it must be determined whether the 2040 Plus Project Increase Above Existing Conditions (*Combined Effects*) is exceeded. Per Table 5.5-7, this criteria is exceeded along 15 of the segments. Next, under the *Incremental Effects* criteria, cumulative noise impacts are defined by determining if the forecast ambient (2040 No Project) noise level is increased by 1 dB or more. Based on the results of Table 5.5-7, of the 15 segments that exceed the *Combined Effects* criteria, 10 would also exceed the *Incremental Effects* criteria. Therefore, 10 of the roadway segments would result in significant cumulative impacts, as they would exceed both the *Combined Effects* and the *Incremental Effects* criteria. The proposed project would result in long-term mobile noise impacts based on project generated traffic as well as cumulative and incremental noise levels within the rezone project area. Therefore, the proposed project, in combination with cumulative background traffic noise levels, would result in a significant cumulative impact in this regard.

CUMULATIVE STATIONARY NOISE SOURCES

The GPEIR concluded that isolated noise problems occur where commercial/industrial uses are located near a noise-sensitive land use. The GPEIR did not include residential uses as sources of stationary noise. As such, implementation of the proposed project would result in no greater impacts involving stationary sources than previously identified. Therefore, cumulative noise impacts from stationary noise sources would be considered less than significant.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in significant unavoidable cumulative traffic noise impacts as a result of proposed development within the rezone project area with implementation of the GPEIR policies and programs. If the City of Palmdale approves the proposed Housing Element, the City shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

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5.6 Hazards and Hazardous Materials

5.6 HAZARDS AND HAZARDOUS MATERIALS

This section describes the means by which hazardous substances are regulated from a federal, state, and local perspective, and discusses potential adverse impacts to human health and the environment as a result of exposure to hazards and hazardous materials. For this EIR, the term "hazardous material" includes any material that, because of its quantity, concentration, or physical, chemical, or biological characteristics, poses a considerable present or potential hazard to human health or safety, or to the environment. It refers generally to hazardous chemicals, radioactive materials, and bio-hazardous materials. "Hazardous waste," a subset of hazardous material, is material that is to be abandoned, discarded, or recycled and includes chemicals, radioactive, and bio-hazardous waste (including medical waste). The information in this section is based on the following documentation:

- *City of Palmdale General Plan*, Safety Element (January 25, 1993);
- *Final Program EIR for the City of Palmdale General Plan* (SCH No. 87120908) (February 1, 1993); and
- *The EDR Radius Map Report* (EDR Radius Report) (March 13, 2012); refer to Appendix F, EDR Radius Report.

5.6.1 EXISTING SETTING

Existing hazards and hazardous materials conditions are based on existing (2012) on the ground development conditions within the City. The City is approximately 104-square miles and is comprised of many different neighborhoods and areas with a variety of development including residential, commercial, industrial, and public facility uses. The land that is anticipated for residential development as part of the proposed project includes vacant properties, as well as developed properties that contain civic, public facility, and religious assembly uses.

REPORTED REGULATORY PROPERTIES

"Cortese" List

Government Code Section 65962.5 was originally enacted in 1985 and amended in January 1992. The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List". The Cortese List is a planning document used by the State and its various local agencies and developers to comply with the California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. California Government Code section 65962.5 requires the California Environmental Protection Agency (Cal EPA) to develop at least an annually updated Cortese List.

The California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. The list is maintained via the DTSC's Brownfields and Environmental Restoration Program (Cleanup Program), called EnviroStor. The properties identified below are reported in the Cortese List within the City.

DTSC

The following Cortese-Listed site is maintained by the DTSC:

- Air Force Plant 42.

The DTSC also maintains a listing of hazardous waste facilities subject to corrective action (pursuant to Section 25187.5 of the Health and Safety Code) on the Cortese List. The following site is listed and located within the City:

- Palmdale E WTF (Wastewater Treatment Facility) (30th Street East and Avenue P).

RWQCB

The Regional Water Quality Control Board (RWQCB) has reported 73 leaking underground storage tank (LUST) sites on the Cortese List within the City; refer to Appendix F for a complete listing of these sites. The following LUST sites remain open per the RWQCB:

- Antelope Valley Auto Mall/Carwash (38935 North 5th Street West);
- Antelope Valley Recycling and Disposal Former UST (1200 West City Ranch);
- Arco #1369 (411 West Palmdale Boulevard);
- FAA Palmdale ARTCC (2555 East Avenue P);
- LA CO DPW Road MD5 Palmdale (38126 North Sierra Highway);
- LA CO FD Fire Camp #016 (26652 North Angeles Forest Highway);
- Lockheed Martin Skunk Works (1011 Lockheed Way);
- Minute Serve Dairy (41940 North 50th Street West);
- Petro-Lock Inc (38206 Sierra Highway North) (within the rezone project area);
- Shell Service Station (37204 East 47th Street);
- Shell Service Station (1853 Palmdale Boulevard East);
- Sierra Highway and Avenue S (37205 Sierra Highway);
- US Gas and Mini Mart (105 East Palmdale Boulevard);
- USSA Gasoline Corp #186 (38821 North 10th Street West); and
- Village Center Market (9508 Palmdale Boulevard East).

The RWQCB also maintains a listing of solid waste disposal sites on the Cortese List. No listed sites are located within the City.

Other Regulatory Databases

Various regulatory databases (other than the Cortese List discussed above) are maintained by federal, state, and local agencies. Of these regulatory databases, properties located within the proposed rezone project area have been listed in the following databases:

- CA FID UST. The CA FID UST database maintains information on properties where an underground storage tank is located.

- HAZNET. The HAZNET database extracts data from the copies of hazardous waste manifests received each year by the DTSC. The volume of manifests is typically 700,000 to 1,000,000 annually, representing approximately 350,000 to 500,000

shipments. Data from non-California manifests and continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. The source is the DTSC.

- HIST CORTESE. The historic "Cortese" Hazardous Waste and Substances Sites List is a list of sites that are designated by the State Water Resources Control Board (SWRCB), the Integrated Waste Board, and the DTSC.

- HIST UST. The HIST UST database contains information on sites where historical underground storage tanks are located.

- LOS ANGELES COUNTY HMS. The Street Number List (HMS) includes industrial waste and underground storage tank sites.

- LUST. The LUST database contains information on sites that maintain leaking USTs.

- NPDES. National Pollutant Discharge Elimination System (NPDES) Permits Listing is a listing of NPDES permits, including stormwater.

- SWEEPS-UST. The SWEEPS-UST database maintains information on properties where an underground storage tank is located; however, this database is no longer updated.

The properties listed in the aforementioned databases that are located within the rezone project area are as follows:

- 13th Street East and Avenue R. This regulatory property was reported in the CHIMRS database. A spill (mineral oil, unknown polychlorinated biphenyls [PCBs]) was reported to result from a motor vehicle that hit a power pole with a transformer mounted on it.

- 38045 10th Street East. This regulatory property was reported in the CHIMRS database. A release of sewage was reported within a residential area, as a result of a blockage in a private lateral. No hazardous materials or contamination was reported.

- Antelope Valley Baptist Church (38117 13th Street East). This property was reported in the HAZNET database. The handling, storage, and/or transport of ACMs (approximately 0.9270 tons) was noted. A disposal method was reported.

- Albertsons (815 East Avenue Q-6). This property was a reported Los Angeles County HMS facility and is reported to be closed. No contamination has been noted.

- Pierce Property (932 East Avenue Q-10). This property was reported in the LUST database. This property was acquired by the City of Palmdale for inclusion in a housing redevelopment project commonly known as the "Courson Connection." This property has since been developed with a senior center, park, and two apartment complexes. A Phase I Environmental Site Investigation (ESA) conducted by Gilray Enterprises, Inc. (GEI) on November 04, 2004 identified the presence of a small UST on the subject property.

The UST had a capacity of approximately 275 gallons with a single wall, unlined, bare steel with no apparent exterior corrosion protection. The UST had an aboveground manually operated dispenser, a fill port, and a vent line, all attached directly above the UST. There were no other dispensers or product piping connected to the UST.

During removal of the UST, the soil was removed to expose the top and sides of the tank. The tank was found to be fully intact with no evidence of breaches in its integrity. There was no physical evidence of leakage. The tank was essentially empty. Very little liquid remained in the bottom. The former contents of the tank are unknown, but were reported by the property owner to be either automotive or possibly aviation fuel. All soil from the stockpile was backfilled into the excavation. The excavation was then backfilled to surface grade with additional clean fill soil obtained on-site.

The UST was removed from the property according to regulatory guidelines. Based upon the results of the December 2004 investigation, there does not appear to be any significant environmental impact on the property from the former UST installation. The case was reported to be closed by the RWQCB on July 18, 2006.

- Petro-Lock, Inc. (38206 Sierra Highway). This vacant property was historically a gas station that existed prior to 1935 and through approximately 1982. The site operations have been dormant since 1957. This site is listed in the HIST UST, CA FID UST, SWEEPS UST, LOS ANGELES COUNTY HMS, HIST CORTESE, and LUST regulatory databases. Nine (9) USTs and associated piping materials were reported to be removed from this location. The actual number of USTs at this property is unknown. Contamination is anticipated to have resulted at this property and the extent of contamination is currently unknown. This site remains open and is also listed on the Cortese List per the RWQCB.

- Regency Senior Apartments (northwest corner of 10th Street East and Avenue Q). This regulatory property was reported in the NPDES database. The Palmdale Community Redevelopment Agency obtained a NPDES permit for discharge purposes. No hazardous materials or contamination was reported.

Surrounding Properties

Surrounding properties may also contribute to potential groundwater contamination within the Palmdale area. These properties include, but are not limited to, commercial (i.e., dry cleaners, gas stations, automobile service stations, salvage yards, and other automobile-related uses) and industrial operations (i.e., Pacific Bell, trucking operations, and concrete plants), as well as Air Force Plant 42 (located to the east of Sierra Highway, between East Avenue P and East Avenue M).

TRANSPORT OF HAZARDOUS MATERIALS/WASTE

Transportation of hazardous materials/wastes is regulated by California Code of Regulations (CCR) Title 26. The Federal Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). The California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) enforce federal and state regulations and respond to hazardous materials transportation emergencies.

Emergency responses are coordinated as necessary between federal, state, and local governmental authorities and private persons through a State-mandated Emergency Management Plan.

Major transportation routes within the City include surface streets, railroads, and freeways. Major surface streets within the proposed rezone area include 5th Street East, 9th Street East, 10th Street East, 11th Street East, 12th Street East, Avenue Q, Palmdale Boulevard, and East Avenue R. The railroad is located parallel to Sierra Highway, bisecting the proposed rezone project area in a north/south orientation. The SR-14 freeway is located to the west of the proposed rezone project area. Further, the City's designated truck routes, pursuant to Municipal Code Section 10.04.060, Chapter 15.103 added), are the following:

- 10th Street West from Avenue P to Avenue M;
- Sierra Highway from the Antelope Valley Freeway to Avenue M;
- 50th Street East from Palmdale Boulevard to Avenue M;
- Avenue M from the Antelope Valley Freeway to 50th Street East;
- Avenue P from 10th Street West to 50th Street East;
- City Ranch Road, Tierra Subida, Rayburn Road, and Avenue R from the Palmdale Dump to Sierra Highway;
- Avenue S from Antelope Valley Freeway to Sierra Highway;
- Pearblossom Highway from Sierra Highway to Fort Tejon Road; and
- Avenue T from Fort Tejon Road to 90th Street East.

These designated truck routes are used to transport hazardous materials from suppliers to users.

FIXED FACILITY

Many businesses within the City handle, transport, and/or store hazardous materials that could threaten human health or the environment. Potential hazards are found in materials that are toxic, flammable, corrosive, or reactive. There are no properties located within the proposed rezone project area that are reported to routinely handle, transport, and/or store hazardous materials. It is noted that existing federal, state, and local laws regulate the use, transport, disposal, and storage of hazardous materials within the City.

CLANDESTINE DUMPING

Clandestine dumping of toxic materials and hazardous materials/waste on public or private property is a criminal act due to the health and safety threat it poses. In general, because of the extensive laws governing industrial wastes, local industrial wastes are disposed of properly. However, industrial wastes, as well as household wastes, commercial wastes, and other hazardous materials are sometimes illegally dumped in desert areas, such as are present in Palmdale. Dumping occurs not only on remote properties, but also down storm drains and into sewers.

LANDFILLS

Landfills can have adverse impacts on surrounding properties, the ground, and groundwater below the landfill. The concern from these facilities is related to the kind of disposed of

materials they contain, which can consist of non-hazardous (Class III), hazardous waste (Class I), or a combination of both (Class II). The only active landfill located in the City (Antelope Valley Public Landfill) is a Class III landfill, thus, it does not accept hazardous wastes.

Hazardous wastes generated within the City are transported to Kettleman Hills Landfill in Kern County or out of State. The Kettleman Hills facility is considered to be an active "Class One" landfill, capable of handling all types of urban wastes, including toxic and hazardous materials (except explosives and radioactive materials). Kettleman Hills is only partially open, thus, most of the City's hazardous waste is transported out of State.

AIR FORCE PLANT 42/PALMDALE REGIONAL AIRPORT

Air Force Plant 42 (Plant 42) encompasses over 5,800 acres located north of Avenue P and south of Avenue M within the City of Palmdale. The western border is Sierra Highway, and the Plant extends east in the vicinity of 40th Street East (south of Avenue N to Avenue P) and 50th Street East (north of Avenue N to Avenue M). Plant 42 is a federally owned military aerospace facility under the control of the Air Force Material Command (AFMC). Aerospace contractors at Plant 42 share a common runway complex and either lease building space from the U.S. Air Force (commonly referred to as Government Owned Contractor Operated [GOCO]), or own their own building outright. Plant 42 updated their operation status from GOCO to a Department of Defense (DoD) operated facility in August 2010. There are eight separate production sites specially suited for advanced technology and/or "black" program projects. Boeing, Lockheed Martin (home of Skunk Works), and Northrop Grumman are among the contractors operating at Plant 42. The potential hazards associated with Plant 42 operations involve hazardous materials and airport safety.

Palmdale Regional Airport (PRA) involves approximately 17,000 acres of unincorporated Los Angeles County lands situated in the City's northeast quadrant, east and southeast of Plant 42. PRA involves a small commercial air terminal that was leased from the Air Force by Los Angeles World Airports (LAWA), a department of the City of Los Angeles, and use of Plant 42's runways. After several airlines were unable to sustain flight operations at PRA, the terminal was remodeled and reopened in May 2007. The facility operated through December 2008. PRA has not been used for commercial service since December 2008.

Hazardous Materials

The facilities located on Plant 42 handle and store hazardous materials on-site, which may threaten human health or the environment. Plant 42 is identified on the Cortese List, among other regulatory databases, as discussed in the *Reported Regulatory Properties* Section above.

Airport Safety Hazards

The presence of Air Force Plant 42 creates a potential for aircraft accidents within the Plant and surrounding area. While very rare, aviation accidents in built-up urban areas can cause substantial personal injury, property damage, loss of life on the ground, in addition to passenger and crew injuries/fatalities. The U.S. Air Force minimizes disaster potential by following strict safety precautions and by having its own emergency personnel for crash and rescue operations. The *Air Force Plant 42 Air Installation Compatible Use Zone* (AICUZ) *Study* addresses the health, safety, and general welfare in the areas surrounding Plant 42. The potential for accidents is highest at the end of the runway (30 percent) and decreases with distance from the

end of the runway. The Clear Zone and Accident Potential Zones are further discussed in the *Air Installation Compatible Use Zone Study* Section below.

5.6.2 REGULATORY SETTING

Applicable federal, state, and local regulatory agencies, policies, and law that apply to hazards and hazardous materials are discussed below.

FEDERAL AND STATE

Environmental Protection Agency

According to the EPA, a "hazardous" waste is defined as one "which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (U.S. Public Health and Welfare Code Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the Federal and State levels. Compliance with Federal and State hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards, which include, but are not limited to, the following:

- Resources Conservation and Recovery Act (RCRA) – hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – cleanup of contamination;
- Superfund Amendment and Reauthorization Act (SARA) – cleanup of contamination; and
- Hazardous Materials Transportation Act (HMTA) – safe transport of hazardous materials.

These laws provide the "cradle to grave" regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed of. The primary responsibility for implementing RCRA is assigned to the EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

The EPA and the DTSC have developed and continue to update lists of hazardous wastes subject to regulation. In addition to the EPA and DTSC, the RWQCB, Los Angeles Region (Region 4), is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. Other State agencies involved in hazardous materials management include the Office of Emergency Services, California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Air Resources Board (CARB), and CalRecycle. California hazardous materials management laws include, but are not limited to, the following:

- Hazardous Materials Management Act – business plan reporting;
- Hazardous Substance Act – cleanup of contamination;

- Hazardous Waste Control Act – Hazardous waste management; and
- Safe Drinking Water and Toxic Enforcement Act of 1986 – releases of and exposure to carcinogenic chemicals.

Department of Toxic Substances Control

The responsibility for implementation of RCRA was given to Cal EPA's DTSC in August 1992. The DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by EPA, are called "non-RCRA hazardous wastes."

State Water Resources Control Board

Brownfields are underutilized properties where reuse is hindered by the actual or suspected presence of pollution or contamination. The goals of the State Water Resources Control Board's (SWRCB) Brownfield Program are to:

- Expedite and facilitate site cleanups and closures for Brownfields sites to support reuse of those sites;
- Preserve open space and greenfields;
- Protect groundwater and surface water resources, safeguard public health, and promote environmental justice; and
- Streamline site assessment, clean up, monitoring, and closure requirements and procedures within the various SWRCB site cleanup programs.

Site cleanup responsibilities for brownfields primarily reside within four main programs at the SWRCB: the Underground Storage Tank Program, the Site Cleanup Program, the DoD Program, and the Land Disposal Program. These SWRCB cleanup programs are charged with ensuring sites are remediated to protect the State of California's surface and groundwater and return it to beneficial use.

California Air Resources Board

One of CARB's major goals is to protect the public from exposure to toxic air contaminants. The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk.

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program, by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner

of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires CARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds. This report includes available information on each of the above factors required under the mandates of the AB 1807 program. AB 2588 air toxics "Hot Spots" program requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Accidental Release Prevention Law

The State's Accidental Release Prevention Law provides for consistency with federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the Clean Air Act) regarding accidental chemical releases and allows local oversight of both the State and Federal programs. State and federal laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program. The Accidental Release Prevention Law is implemented by the Certified Unified Program Agencies (CUPAs) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an offsite consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA, which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Transportation of Hazardous Materials/Wastes

Transportation of hazardous materials/wastes is regulated by California Code of Regulations (CCR) Title 26. The DOT is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). The CHP and Caltrans enforce federal and state regulations and respond to hazardous materials transportation emergencies. Emergency responses are coordinated as necessary between federal, state, and local governmental authorities and private persons through a State mandated Emergency Management Plan.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle.

AIR FORCE PLANT 42

Joint Land Use Committee

The City of Palmdale, City of Lancaster, and the U.S. Air Force formed the Joint Land Use Committee (JLUC) in 1991 to discuss airport land use compatibility issues. The JLUC developed a number of policies affecting land use decisions for projects in the general vicinity of Air Force Plant 42. New projects and land use requests are reviewed for conformance with the intent of the JLUC policies. The *Palmdale General Plan* has also established several policies related to the JLUC and Plant 42; see discussion below.

Air Installation Compatible Use Zone Study

The *Air Force Plant 42 Air Installation Compatible Use Zone* (AICUZ) *Study* (2010) addresses the health, safety, and general welfare in the areas surrounding Plant 42. The AICUZ Study documents Plant 42 aircraft operations and provides compatible use guidelines, as well as noise contours, for land areas surrounding the installation. The purpose of the AICUZ program is to promote compatible land development in areas subject to accident potential and aircraft noise. The AICUZ study is to be used in the planning process of affected jurisdictions to prevent incompatible land uses.

The potential exists for aircraft accidents to occur in the areas around airports. As a result, safety zones are designated and incompatible land uses are restricted around Plant 42, in order to reduce the public's exposure to safety hazards. The AICUZ program includes three safety zones: the Clear Zone (CZ); Accident Potential Zone (APZ) I; and APZ II. The CZ and APZ are defined as follows:

- *Clear Zone*: An obstruction-free surface on the ground symmetrically centered on the extended runway centerline beginning at the end of the runway and extending outward 3,000 feet. The CZ is a 3,000-foot by 3,000-foot area at the end of the runway, within which any development would pose a major risk of life and property.

- *Accident Potential Zone I*: APZ I begins at the outer end of the CZ, is 5,000 feet long by 3,000 feet wide.

- *Accident Potential Zone II*: APZ II begins at the outer end of APZ I, is 7,000 feet long by 3,000 feet wide.

According to AICUZ Study Figure 3-5, CZ has the highest accident potential (27.4 percent), while the accident potential for APZ I and APZ II are 10.1 percent and 5.6 percent, respectively. AICUZ Study Figure 3-6, *Clear Zones and Accident Potential Zones*, illustrates the CZ and APZ for the two runways at Plant 42.

The AICUZ Study provides the land use compatibility guidelines that are applicable to Plant 42. More specifically, AICUZ Study Table 3-5, *Land Use Compatibility, Noise Exposure and Accident Potential Guidelines*, identifies land uses and possible noise exposure and accident potential combinations for Plant 42.

REGIONAL

Los Angeles Regional Water Quality Control Board

The Los Angeles RWQCB is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. The UST Section directs environmental cleanup activities at leaking UST sites. Such sites include active and inactive gasoline stations, agricultural sites, brownfield redevelopment sites, airports, bulk petrochemical storage terminals, pipeline facilities, and various chemical and industrial facilities. The Site Cleanup Section oversees activities at non-UST sites where soil or groundwater contamination have occurred. Many of these sites are former industrial facilities and dry cleaners, where chlorinated solvents were spilled, or have leaked into the soil or groundwater.

Antelope Valley Air Quality Management District

The Antelope Valley Air Quality Management District (AVAQMD) works with CARB and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The AVAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines.

COUNTY OF LOS ANGELES

Hazardous Materials Control Program

In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program within the Department of Health Services. Originally, the Program focused on the inspection of businesses that generate hazardous waste, but has since expanded to include hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July 1, 1991, the Program was transferred to the Los Angeles County Fire Department (LACFD) and its name changed to the Health Hazardous Materials Division (HHMD).

The HHMD's mission is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. The Hazardous Materials Specialists are environmental health professionals dedicated to preventing pollution by serving both the public and business communities in Los Angeles County.

Los Angeles County Fire Department

The purpose of the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department is to protect the public health and environment of the County from accidental release and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

HHMD oversees the County's Certified Unified Program Agencies (CUPA) program and administers the following programs within Los Angeles County: Hazardous Waste Generator Program; Hazardous Materials Release Response Plans and Inventory Program; California Accidental Release Prevention Program (Cal-ARP); Aboveground Storage Tank Program; and Underground Storage Tank Program. The HHMD also inspect and permit hazardous material handling and hazardous waste generating businesses; provide 24-hour emergency response services to hazardous materials incidents; investigates criminal complaints of federal and state hazardous materials and waste laws; and reviews and approves assessment and mitigation work plans for sites contaminated with hazardous substances.

Household Hazardous and E-Waste Program

The Los Angeles County Sanitation District, in cooperation with the Los Angeles County Department of Health Services, has established the Household Hazardous and E-Waste (electronic waste) Roundup Program. The Household Hazardous Waste Collection Program provides Los Angeles County residents a legal and cost-free way to dispose of unwanted household chemicals that cannot be disposed of in the regular trash.

CITY OF PALMDALE GENERAL PLAN

Safety Element

General Plan Safety Element addresses natural and man-made hazards present in the City of Palmdale. The Safety Element is intended to guide development by reducing the levels of risk posed by these hazards within the City and its Planning Area. Specifically, the Safety Element identifies present conditions and public concerns, sets policies and standards for improved public safety, and plans for protection from potential disasters. It seeks to minimize physical harm, as well as economic and social disruptions.

The City's goals, objectives, and policies for hazardous materials and uses are designed to ensure the protection of the public health, safety, and welfare, and environmental resources in the City. Planning practices emphasize waste reduction, recycling, proper management of hazardous materials, siting of facilities, and effective emergency response.

Objective S2.3 of the Safety Element is to protect the public from hazardous materials and the hazards associated with the transport, storage, or disposal of such materials. Objective 2.2 of the Safety Element ensures that damage resulting from aircraft accidents is minimized. The Safety Element Policies that are relevant to the proposed project are outlined in the *Impacts and Mitigation Measures* Section below.

CITY OF PALMDALE ZONING ORDINANCE

Palmdale Zoning Ordinance Article 96 (Hazardous Waste Facilities) establishes a uniform permit application and review process for hazardous waste facilities to ensure protection of the health, safety, welfare, quality of life, and the environment of the residents of Palmdale.

5.6.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study Checklist includes questions relating to hazards and hazardous materials. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working the in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working the project area (refer to Section 8.0, Effects Found Not to be Significant);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (refer to Section 8.0, Effects Found Not to be Significant); and/or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (refer to Section 8.0, Effects Found Not to be Significant).

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

5.6.4 IMPACTS AND MITIGATION MEASURES

CONSTRUCTION-RELATED ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

- **SHORT-TERM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE ANTICIPATED RESIDENTIAL DEVELOPMENT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT.**

Impact Analysis: One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of a hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. Human exposure of contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure. Construction activities associated with project implementation could result in the release of hazardous materials into the environment through reasonably foreseeable upset and accident conditions.

DEMOLITION OF STRUCTURES

Existing structures may need to be demolished prior to construction of new buildings. Demolition of structures could expose construction personnel and the public to hazardous materials such as asbestos containing materials (ACMs) or lead-based paints (LBPs).

Residentially-Zoned Land - General Plan Study Area

The project anticipates the development of 2,786 dwelling units on vacant residentially-zoned land that is located throughout the City. Therefore, this anticipated development would not create a significant hazard to the public or the environment through demolition of structures. No impact would occur in this regard.

Rezone Project Area

Although specific development projects have not been identified, implementation of the rezone project could result in the removal of up to3,038 dwelling units and 71,630 square feet of non-residential uses. Given the age of some of the buildings within the rezone project area, it is likely that these buildings contain LBPs, ACMs, and/or other contaminants. As a result, construction workers and the public could be exposed. Federal and state regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to federal and state standards.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition (Mitigation Measure HAZ-1). If ACM material is found, abatement of asbestos would be required prior to any demolition activities. Also, if paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste would be required to be evaluated independently from the

building material by a qualified Environmental Professional (HAZ-2). If lead-based paint is found, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition activities. Compliance with Mitigation Measures HAZ-1 and HAZ-2 and AVAQMD Rule 1403 would reduce potential impacts associated with the demolition of structures to less than significant levels.

CURRENT AND HISTORIC USES

Residentially-Zoned Land - General Plan Study Area

The residential development anticipated on the residentially-zoned land within the General Plan study area would result in the conversion of vacant land to residential uses. Hazardous materials conditions may exist relating to historic commercial and industrial uses on these properties. Grading and excavation for future residential development could expose construction workers and the public to unidentified hazardous substances present in the soil or groundwater. Exposure of the public or the environment to hazardous substances is considered a potentially significant impact. Preparation of a formal Phase I Environmental Site Assessment (ESA) would be required on a project-by-project basis for any vacant, commercial, and industrial properties (current or historical) involving hazardous materials or waste (Mitigation Measure HAZ-3). The Phase I ESA would be prepared in accordance with ASTM Standard Practice E 1527-05 or the Standards and Practices for All Appropriate Inquiry (AAI), prior to any land acquisition, demolition, or construction activities. The Phase I ESA would identify specific Recognized Environmental Conditions (RECs), which may require further sampling/remedial activities by a qualified hazardous materials Environmental Professional with Phase II/site characterization experience. The Environmental Professional would identify proper remedial activities, if necessary. Therefore, with implementation of Mitigation Measure HAZ-3, potential construction-related accident conditions involving the release of hazardous materials into the environment, as a result of historic uses on the residentially-zoned land would be reduced to less than significant levels. Although remedial processes are yet to be determined (if necessary), remediation activities could also expose construction workers and the public to a variety of potentially hazardous materials. Site remediation activities are strictly controlled by local, state, and federal requirements. Toxic or hazardous materials would be handled in strict accordance with existing regulations, thus, resulting in less than significant impacts.

Despite compliance with Mitigation Measure HAZ-3, accidental conditions may arise during construction of future projects within the project area, if unknown wastes or suspect materials are discovered. In the event the contractor discovers unknown wastes or suspect materials, which are believed to involve hazardous wastes/materials, the contractor would be required to comply with Mitigation Measure HAZ-4, which instructs the contractor on how to proceed. Compliance with HAZ-4 would reduce potential impacts involving the accidental discovery of unknown wastes or suspect materials during construction to less than significant levels. Additionally, General Plan Policy S2.3.1 requires that the City coordinate with Los Angeles Fire Department to develop a listing of all hazardous waste generators that could affect City residents. General Plan Policies S2.3.2 and S2.3.3 would also help identify existing or previously existing hazardous waste generators or contaminated sites and require that soils containing toxic or hazardous substances be cleaned up to the satisfaction of the agency having jurisdiction, prior to the granting of any permits for new development.

Rezone Project Area

The land that is anticipated for residential development within the rezone project area includes vacant properties, as well as developed properties that contain civic, public facility, and religious assembly uses. Hazardous materials conditions may exist relating to historic commercial and industrial uses on the vacant properties, and current civic, public facility, and religious assembly uses on the developed properties. Grading and excavation for future residential development within the rezone project area could expose construction workers and the public to unidentified hazardous substances present in the soil or groundwater. As concluded above for the residentially-zoned land, exposure of the public or the environment to hazardous substances is considered a potentially significant impact. Moreover, as detailed above, seven reported regulatory properties are located within the rezone project area. Of these properties, three have reported information not associated with hazardous materials, and/or a release of hazardous materials to the soil and/or groundwater. However, the following four properties have reported the presence of hazardous materials within the rezone project area.

- *13th Street East and Avenue R*. This regulatory property was reported in the CHIMRS database. A spill (approximately eight gallons of mineral oil, unknown PCB) was reported on January 5, 2008 that resulted from a motor vehicle that hit a power pole with a transformer mounted on it (owned by Southern California Edison). Cleanup was reported by the reporting party. However, case completion was not reported.

  Implementation of Mitigation Measure HAZ-3, which requires preparation of a Phase I ESA, would ensure that any future develop at this vacant property would identify whether or not a potential for PCB-contaminated soil is present prior to any disturbance activities. The Phase I ESA would also identify if further sampling/remedial activities are required. With implementation of Mitigation Measure HAZ-3, potential for accidental conditions during construction, as a result of this past spill, would be reduced to less than significant levels.

- *Antelope Valley Baptist Church (38117 13th Street East)*. This property was reported in the HAZNET database. The handling, storage, and/or transport of ACMs (approximately 0.9270 tons) was noted. A disposal method was reported.

  It is anticipated that this reported disposal was a result of on-site remedial activities for the removal of ACMs in this structure(s). Proper disposal of the ACMs was reported. Thus, this reported regulatory property is not anticipated to have resulted in an environmental condition at this site. ACMs are anticipated to be associated with other structures within the proposed rezone project area. With implementation of recommended Mitigation Measure HAZ-1 pertaining to ACM identification and remediation, impacts in this regard would be reduced to less than significant levels.

- *Pierce Property (932 East Avenue Q-10)*. This property was reported in the LUST database. A Phase I Environmental Site Investigation (ESA) conducted by Gilray Enterprises, Inc. (GEI) on November 04, 2004 identified the presence of a small UST on this property. The UST was removed from the property according to regulatory guidelines. Based upon the results of the investigation conducted in December 2004 (refer to Appendix F), there does not appear to be any significant environmental impact on the property from the former UST. The case was reported to be closed by the RWQCB on July 18, 2006. Further, this property has since been developed with a

senior center, park, and two apartment complexes. Thus, existing contamination as a result of this former UST is unlikely.

However, portions of this property do remain vacant. With implementation of recommended Mitigation Measure HAZ-3, any future development at this property would be required to identify whether or not a potential for contaminated soil is present prior to any disturbance activities. The Phase I ESA would identify if further sampling/remedial activities are required. With implementation of Mitigation Measure HAZ-3, potential for accidental conditions during construction, as a result of this past UST location, would be reduced to less than significant levels.

- *Petro-Lock, Inc. (38206 Sierra Highway)*. This vacant property was historically a gas station that existed prior to 1935 and through approximately 1982. The site operations have been dormant since 1957. Nine (9) USTs and associated piping materials were reported to be removed from this location. The actual number of USTs at this property is unknown. Contamination is anticipated to have resulted at this property and the extent of contamination is currently unknown. This site remains open and is also listed on the Cortese List per the RWQCB.

  Based on available information, this property is anticipated to include contaminated soil and possibly groundwater as a result of the past gas station/service station activities on-site. No verification/sampling has occurred. With implementation of the recommended Mitigation Measure HAZ-3, a Phase I ESA would be required to identify if further sampling and remedial activities are required. With implementation of Mitigation Measure HAZ-3, potential for accidental conditions during construction, as a result of this past use, would be reduced to less than significant levels.

Compliance with Mitigation Measure HAZ-3 would ensure that potential accidental conditions during construction, as a result of historic and current uses within the rezone project area, would be reduced to less than significant. Additionally, the potential impacts associated with remediation activities (if needed) and the accidental discovery of unknown wastes or suspect materials within the rezone project area would be less than significant, as concluded above for the residentially-zoned land.

Properties surrounding the rezone project area may also contribute to potential groundwater contamination within the project area. These properties include, but are not limited to, commercial (i.e., dry cleaners, gas stations, automobile service stations, salvage yards, and other automobile-related uses) and industrial operations (i.e., Pacific Bell, trucking operations, concrete plants), as well as Air Force Plant 42 (located to the east of Sierra Highway, between East Avenue P and East Avenue M). As discussed above, recommended Mitigation Measure HAZ-3 requires a Phase I ESA, in order to identify if further sampling and remedial activities are required. With implementation of Mitigation Measure HAZ-3, potential for accidental conditions during construction, as a result of surrounding properties, would be reduced to less than significant levels.

CONCLUSION

Overall, project implementation could result in the accidental release of hazardous materials during construction as a result of existing contamination. With implementation of Policies S2.3.1, S2.3.2, and S2.3.3 and Mitigation Measures HAZ-1 through HAZ-4, and compliance with

applicable federal, state, and local regulatory requirements pertaining to hazardous materials, project implementation would create a less than significant hazard to the public or the environment through reasonably foreseeable upset/accident conditions involving the release of hazardous materials into the environment.

Mitigation Programs:

General Plan Policies:

Policy S2.3.1 Coordinate with Los Angeles Fire Department to develop a listing of all hazardous waste generators that could affect City residents.

Policy S2.3.2 Continue to support and encourage state, City and county efforts to identify existing or previously existing hazardous waste generators or contaminated sites.

Policy S2.3.3 Require that soils containing toxic or hazardous substances be cleaned up to the satisfaction of the agency having jurisdiction, prior to the granting of any permits for new development.

Project Mitigation Measures:

HAZ-1 Prior to demolition and/or rehabilitation activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the Antelope Valley Air Quality Management District (AVAQMD) Rule 1403.

HAZ-2 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified lead specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifics exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City Project Engineer.

HAZ-3 A formal Phase I Environmental Site Assessment (ESA) shall be prepared on a project-by-project basis for any vacant, commercial, and industrial properties involving hazardous materials or waste. The Phase I ESA shall be prepared in accordance with ASTM Standard Practice E 1527-05 or the Standards and Practices for All Appropriate Inquiry (AAI), prior to any land acquisition, demolition, or construction activities. The Phase I ESA would identify specific Recognized Environmental Conditions (RECs), which may require further sampling/remedial activities by a qualified hazardous materials Environmental Professional with Phase

II/site characterization experience prior to land acquisition, demolition, and/or construction. The Environmental Professional shall identify proper remedial activities, if necessary.

HAZ-4 If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:

- Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area;
- Notify the City's Project Engineer;
- Secure the area as directed by the Project Engineer; and
- Notify the implementing agency's Hazardous Waste/Materials Coordinator. The Hazardous Waste/Materials Coordinator shall advise the responsible party of further actions that shall be taken, if required.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

OPERATIONS-RELATED ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

- **LONG-TERM OPERATIONS OF THE ANTICIPATED RESIDENTIAL DEVELOPMENT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS.**

Impact Analysis:

ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

The development of approximately 13,000 dwelling units is anticipated with project implementation. Hazardous materials are not typically associated with residential uses. Minor cleaning products along with the occasional use of pesticides and herbicides for landscape maintenance would be the extent of materials used. These materials would be stored, however, not in reportable quantities. Since the project anticipates the development of residential uses, impacts pertaining to the routine transport, use, or disposal of hazardous materials resulting from project implementation would be less than significant.

POTENTIAL EXPOSURE OF FUTURE RESIDENTS

Project implementation could result in the exposure of future residents to soil and groundwater contamination, as a result of past on-site uses or contamination resulting from off-site properties. General Plan Policy S2.3.1 states that the City would coordinate with Los Angeles Fire Department to develop a listing of all hazardous waste generators that could affect City residents. General Plan Policies S2.3.2 and S2.3.3 would also help identify existing or previously existing hazardous waste generators or contaminated sites and require that soils containing toxic or hazardous substances be cleaned up to the satisfaction of the agency having jurisdiction, prior to the granting of any permits for new development. Policy S2.3.6 requires that all proposed hazardous waste facilities comply with the City's hazardous waste

management plan and Chapter 9 Article 96 (hazardous Waste Facilities) of the Palmdale Zoning Ordinance. Policy S2.3.7 requires that the City review proposed development in proximity to any existing or proposed hazardous waste facility, to ensure that future development and land use decisions consider and incorporate site design, setbacks, and buffering techniques appropriate for the site and provide adequate mitigation of any potential adverse impacts to such development from hazardous waste facilities.

In addition to the General Plan Policies identified above, implementation of recommended Mitigation Measure HAZ-3 would ensure that future residents would not be exposed to a significant risk involving existing hazardous materials conditions. Thus, impacts in this regard would be reduced to less than significant levels.

OFF-SITE TRANSPORTATION OF HAZARDOUS MATERIALS

Transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. The potential exists for licensed vendors to transport hazardous materials to and from existing commercial/industrial sites within the City. Accidental releases would most likely occur in the commercial/industrial areas and along transport routes leading to and from these areas. The anticipated residential development could be located along City designated truck routes, which include the following:

- 10th Street West from Avenue P to Avenue M.
- Sierra Highway from the Antelope Valley Freeway to Avenue M (within the rezone project area).
- 50th Street East from Palmdale Boulevard to Avenue M.
- Avenue M from the Antelope Valley Freeway to 50th Street East.
- Avenue P from 10th Street West to 50th Street East.
- City Ranch Road, Tierra Subida, Rayburn Road, and Avenue R from the Palmdale Dump to Sierra Highway (Avenue R is within the rezone project area).
- Avenue S from Antelope Valley Freeway to Sierra Highway.
- Pearblossom Highway from Sierra Highway to Fort Tejon Road.
- Avenue T from Fort Tejon Road to 90th Street East.

The City's street setback requirements would minimize the direct damage that could occur from transportation-related hazardous waste spills. Additionally, the DOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the Code of Federal Regulations, and implemented by Title 13 of the CCR. Appropriate documentation would be provided for all hazardous waste that is transported, as required for compliance with existing hazardous materials regulations. Further, General Plan Policy S2.3.5 promotes the routing of vehicles carrying potentially hazardous materials along transportation corridors that reduce the risk to the public and sensitive environmental areas.

This policy further encourages the City to cooperate with regional agencies in developing such routing systems. Compliance with all applicable federal and state laws related to the transportation of hazardous materials would reduce the likelihood and severity of accidents during transit, thereby ensuring that a less than significant impact would occur in this regard.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies S2.3.1, S2.3.2, and S2.3.3 outlined above, and the following:

Policy S2.3.5 Promote the routing of vehicles carrying potentially hazardous materials along transportation corridors that reduce the risk to the public and sensitive environmental areas. Cooperate with regional agencies in developing such routing systems.

Policy S2.3.6 Require that all proposed hazardous waste facilities comply with the City's hazardous waste management plan and Chapter 9 Article 96 (Hazardous Waste Facilities) of the Palmdale Zoning Ordinance.

Policy S2.3.7 Review proposed development in proximity to any existing or proposed hazardous waste facility, to ensure that future development and land use decisions consider and incorporate site design, setbacks and buffering techniques appropriate for the site and provide adequate mitigation of any potential adverse impacts to such development from hazardous waste facilities.

Project Mitigation Measures: Refer to Mitigation Measure HAZ-3.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

CORTESE LIST SITES

- **FUTURE RESIDENTIAL DEVELOPMENT WITHIN THE CITY COULD BE LOCATED ON A SITE CURRENTLY ON THE CORTESE LIST, CREATING A SIGNIFICANT HAZARD TO THE PUBLIC OR THE ENVIRONMENT.**

Impact Analysis:

RESIDENTIALLY-ZONED LAND – GENERAL PLAN STUDY AREA

The project anticipates the development of 2,786 dwelling units on vacant residentially-zoned land that is located throughout the City. This residentially-zoned land does not involve the Cortese-Listed sites that are maintained by the DTSC (Plant 42 and Palmdale E WTF). Additionally, it is not anticipated that this residentially-zoned land would involve the Cortese-Listed sites that are maintained by the RWQCB, as identified above, since these sites are zoned for industrial uses. Notwithstanding, given the conceptual nature of the anticipated residential development, residentially-zoned land could involve the Cortese-Listed sites that are maintained by the RWQCB, as identified above. Potential hazards to construction workers and the public

could occur from construction activities and project operations on or in the vicinity of these existing sites that may potentially be contaminated. Since the project does not propose any specific development project, future development would be evaluated on a project-by-project basis to determine if such sites are listed on the Cortese List. A formal Phase I Environmental Site Assessment (ESA) would be required to be prepared on a project-by-project basis for any vacant, commercial, and industrial properties (current or historical) involving hazardous materials or waste (Mitigation Measure HAZ-3). The Phase I ESA would identify specific Recognized Environmental Conditions (RECs), which may require further sampling/remedial activities by a qualified hazardous materials Environmental Professional with Phase II/site characterization experience. The Environmental Professional would identify proper remedial activities, if necessary. Therefore, with implementation of Mitigation Measure HAZ-3, potential impacts associated with an on-site regulatory property would be reduced to a less than significant level.

REZONE PROJECT AREA

Project implementation is anticipated to result in the development of 13,253 dwelling units within the rezone project area. The anticipated residential development could involve the property located at 38206 Sierra Highway North (Petro-Lock Inc), a Cortese–Listed site. As discussed above, this vacant property was historically a gas station. Nine (9) USTs and associated piping materials were reportedly removed from this location. The actual number of USTs at this property is unknown. Contamination is anticipated to be associated with this property and the extent of contamination is currently unknown. Implementation of recommended Mitigation Measure HAZ-3 would require further sampling/remedial activities by a qualified hazardous materials Environmental Professional with Phase II/site characterization experience. The Environmental Professional would identify proper remedial activities, if necessary. As required by state laws and regulations, the RWQCB would oversee any required sampling/remediation activities needed prior to constructing residential uses at this site, in coordination with any future Applicant(s) at the site, and any other responsible parties (as identified by the RWQCB, or their appointed designee). Further, implementation of the recommended Mitigation Measure HAZ-4 would ensure that potential impacts from unknown hazardous materials on-site would be reduced. With implementation of recommended Mitigation Measures HAZ-3 and HAZ-4, impacts resulting from the future residential development at this Cortese-Listed site would be reduced to less than significant levels.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies S.2.3.1, S.2.3.6, and S.2.3.7, outlined above.

Project Mitigation Measures: Refer to Mitigation Measures HAZ-3 and HAZ-4.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

HAZARDOUS EMISSIONS OR MATERIALS NEAR SCHOOLS

- **PROJECT IMPLEMENTATION COULD RESULT IN HAZARDOUS EMISSIONS OR THE HANDLING OF HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING SCHOOL.**

Impact Analysis:

CONSTRUCTION ACTIVITIES

Residentially-Zoned Land - General Plan Study Area

Development of the residentially-zoned land could require remediation of existing contamination. Remediation activities, if any, would include the potential transport of hazardous materials to an approved landfill facility. As discussed in Section 5.11, School Facilities, multiple schools are located throughout the City.

Rezone Project Area

Development of the anticipated residential uses within the rezone project area could require remediation of existing contamination. These development sites could be located within 0.25 mile of a school site, including the following:

- R. Rex Paris High School (38801 Clock Tower Plaza Drive);
- Yucca Elementary School (38440 2nd Street East);
- Opportunities for Learning (270 East Palmdale Boulevard);
- Palmdale Tree Elementary School (326 East Avenue R);
- Reaching Higher Academy (38117 13th Street East);
- Palmdale School (10th Street East and East Avenue Q-9);
- Focus Student Learning Center (1020 East Palmdale Boulevard);
- Guidance Charter School (1125 East Palmdale Boulevard);
- Antelope Valley Community College (Palmdale Campus (1529 East Palmdale Boulevard # 300);
- Antelope Valley Learning Academy (1601 East Palmdale Boulevard # C); and
- Patterns in Excellence Academy (37841 Lasker Avenue).

Conclusion

As discussed in Impact Statements *Construction-Related Accidental Release Of Hazardous Materials* and *Long-Term Accidental Release of Hazardous Materials* above, with implementation of Policies S2.3.2 and S2.3.3 and Mitigation Measures HAZ-1 through HAZ-4, and compliance with applicable federal, state, and local regulatory requirements pertaining to hazardous materials, potential impacts associated with the handling of hazardous materials during remedial activities (if any) would be reduced to less than significant levels. Further, implementation of the identified Policy S2.3.5 and compliance with all applicable federal and state laws related to the transportation of hazardous materials would reduce the likelihood and severity of accidents during transit, thereby ensuring that a less than significant impact would occur in this regard.

OPERATIONAL ACTIVITIES

The development of approximately 13,000 new dwelling units is anticipated with project implementation. As previously stated, hazardous materials are not typically associated with residential uses other than minimal amounts of hazardous materials (e.g., the occasional use of pesticides and herbicides for landscape maintenance). Thus, project implementation is not anticipated to emit hazardous emissions or handle significant amounts of hazardous materials within 0.25 mile of an existing school.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies S2.3.2, S2.3.3, and S2.3.5, outlined above.

Project Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-4.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

AIRPORT SAFETY HAZARD

- **PROJECT IMPLEMENTATION WOULD NOT RESULT IN A SAFETY HAZARD ASSOCIATED WITH PLANT 42 FOR PEOPLE RESIDING WITHIN THE PROJECT AREA.**

Impact Analysis:

RESIDENTIALLY-ZONED LAND – GENERAL PLAN STUDY AREA

The project anticipates the development of 2,786 dwelling units on vacant residentially-zoned land that is located throughout the City. Therefore, future housing development on residentially-zoned land could occur within two miles of Plant 42. AICUZ Study Figure 3-6 illustrates the CZ and APZ for the two runways at Plant 42, and AICUZ Study Table 3-5 identifies land uses and accident potential. According to AICUZ Study Table 3-5, residential land uses and related structures are not compatible and should be prohibited within the CZ, APZ I, and APZ II, with one exception: single detached units and related structures are compatible without restriction within APZ II. Additionally, the suggested maximum density for single detached units and "other residential" is one to two dwelling units per acre, possibly increased under a Planned Unit Development where maximum lot coverage is less than 20 percent. All future residential development throughout the City would be subject to compliance with the land use compatibility guidelines for the CZ, APZ I, and APZ II established in the AICUZ Study, thereby ensuring project implementation would result in a less than significant safety hazard for people residing on the residentially-zoned land that is located throughout the City. Additionally, all future residential development would be subject to compliance with the DoD regulations as outlined in the AICUZ Study and the applicable FAA regulations, which affect development in the CZ and APZs. Further, General Plan Policies S2.2.1 and S2.2.2 require compliance with the regulations outlined in the AICUZ Study and ensure that all future residential development promote clear linear corridors. Through the design review process, the City would ensure that residential buildings are located in a manner that would promote clear linear corridors through the City within any APZ, to create potential pilot options in the event of an aircraft emergency. With

implementation of General Plan Policies S2.2.1 and S2.2.2 and compliance with the AICUZ Study, project implementation would not result in a safety hazard associated with Plant 42 for people residing on the residentially-zoned land.

REZONE PROJECT AREA

A review of AICUZ Study Figure 3-6 indicates that the residential development anticipated to occur within the rezone project area would be located outside of the CZ, APZ I, and APZ II for Plant 42. Notwithstanding, all future residential development within the rezone area would be subject to compliance with the land use compatibility guidelines for the CZ, APZ I, and APZ II established in the AICUZ Study, thereby ensuring project implementation would result in a less than significant safety hazard for people residing on this area. Additionally, all future residential development would be subject to compliance with the DoD regulations as outlined in the AICUZ Study and the applicable FAA regulations, which affect development in the CZ and APZs. Further, compliance with General Plan Policies would be required. Thus, project implementation would not result in a safety hazard associated with Plant 42 for people residing in the rezone project area.

Mitigation Measures:

General Plan Policies:

Policy S2.2.1 Require all development to be consistent with Department of Defense regulations as outlined in the Air Force Plant 42 Air Installation Compatibility Use Zone (AICUZ) Report and to comply with applicable FAA regulations which affect development in the Accident Potential Zones.

Policy S2.2.2 Through the design review process, ensure that new buildings are located in a manner which will promote clear linear corridors through the developed area within any Accident Potential Zones, to create potential pilot options in the event of an aircraft emergency.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.6.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD RESULT IN CUMULATIVE IMPACTS ASSOCIATED WITH HAZARDS AND HAZARDOUS MATERIALS.**

Impact Analysis: Cumulative development would include some industrial and commercial uses, which could involve the use of various hazardous products in greater quantities. Residential development would also increase the use of household-type hazardous materials. The use, storage, disposal, and transport of hazardous materials could result in a foreseeable number of spills and accidents. All construction and demolition activities, as well as all new development, would be subject to compliance with hazardous materials regulations.

Compliance with all federal, state, and local regulations during the construction and operation of new developments would ensure that there are no cumulatively considerable significant hazards to the public or the environment associated the routine transportation, use, disposal, or release of hazardous materials. Impacts related to hazards and hazardous materials would be reduced to less than significant levels with implementation of the General Plan Policies outlined above and Mitigation Measures HAZ-1 through HAZ-4.

Future development within the City located within 2.0 miles of Plant 42 would be subject to compliance with the land use compatibility guidelines for the CZ, APZ I, and APZ II established in the AICUZ Study. Additionally, all future development would be subject to compliance with the DoD regulations as outlined in the AICUZ Study, the applicable FAA regulations, and relevant General Plan policies. Compliance with the AICUZ Study, applicable FAA regulations, and relevant General Plan policies would ensure that future development within two miles of Plant 42 would result in a less than significant safety hazard for people residing or working in the project area.

Overall, future development would be required to evaluate their respective hazards and hazardous materials impacts on a project-by-project basis. Implementation of the proposed project would not result in cumulatively considerable impacts pertaining to hazards and hazardous materials.

Mitigation Measures:

General Plan Policies: Refer to General Plan Policies S2.2.1, S2.2.2, S2.3.1, S2.3.2, S2.3.3, S2.3.5, S2.3.6, and S2.3.7, outlined above.

Project Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-4.

Level of Significance: Less Than Significant Impact With General Plan Policies and Mitigation Incorporated.

5.6.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Hazards and hazardous materials impacts associated with implementation of the proposed project would be less than significant with compliance and/or adherence to the relevant federal, state, and local regulations, General Plan Polices, and Mitigation Measures HAZ-1 through HAZ-4. Therefore, no significant unavoidable hazards and hazardous materials-related impacts would occur as a result of the proposed project.

5.7 Hydrology and Water Quality

5.7 HYDROLOGY AND WATER QUALITY

This section analyzes potential impacts on existing drainage patterns, surface hydrology, flood control facilities, and water quality conditions in the project area. Mitigation measures are recommended to avoid or reduce potential impacts to a less than significant level. The discussion in this section is based on information and conclusions contained in the following studies:

- City of Palmdale Master Plan of Drainage Update (August 1996);
- City of Palmdale General Plan, Land Use Element (January 25, 1993);
- City of Palmdale General Plan, Public Services Element (January 25, 1993); and
- State of the City Report (June 2009).

5.7.1 EXISTING SETTING

SURFACE WATERS

The project area forms part of the Antelope Valley, which is a large, closed basin in the western Mojave Desert. With annual average precipitation of less than ten inches on the valley floor and over 12 inches in the local mountains, the Valley's climate is generally dry. Runoff water from the San Gabriel Mountains flows in the local washes and creeks, and ultimately toward Rogers, Rosamond, and Buckhorn Dry Lakes. The major watercourses flowing through Palmdale are Amargosa Creek, Anaverde Creek, Little Rock Wash, and Big Rock Wash. Given the area's arid climate, flow through these creeks and washes generally occurs only during heavy rainfall or from the local mountains' melting snowpack. The primary surface water source located in the in the rezone project area is Anaverde Creek.

The *1988 City of Palmdale Master Plan of Drainage* was prepared in order to analyze the pre- and ultimate development conditions (10-, 25-, and 50-year storms) for six watersheds, Significant additional information and changes within the watersheds were addressed in the *1996 Master Plan of Drainage Update* (Master Plan).

City Watersheds

The following watershed descriptions are based on the General Plan and Master Plan:

Portal Ridge Watershed. Portal Ridge watershed extends northerly and northeasterly from Portal and Ritter Ridges, through a portion of the City of Palmdale, unincorporated Los Angeles County, and the City of Lancaster, to Portal Ridge Wash between Avenue I and Avenue J. Portal Ridge Wash, which drains the areas between 140th Street West and 17th Street West, confluences with Fairmont Wash near Avenue H west of the Antelope Valley Freeway. It flows into the existing Freeway Basin located along the east side of the Antelope Valley Freeway north of Avenue H. The basin outflow reaches the normal dry Rosamond Lake at the Kern/Los Angeles County boundary.

Amargosa Creek. This creek collects runoff from the northern face of the Sierra Pelona Mountains and the southern slopes of Portal and Ritter Ridges. It begins at the mouth of the San Francisquito Canyon, travels the length of Leona Valley, and enters Palmdale along Elizabeth Lake Road, in the vicinity of the 25th Street West and Elizabeth Lake Road

intersection. The creek travels north to Avenue K, where it is divided into two flows. The western flow is concentrated at 20th Street West and Avenue J in a channel constructed for the Antelope Valley Freeway. It continues toward the north, running parallel to the freeway, to a retention basin located near the intersection of Avenue G and 20th Street West in Lancaster. The second flow is diverted to the east of Lancaster, generally following a northerly course between the Union Pacific Railroad and 10th Street East. It merges with other flood waters at Avenue G.

Anaverde Creek. This creek collects runoff from the Sierra Pelona Range and drains easterly through the Anaverde Valley. The creek then flows northerly along Sierra Highway into United States Air Force Plant 42 (Plant 42), where it is initially collected in the Lockheed Drainage Channel and then held in the Air Force Retention Basin. Overflow from the retention basin would flow due north along 20th and 30th Streets East, and merge with other flood waters at Avenue G.

Little Rock Wash. Little Rock Wash collects runoff from the San Gabriel Mountains in Little Rock Canyon and travels just west of Littlerock through the east side of Palmdale and proposed Palmdale Regional Airport in a northerly direction to Rosamond Dry Lake.

Big Rock Wash. Big Rock Wash collects runoff from the San Gabriel Mountains in Pallett and Big Rock Creeks. Traveling north from Holcomb Ridge through Pearblossom, it is divided by the Alpine, Lovejoy, and Piute Buttes, and merges at Avenue E, prior to entering Edwards Air Force Base and Rogers Dry Lake.

Floodplain Mapping

In Palmdale, intermittent flooding and sheetwashing occur along major drainages and adjacent areas. Within the Palmdale area, floodplains are associated with the Amargosa Creek, Anaverde Creek, Little Rock Wash, and Big Rock Wash; refer to State of the City (SOC) Report Figure 2.0-5 (Flood Plains). As indicated in SOC Report Figure 2.0-5, the majority of the City is not located within a floodplain; refer to the *Federal Emergency Management Agency* Section below for a detailed discussion.

STORM DRAINAGE

Storm drains (or stormwater conveyance system) are private and public drainage facilities, other than sanitary sewers, through which surface water runoff (typically in urban areas) is transported to another location where the water is discharged to a natural drainage or water course (most likely) or to a treatment facility. The main purpose of the storm drain system is to prevent flooding by transporting water away from developed areas.

The City's Master Plan shows the existing and proposed local and regional facilities within the City. The objective of the Master Plan is to provide a plan to construct both local and regional facilities to minimize flooding and flood damage within the City. The City has a Capital Improvement Program (CIP), which funds the construction of the Master Plan facilities. Much of the City lacks local storm drain and regional channel facilities. Recent development provides local storm drains that drain into onsite retention basins.

In the rezone project area, the Master Plan recommended the following regional facilities be constructed:

- Reinforced concrete box (RCB) along Sierra Boulevard from the proposed Anaverde basin to the proposed Lockheed basin.
- A RCB along 15th Street East from Avenue R to Avenue P; refer to Master Plan Exhibit 3.
- Several local storm drains, which would confluence with the regional facilities, were also proposed, as illustrated on Master Plan Exhibit 3.

LOCALIZED FLOODING

Rainfall in the Antelope Valley is relatively sparse. However, localized flooding has occurred in Palmdale when rainfall is heavy and prolonged, generating increases in storm runoff. Urban development reduces the total ground absorption area by creating impermeable surfaces (structures, pavement, streets, etc.). Storm runoff, increased by the presence of impermeable surfaces, flows from developed areas and contributes to street flooding. Additionally, since most drainage courses in Palmdale are unimproved, stormwater overflows into adjacent flat areas and contributes to sheet flow.

Throughout most of the year, very little surface runoff from the upper watersheds ever reaches the City. However, given the lack of a completed regional drainage system, localized flooding has occurred in Palmdale when rainfall is heavy and prolonged, generating increases in storm runoff. Impermeable surfaces in hillsides and some developed areas cause increased runoff velocity. The high runoff velocity, which prevents substantial ground seepage along with the lack of a completed storm drainage system, results in the overflow of existing flood control facilities causing intermittent flooding in the flat low-lying areas. The velocity also makes the runoff erosive and hazardous.

Although, the amount and frequency of rain is variable, and flood waters may be diverted, the lack of a completed regional drainage system continues to result in local flooding problems. The City's Master Drainage Plan is anticipated to mitigate localized flooding impacts within the City and downstream. Retention and detention basins, pipes, and channels are proposed throughout the City to protect existing and future development from flooding.

STORMWATER QUALITY

This section discusses the types of contaminants that may be found in existing stormwater runoff.

Nonpoint Source Pollutants

A net effect of urbanization can be to increase pollutant export. However, an important consideration in evaluating stormwater quality from a project is to determine whether it impairs the beneficial use of the receiving waters. Nonpoint source pollutants have been characterized by the major categories outlined below, in order to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements,

however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. The backgrounds of these standard water quality categories provide an understanding of typical urbanization impacts.

SEDIMENT

Sediment is made up of tiny soil particles that are washed or blown into surface waters. It is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants including nutrients, trace metals, and hydrocarbons. Construction sites are the largest source of sediment for urban areas under development. Another major source of sediment is stream bank erosion, which may be accelerated by increases in peak rates and volumes of runoff due to urbanization.

NUTRIENTS

Nutrients are a major concern for surface water quality, especially phosphorous and nitrogen. The orthophosphorous form of phosphorus is readily available for plant growth. The ammonium form of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate and nitrite forms of nitrogen in a process called nitrification. This process consumes large amounts of oxygen, which can impair the dissolved oxygen levels in water. The nitrate form of nitrogen is very soluble and is found naturally at low levels in water. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching groundwater. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. As a general rule of thumb, nutrient export is greatest from development sites with the most impervious areas. Other problems resulting from excess nutrients are 1) surface algal scums; 2) water discolorations; 3) odors; 4) toxic releases; and, 5) overgrowth of plants. Common measures for nutrients are total nitrogen, organic nitrogen, total Kjeldahl nitrogen (TKN), nitrate, ammonia, total phosphate, and total organic carbon (TOC).

TRACE METALS

Trace metals are primarily a concern because of their toxic effects on aquatic life and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban runoff is attached to sediment and this effectively reduces the level, which is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with the sediment settle out rapidly and accumulate in the soils. Also, urban runoff events typically occur over a shorter duration, which reduces the amount of exposure that could pollute the aquatic environment. The toxicity of trace metals in runoff varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

OXYGEN-DEMANDING SUBSTANCES

Aquatic life is dependent on the level of dissolved oxygen (DO) in water. When organic matter is consumed by microorganisms, DO is consumed in the process. A rainfall event can deposit large quantities of oxygen-demanding substances in lakes and streams. The biochemical oxygen demand of typical urban runoff is on the same order of magnitude as the effluent from

an effective secondary wastewater treatment plant. A DO problem arises when the rate of oxygen-demanding material exceeds the rate of replenishment. Oxygen demand is estimated by the direct measure of DO and indirect measures such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), oils and greases, and total organic carbon (TOC).

BACTERIA

Bacteria levels in undiluted urban runoff usually exceed public health standards for recreational water contact. Studies have found that total coliform counts exceeded EPA water quality criteria at almost every site and almost every time it rained. The coliform bacteria that are detected may not be a health risk in themselves, but are often associated with human pathogens.

OIL AND GREASE

Oil and grease contain a wide variety of hydrocarbons some of which could be toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become attached to it. The major source of hydrocarbons in urban runoff is through leakage of crankcase oil and other lubricating agents from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbons export, although illegal disposal of waste oil into stormwater can be a local problem.

OTHER TOXIC CHEMICALS

Priority pollutants are generally related to hazardous wastes or toxic chemicals and can be sometimes detected in stormwater. Priority pollutant scans have been conducted in previous studies of urban runoff, which evaluated the presence of over 120 toxic chemicals and compounds. The scans rarely revealed toxins that exceeded the current safety criteria. The urban runoff scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous wastes). Measures of priority pollutants in stormwater include: 1) phthalate (plasticizer compound); 2) phenols and creosols (wood preservatives); 3) pesticides and herbicides; 4) oils and greases; and 5) metals.

Physical Characteristics of Surface Water Quality

Standard parameters, which can assess the quality of stormwater, provide a method of measuring impairment. A background of these typical characteristics assists in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface runoff. In an urban environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, a high density of automobile traffic makes a number of potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water have traditionally served as the means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for stormwater make up a long list and are classified in many ways. In many cases, the concentration of an urban pollutant, rather than the annual load of that pollutant, is needed to assess a water quality problem. Some of the physical, chemical, or biological characteristics that evaluate the quality of the surface runoff are addressed below:

DISSOLVED OXYGEN (DO)

DO in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The DO concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. Dissolved oxygen is a transient property that can fluctuate rapidly in time and space. Dissolved oxygen represents the status of the water system at a particular point and time of sampling. The decomposition of organic debris in water is a slow process and the resulting changes in oxygen status respond slowly also. The oxygen demand is an indication of the pollutant load and includes measurements of Biochemical Oxygen Demand (BOD) or Chemical Oxygen Demand (COD).

BIOCHEMICAL OXYGEN DEMAND (BOD)

The BOD is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory at 20 degrees Celsius, after which the residual DO is measured. The BOD values commonly referenced are the standard five-day values. These values are useful in assessing stream pollution loads and for comparison purposes.

CHEMICAL OXYGEN DEMAND (COD)

The COD is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on bacteriological actions as with BOD. COD does not necessarily provide a good index of oxygen demanding properties in natural waters.

TOTAL DISSOLVED SOLIDS (TDS)

TDS concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. There are several reasons why TDS are an important indicator of water quality. Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water. TDS are also a major determinant of aquatic habitat. TDS affects saturation concentration of dissolved oxygen and influence the ability of a water body to assimilate wastes.

pH

The pH of water is the negative log, base 10, of the hydrogen ion (H+) activity. A pH of seven is neutral; a pH greater than seven indicates alkaline water; a pH less than seven represents acidic water. In natural water, carbon dioxide reactions are some of the most important in

establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life and generally toxic limits are pH values less than 4.8 and greater than 9.2.

ALKALINITY

Alkalinity is the opposite of acidity, representing the capacity of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities less than 200 mg/l and ranges of alkalinity of 100 to 200mg/l apparently support well-diversified aquatic life.

SPECIFIC CONDUCTANCE

The specific conductivity of water, or its ability to conduct an electric current, is related to the total dissolved ionic solids. Long-term monitoring of a project's waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities in excess of 2,000 micro-ohms per centimeter (µohms/cm) indicate a TDS level too high for most freshwater fish.

TURBIDITY

The clarity of water is an important indicator of water quality that relates to the ability of photosynthetic light to penetrate. Turbidity is an indicator of the property of water that causes light to become scattered or absorbed. Turbidity is caused by suspended clays and other organic particles. It can be used as an indicator of certain water quality constituents such as predicting sediment concentrations.

NITROGEN (N)

Sources of nitrogen in stormwater are from the additions of organic matter or chemical additions to water bodies. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication since nitrification consumes DO in the water. Organic nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen (N/N), a form available for plants. High concentrations of N/N in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of N/N is needed for algal blooms. Some fish life can be affected when N/N exceeds 4.2 mg/l. There are a number of ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen include Kjeldahl nitrogen (organic nitrogen plus ammonia); ammonia; nitrite plus nitrate; nitrite; and, nitrogen in plants. The principal water quality criterion for nitrogen focuses on nitrate and ammonia.

PHOSPHORUS (P)

Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban stormwater discharge is generally from fertilizers and industrial products. Orthophosphate is soluble and is considered to be the only biologically available form of phosphorus. Since phosphorus strongly associates with solid particles and is a significant part

of organic material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. The primary methods of measurement include detecting orthophosphate and total phosphorus.

EXISTING STORMWATER RUNOFF

The City of Palmdale site lacks any measured data on existing stormwater runoff quality. In the absence of specific data, existing stormwater quality can be qualitatively discussed by relating typical pollutants to specific land uses. Existing development within the City includes residential and non-residential (i.e., commercial, industrial, public facilities [institutional, schools, and public facilities], and airport) uses. Existing development within the rezone project area includes residential, commercial, civic, and public facility uses. These residential and non-residential land uses have long-term effects on runoff. The potential for negative water quality effects is generally correlated to the density of development and the amount of impervious area associated with the development. Vacant land is also interspersed throughout the City and rezone project area.

Residential Activities and Development

Detached residential development has the potential to generate sediments such as nutrients and organic substances (including fertilizers), pesticides (from landscape application), trash and debris (including household hazardous waste), oxygen demand, oil and grease (from driveways and roads), and bacteria and viruses.

Municipal Activities and Development

Infrastructure and facilities (roads, streets, highways, parking facilities, storm drains, and flood management facilities) present a threat to water quality. Other facilities such as parks, airfields, water treatment plants, wastewater reclamation plants, landfills and transfer centers, and corporate yards also present water quality issues. Municipalities may also own and administer areas and activities tributary to impaired water bodies and/or water quality sensitive areas that might be harmful to water quality.

Commercial, Civic, and Industrial Activities and Development

Certain commercial activities have the potential to generate pollutants that can negatively affect stormwater quality. Auto repair shops in particular have the potential to generate heavy metals, oils, toxic chemicals and other oxygen-demanding substances. In addition, restaurants have the potential to generate pollutants such as grease, trash, and other oxygen-demanding substances.

Industrial activities can significantly affect water quality, depending on the type of pollutants and activity. In general, industrial activity is associated with effects on ambient water temperature, alkalinity levels of total suspended solids and oxygen demand. Certain industrial uses may entail the generation of heavy metals, nutrients, toxic chemicals, and other pollutants. Industrial uses that take place indoors do not have stormwater pollutant exposure and present little threat to stormwater quality.

Vacant Lands

Portions of the City and rezone project area are comprised of unimproved vacant lands, which are likely to produce suspended solids. In addition, these vacant areas do not currently contain any structural Best Management Practices (BMP), which would potentially decrease the amount of pollutants in stormwater runoff. It is likely that portions of potential pollutants are removed through the use of natural conveyance rather than a storm drain. Conveying flows overland through vegetation affords some infiltration and biofiltration of runoff and thus, potential pollutant removal. A drawback to conveying flows overland is that it increases erosion problems, thus, increasing suspended solids in the runoff.

RECEIVING WATERS

The project area's primary receiving waters are Armagosa Creek, Anaverde Creek, Little Rock Wash, and Big Rock Wash. These receiving waters are included in the Water Quality Control Plan for the Lahotan Region North and South Basins (Basin Plan) last amended in November 2010. None of the local creeks or washes are on the Clean Water Act Section 303(d) list. However, the Basin Plan lists and defines the beneficial uses of the area's existing drainage features (Armagosa Creek, Little Rock Wash, and Big Rock Wash), as follows:

- *Agricultural Supply (AGR)* – Beneficial uses of waters used for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, and support of vegetation for range grazing.

- *Cold Freshwater Habitat (COLD)* – Beneficial uses of waters that support cold water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

- *Ground Water Recharge (GWR)* – Beneficial uses of waters used for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

- *Industrial Service Supply (IND)* – Beneficial uses of waters used for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, geothermal energy production, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.

- *Municipal and Domestic Supply (MUN)* – Beneficial uses of waters used for community, military, or individual water supply systems including, but not limited to, drinking water supply.

- *Rare, Threatened, or Endangered Species (RARE)* – Beneficial uses of waters that support habitat necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened or endangered.

- *Water Contact Recreation (REC-1)* – Beneficial uses of waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing,

skin and scuba diving, surfing, white water activities, fishing, and use of natural hot springs.

- *Noncontact Water Recreation (REC-2)* – Beneficial uses of waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

- *Inland Saline Water Habitat (SAL)* – Beneficial uses of waters that support inland saline water ecosystems including, but not limited to, preservation and enhancement of aquatic saline habitats, vegetation, fish, and wildlife, including invertebrates.

- *Spawning, Reproduction, and Development (SPWN)* – Beneficial uses of waters that support high quality aquatic habitat necessary for reproduction and early development of fish and wildlife.

- *Warm Freshwater Habitat (WARM)* – Beneficial uses of waters that support warm water ecosystems including, but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.

- *Wildlife Habitat (WILD)* – Beneficial uses of waters that support wildlife habitats including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.

GROUNDWATER

Groundwater System

An alluvial fan is a very common desert landform built as flood waters transport sand and gravel from the mountains to lower elevations. Water infiltrates the Antelope Valley alluvial fans, percolating to lower sand levels that serve as aquifers. Sand can hold an abundant amount of groundwater, given its high porosity and permeability. Groundwater moves freely through these course settlements.

The Antelope Valley Groundwater Basin (AV Basin), which underlies the City, consists of two primary aquifers: the upper (principal) aquifer; and the lower (deep) aquifer. These aquifers are separated vertically by lacustrine deposits[1] and horizontally by fault zones; refer to GPEIR Exhibit 3-13 (Aquifers and Groundwater Surface). The principal aquifer is an unconfined aquifer, while the deep aquifer is generally considered to be confined. In general, the principal aquifer is thickest in the southern portion of the Antelope Valley Region near the San Gabriel Mountains and the deep aquifer is thickest in the vicinity of the dry lakes on Edwards AFB. The principal aquifer overlies the lacustrine deposits and supplies all water pumped from wells in the Antelope Valley. The deep aquifer underlies the deposits. Water moves downward from the principal aquifer to the deep aquifer on the western and southern limits of the lacustrine deposits. Upward movement from the deep aquifer to the principal aquifer occurs in areas of extensive pumping of groundwater.

[1] Lacustrine deposits are comprised of silts and clays deposited when an inland lake covered the valley.

The AV Basin is divided into seven sub-basins, as illustrated on GPEIR Exhibit 3-14 (Antelope Valley Groundwater Basin). The rezone project area is located in the Lancaster Subbasin, which is the largest of the seven subbasins. This sub-basin contains the greatest number of water wells and supplies the majority of groundwater to the Palmdale area. Groundwater movement is generally northeasterly from the foothills of the San Gabriel and Sierra Pelona Mountains towards the Rosamond and Rodgers Dry Lakes. Distorted movement occurs due to pumping depressions found at Plant 42, among others.

Groundwater Storage Capacity and Recharge

The total storage capacity of the AV Basin has been reported at between 68 and 70 million acre feet (MAF).[2] The Antelope Valley is not part of the larger Los Angeles County recharge area. The surrounding mountains funnel water towards the Valley floor, thus providing the Valley with a self-contained water cycle. The total recharge is the quantity of water that goes back to the underground basin or water source. Natural recharge of groundwater in the area is through the percolation of surface water. The percolation of storm runoff in the alluvial fans of the Amargosa and Anaverde Creeks, and Big Rock and Little Rock Washes provides recharge to the Lancaster sub-basin, which underlies both the rezone project area and the remainder of the City. Recharge rates in the area are subject to the fluctuation of winter rains.

The Palmdale area is located within the jurisdiction of both the Palmdale Water District (PWD) and the Los Angeles County Water Works District 40 (District 40). In 2010, PWD received 19,800 acre feet (AF) of water, of which approximately 40 percent was groundwater. Similarly, District 40 received 46,800 AF of water in 2010, of which approximately 16 percent was groundwater. The AV Basin is at the present time under adjudicated, thus, is not currently governed by a watermaster and there is no water management plan. Therefore, there are no restrictions on groundwater extractions within the Basin. The U.S. Geological Survey reports that groundwater extractions have exceeded the estimated natural recharge of the basin since the 1920s. This overdrafting or pumping has caused water levels to decline in excess of the recharge. Groundwater recharge through the ground seepage of rainwater is limited to an average of nine inches of annual rainfall. With evaporation, the actual amount of water that reaches the basins by percolation is further reduced.

Groundwater wells provide 80 percent of Palmdale's water needs, while the California Aqueduct provides the remaining 20 percent. The continued reliance on groundwater to meet current and increasing demands for water due to urbanization in the Valley has lowered the groundwater table. To counteract overdrafting, the Los Angeles County Department of Public Works has established regional recharge programs. Refer to Section 5.13, Water, for further discussion regarding the existing conditions in the AV Basin and the project's potential to deplete groundwater supplies or substantially interfere with groundwater recharge.

5.7.2 REGULATORY SETTING

Applicable Federal, State, and local regulatory policies and laws that apply to hydrology, drainage, and water quality are discussed below. Surface water quality is subject to Federal, State, and local water quality requirements administered and enforced by the U.S. Environmental Protection Agency (U.S. EPA), the State Water Resources Control Board

[2] Regional Water Management Group, *Antelope Valley Integrated Regional Water Management Plan*, 2007, Page 2-16.

(SWRCB), and the Regional Water Quality Control Boards (RWQCBs) with cooperation from each county.

CLEAN WATER ACT

The principal law governing pollution of the nation's surface waters is the Clean Water Act (CWA), formerly known as the Federal Water Pollution Control Act (FWPCA). Originally enacted in 1948, it has been amended several times since. As amended in 1977, the law became commonly known as the CWA. The CWA is a Federal law that protects the nation's surface waters, including lakes, rivers, coastal wetlands, and "waters of the United States." The CWA includes provisions that authorize Federal financial assistance for municipal sewage treatment plants and the regulatory requirements that apply to industrial and municipal dischargers. The law authorized states to set effluent standards on an industry basis. In addition, the CWA requires states to adopt water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses."

The CWA specifies that discharges to waters are illegal, unless authorized by an appropriate permit. The permits regulate the discharge of dredged and fill materials, construction-related stormwater discharges, and activities that may result in discharges of pollutants to "waters of the U.S." Section 404 of the CWA establishes a permit program for the discharge of dredge or fill materials into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE). If waters of the U.S. are located on or downstream of a project site, the project may discharge to them, and if impacts on them are anticipated, the project must obtain a CWA Section 401 Water Quality Certification from the appropriate RWQCB. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the U.S. This permitting program is administered by the RWQCBs. In addition, Section 303 and 304 of the CWA provide for water quality standards, criteria, and guidelines.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act functions in cooperation with the CWA to establish the State Water Resources Control Board (SWRCB). The SWRCB and nine Regional Water Quality Control Boards (RWQCB) overseen by the SWRCB, are responsible for protecting California's surface and groundwater supplies. The Porter-Cologne Water Quality Control Act establishes Basin Plans for each of the nine regions overseen by the RWQCB that designate the beneficial uses of California's rivers and groundwater basins. The Basin Plans also establish narrative and numerical water quality objectives for those waters. Basin Plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act is also responsible for implementing CWA Sections 401-402 and 303(d) to SWRCB and RWQCBs.

Impaired Waterbodies

The CWA Section 303(d) and the California's Porter-Cologne Water Quality Control Act require the State to establish the beneficial uses of its State waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes a Total Maximum Daily Load (TMDL) program, which sets the maximum quantity of a particular contaminant that a water

body can maintain without experiencing adverse effects, to guide the application of State and regional water quality standards. Section 303(d) also requires the State to identify "impaired" streams (water bodies affected by the presence of pollutants or contaminants) and to establish the TMDL of each pollutant for each identified stream.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

As authorized by the CWA, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit. However, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Construction Stormwater NPDES

The SWRCB administers water rights, water pollution control, and water quality functions throughout the State, while the RWQCBs conduct planning, permitting and enforcement activities. While the U.S. EPA allows two permitting options to meet NPDES requirements (individual permits and general permits), the SWRCB has elected to adopt one statewide permit. In 2009, the SWRCB adopted the new Construction General Permit, Order No. 2009-0009-DWQ (CGP). The new CGP replaces Order No. 99-08-DWQ, effective July 1, 2010. The permit incorporates several concepts new to construction stormwater permits, which are designed to provide increased water quality protection. The CGP requires that construction sites with 1.0 acre or greater of soil disturbance or less than 1.0 acre, but part of a greater common plan of development, apply for coverage for discharges under the CGP by submitting a Notice of Intent (NOI) for coverage, developing a Stormwater Pollution Prevention Plan (SWPPP), and implementing Best Management Practices (BMPs) to address construction site pollutants. The new CGP also requires post-construction BMPs and Low Impact Development (LID) incorporation starting in September 2012. BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. Construction or temporary BMPs are the required procedures for protecting the watershed during a project's construction phase.

LID measures provide a means to address both pollutant removal and the protection of predevelopment hydrological functions. Some basic LID principles include conservation of natural features, minimization of impervious surfaces, hydraulic disconnects, disbursement of runoff and phytoremediation. LID practices such as bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips and permeable pavements perform both runoff volume reduction and pollutant filtering functions.

Notice of Intent. The NOI certifies that the applicant will comply with conditions in the statewide general NPDES permit. It is not a permit application and does not require approval, although an annual fee must be submitted with the NOI.

Stormwater Pollution Prevention Plan. The SWPPP is directed toward construction staff and describes the erosion and runoff control measures to be used during and after construction, and provides a plan to inspect and maintain these control measures. The SWPPP may be revised during construction in response to changed conditions, or if the properly installed BMPs are ineffective in preventing sediment transport off the site. Revisions to the SWPPP are also required if there are changes in activities which could result in a significant amount of pollutants discharged in stormwater.

Notice of Termination. The State Board must be notified (via a Notice of Termination form) once construction is complete. It must also be notified if a change of ownership occurs during construction. In this case, a revised NOI must be submitted, and the SWPPP must be revised by the new owner to reflect any changes in construction conditions.

Maintenance. The CGP requires that the project owner arrange for maintenance of drainage/ stormwater control facilities after project completion; maintenance may be done by private parties or by a public agency such as a community service district. Municipalities may require maintenance agreements. Construction project proponents may request to be placed under individual NPDES permits rather than the general permit. The Regional Board may issue individual stormwater NPDES permits to construction projects when more stringent controls are necessary to protect water quality. Individual construction projects may also be regulated under a municipality's NPDES management program.

Municipal Stormwater Permit

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases: Under Phase I, for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities, and Phase II, for smaller municipalities.

Enacted in 1990, Phase I of the Stormwater Rule applied to municipal separate storm sewer systems (MS4s) with a service population of 100,000 or more, to construction projects affecting 5.0 acres or more of land disturbance, and to certain industrial activities. Under Phase I, the RWQCB have adopted NPDES stormwater permits for medium and large municipalities, most of which are issued to a group of co-permittees encompassing an entire metropolitan area. The MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants.

Under the NPDES Phase II Rule and the MS4 General Permit, Small MS4s that meet specific criteria must obtain MS4 General Permit coverage for stormwater discharges. Palmdale is under the jurisdiction of the Lahontan RWQCB. The Lahontan RWQCB issues MS4 General Permit coverage for a large region, which includes areas from the Lake Tahoe Basin to Palmdale. In 2003, the City of Palmdale submitted an application and Stormwater Management Program (SWMP) to the RWQCB to receive coverage under the General Permit. The RWQCB notified the City that the RWQCB does not intend to regulate the City of Palmdale under the General Permit. Specifically, the USACE completed a Non-Jurisdictional Determination for the Amargosa Creek watershed in June 2004. Based on the findings, the RWQCB found that stormwater discharges within the Amargosa Creek watershed generated by Palmdale are not

subject to the General Permit, because they do not constitute discharges to waters of the United States.[3]

It is noted that the City is only subject to the CGP discussed above, because they drain only to waters of the State (not the U.S.). Therefore, the only requirements they have currently are NOI, SWPPP, and an Erosion Control Plan. It is anticipated in September 2012 that the CGP will require the water balance calculations, which will effectively require the area to have long-term (post-construction) water quality controls through LID.

NATIONAL FLOOD INSURANCE ACT

With the passage of the National Flood Insurance Act of 1968, the U.S. Congress established the National Flood Insurance Program (NFIP), enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

The Flood Disaster Protection Act of 1973 prohibits federal agencies from providing financial assistance for acquisition or construction of buildings and certain disaster assistance in the floodplains in any community that did not participate in the NFIP by July 1, 1975, or within one year of being identified as flood-prone. This law required federal agencies and federally insured or regulated lenders to require flood insurance on all grants and loans for acquisition or construction of buildings in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP. This requirement is referred to as the Mandatory Flood Insurance Purchase Requirement. The SFHA is that land within the floodplain of a community subject to a one-percent or greater chance of flooding in any given year, commonly referred to as the 100-year flood.

In 1994, Congress amended the 1968 Act and the 1973 Act with the National Flood Insurance Reform Act (NFIRA). The 1994 Act included measures to:

1. Increase compliance by mortgage lenders;
2. Increase the amount of flood insurance coverage that can be purchased;
3. Provide flood insurance coverage for the cost of complying with floodplain management regulations by individual property owners;
4. Establish a Flood Mitigation Assistance grant program to assist States and communities to develop mitigation plans and implement measures to reduce future flood damages to structures;
5. Codify the NFIP's Community Rating System; and
6. Require FEMA to assess its flood hazard map inventory at least once every five years.

[3] Harold J. Singer, Executive Officer, California Regional Water Quality Control Board Lahontan Region, January 18, 2005.

Federal Emergency Management Agency

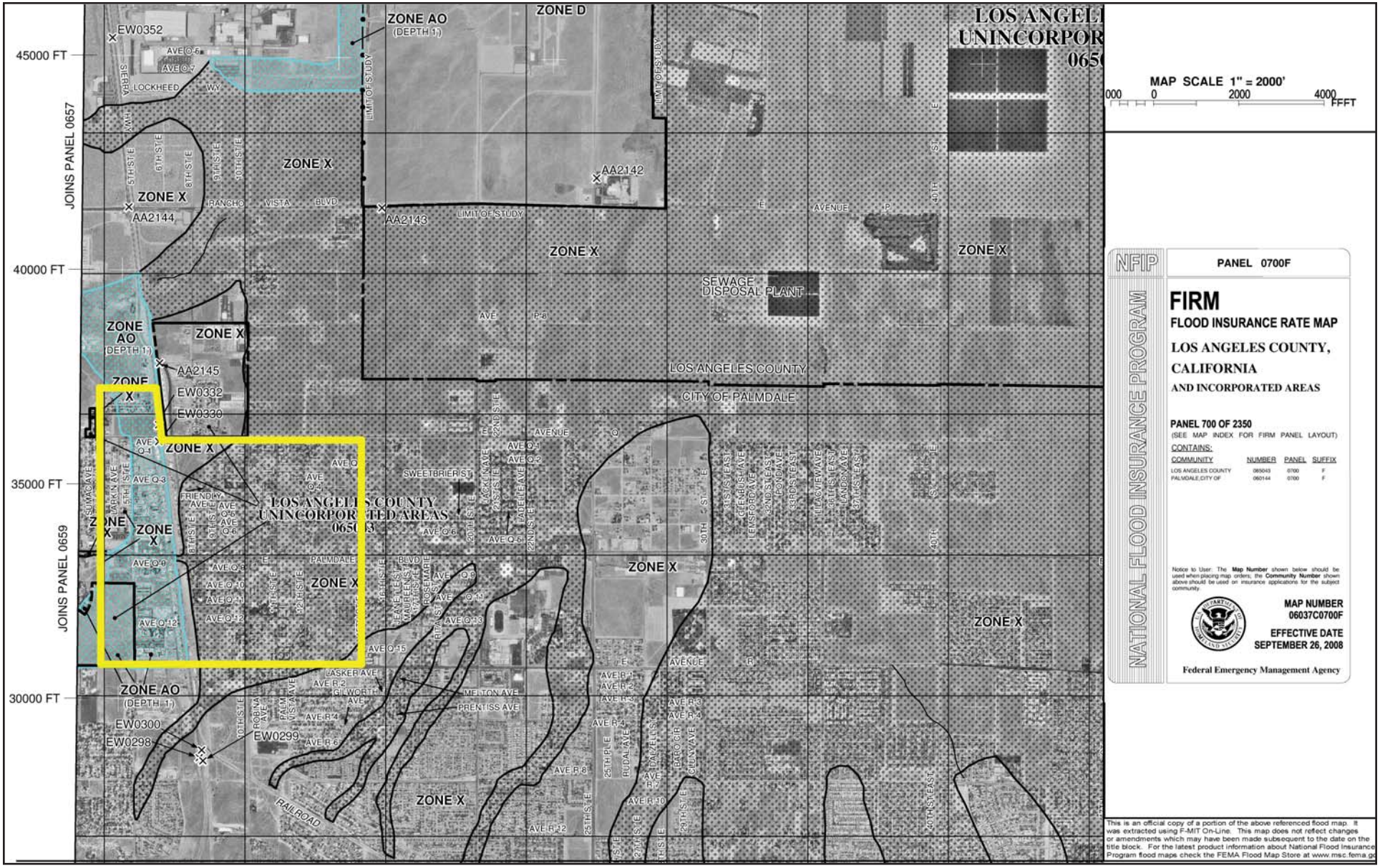
On March 1, 2003, the Federal Emergency Management Agency (FEMA) became part of the U.S. Department of Homeland Security (DHS). FEMA's primary mission is to reduce the loss of life and property and protect the Nation from all hazards, including flooding, among others. FEMA is responsible for administering the NFIP, which enables property owners in participating communities to purchase flood insurance; refer to the *National Flood Insurance Program* discussion above.

Flood is a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties. The term "100-year flood" is defined by FEMA, as the flood elevation that has a one percent chance of being equaled or exceeded each year. A "500-year flood" is one that has a 0.2 percent chance of occurring each year. A 500-year flood event would be slightly deeper and cover a greater area than a 100-year flood event.

Flood zones are geographic areas that FEMA defines, based on studies of flood risk. The zone boundaries are shown on flood hazard maps, also called Flood Insurance Rate Maps (FIRM). Flood hazard areas identified on the FIRM are identified as a Special Flood Hazard Area (SFHA). The SFHA is that land within the floodplain of a community subject to a one-percent or greater chance of flooding in any given year, commonly referred to as the 100-year flood. The one-percent-annual-chance flood (also referred to as the base flood or 100-year flood) represents a magnitude and frequency that has a statistical probability of being equaled or exceeded in any given year, the 100-year flood has a 26-percent (or one in four) chance of occurring over a 30-year period.

SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. These are high-risk flood areas where special flood, mudflow, or flood-related erosion hazards exist and flood insurance is mandatory. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. Low-to-Moderate Risk Zones or Non-Special Flood Hazard Areas (Zones B, C, X) are areas that are not in any immediate danger from flooding caused by overflowing rivers or hard rains. Insurance purchase is not required in these zones. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

SOC Report Figure 2.0-5, Flood Plains, illustrates the boundaries of the City's floodplains and indicates that some of the residentially-zoned lands anticipated for residential development are located within or adjacent to the City's floodplains. Additionally, portions of the rezone project area are located within or adjacent to floodplains (based on FIRM Panel 06037C0700F); refer to Exhibit 5.7-1, *FEMA FIRM Map – Rezone Project Area*.



- Rezone Project Area (approximate)

CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

RBF CONSULTING
A Baker Company

06/12 • JN 10-108426

FEMA FIRM Map – Rezone Project Area

Exhibit 5.7-1

CITY OF PALMDALE GENERAL PLAN

According to the General Plan Safety Element, it is the City's goal to "minimize danger and damage to public health, safety, and welfare resulting from natural hazards" (Goal S1). To this end, it is the City's objective to minimize hazards associated with flood plains in the area (Objective S1.2).

Goal 1 of the General Plan Public Services Element is to "ensure that adequate public services and facilities are available to support development in an efficient and orderly manner." To this end, it is the City's objective to:

Objective PS1.2: Ensure that new development is coordinated with provision of backbone infrastructure within the site and with adjacent properties, to promote cost efficient construction and maintenance, and ease of access to facilities.

Objective PS1.3: Utilize land use strategies to maximize use of infrastructure facilities.

Objective PS1.4: Develop and implement City programs to plan for, construct and maintain municipal facilities.

Objective PS1.5: Coordinate with other jurisdictions in the Antelope Valley to provide for regional infrastructure improvements, minimize impacts of Palmdale development on adjacent jurisdictions, and provide unified support for mutually beneficial improvements requiring outside approvals and/or funding.

CITY OF PALMDALE MUNICIPAL CODE

Section 8.04.265 Chapter 70, Excavation and Grading

Palmdale Municipal Code (PMC) Section 8.04.265 Chapter 70, *Excavation and Grading*, was adopted as the excavation and grading provisions of the Palmdale Building Code. This chapter sets forth regulations for the control of excavation, grading, and earthwork construction, including fills or embankments, and for the control of grading site runoff, including erosion, sediments and construction related pollutants. These regulations establish the minimum standards.

Pursuant to PMC Section 8.04.265 Chapter 70, Section 7010, *Stormwater Management Plan (Erosion Control*), no grading permit shall be issued for work to be commenced between October 1 of any year and April 15 of the following calendar year, unless the plans for such work include a stormwater management plan with details of protective measures, as may be necessary to protect adjoining property from damage by erosion, flooding, or the deposition of mud, debris, or construction-related pollutants, which may originate from the site or result from such grading operation.

According to PMC Section 8.04.265 Chapter 70, Section 7013, *Responsibility*, the permittee or the permittee's agent shall carry out the proposed work in accordance with the approved plans and specifications and in compliance with all the requirements of this code. The permittee is required to put into effect and maintain all mitigation measures required under the National Pollution Discharge Elimination System (NPDES) permit issued to the City of Palmdale (PMC

Section 8.04.265 Chapter 70, Section 7013.6, *Storm Water Control Measures*). Such measures are precautionary measures necessary to protect adjacent watercourses and public or private property from damage by erosion, flooding and deposition of mud, debris, and construction-related pollutants. The permittee is also required to maintain the site in such a manner as to minimize the impacts of storm water and construction-related pollutants due to the grading and related construction activities on adjacent public and private property and drainage courses. The required BMPs shall include, but not be limited to, those identified in this section (PMC Section 8.04.265 Chapter 70, Section 7013.8, *Best Management Practices*).

PMC Section 8.04.265 Chapter 70, Section 7018, *Drainage*, specifies that drainage structures and devices required by Chapter 70 shall conform to the provisions of this section as well as recognized principles of hydraulics. Drainage facilities are required to be designed to carry surface waters to the nearest practical street, storm drain, or natural watercourse approved by the City Engineer or other appropriate governmental agency as a safe place to deposit such waters. Desilting basins, filter barriers, or other methods, as approved by the City Engineer, are required, in order to remove sediments from surface waters before such waters are allowed to enter streets, storm drains, or natural watercourses.

Chapter 15.28, Floodplain Management

PMC Section 8.04.265 Chapter 70, Chapter 15.28, *Floodplain Management*, applies to all areas of special flood hazards within the City's jurisdiction, pursuant to the Flood Insurance Study (FIS) for the City of Palmdale (March 30, 1998) and accompanying FIRM (March 30, 1998), and all subsequent amendments and/or revisions (which are on file in the office of the City Engineer). Pursuant to PMC Section 15.28.040, *Compliance*, no structure or land shall be constructed, located, extended, converted, or altered without full compliance with the terms of Chapter 15.28 and other applicable regulations. A development permit would be required prior to construction or development within any area of special flood hazards (PMC Section 15.28.090, *Establishment of Development Permit*). PMC Sections 15.28.120, 15.28.130, 15.28.140, 15.28.150, and 15.28.155 outline the standards are required to be met in all areas of special flood hazards.

CITY OF PALMDALE ZONING ORDINANCE

Section 86.01, Landscaping Requirements

Pursuant to Zoning Ordinance Section 86.01, *Landscaping Requirements*, in all projects proposed or required to provide landscaping as part of the development plan, the landscaping shall be provided in accordance with the following provisions, among others:

B. All landscaping shall conform at all times to provisions of PMC Section 14.05 (Landscape Water Conservation). In addition, landscape area design shall be based upon the principles of water conservation; grouping of plant materials based upon similar water requirements, ecological requirements, climatic conditions, and selection of drought tolerant plant materials.

C. Landscape areas shall be provided with a permanent, fixed automatic irrigation system adequate to meet the water needs of all landscape material. Irrigation systems shall be designed to minimize maintenance and water consumption, and the irrigation systems

shall be properly designed and installed to ensure that overspray onto fences, walls and structures is eliminated to the maximum extent feasible.

H. Graded, undeveloped portions of project sites proposed for future expansion shall be kept in a weed free condition and appropriate ground cover may be required for erosion control. Graded pad sites may require temporary seeding and irrigation for erosion control and to mitigate visual impacts.

5.7.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to hydrology and water quality. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted) (refer to Section 5.13, Water);
- 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 that would result in substantial erosion or siltation on- or off-site;
- 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 run-off in a manner that would result in flooding on- or off-site;
- Create or contribute to run-off water that would exceed the capacity of existing or planned storm water drainage systems or provision of substantial additional sources of polluted run-off
- Otherwise substantially degrade water quality;
- 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;
- Place a structure within a 100-year flood hazard area that would impede or redirect flood flows;
- 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; and/or

- Result in inundation by seiche, tsunami, or mudflow (refer to Section 8.0, Effects Found Not to be Significant).

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

5.7.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM SURFACE WATER QUALITY

- **GRADING, EXCAVATION, AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD IMPACT WATER QUALITY.**

Impact Analysis: Implementation of the proposed project is anticipated to result in the development of 16,039 dwelling units (a net increase of approximately 13,000 dwelling units) and potential removal of approximately 71,630 square feet of non-residential uses. Project implementation could impact water quality. On a program level, the development of residentially-zoned lands throughout the City would result in the installation of new or replacement of existing public improvements, facilities, and utilities. In the rezone project area, project implementation would result in increased residential densities.

Development and redevelopment activities impact water quality by creating sources of erosion and sedimentation during the construction phase. Construction controls are separated from other water quality management because the measures are temporary and specific to the type of construction. Construction of the anticipated residential developments has the potential to produce typical pollutants such as nutrients, heavy metals, pesticides and herbicides, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers and sanitary wastes, fuel, and lubricants. Generally, standard safety precautions for handling and storing construction materials can adequately reduce the potential pollution of stormwater by these materials. These types of standard procedures can be extended to non-hazardous stormwater pollutants such as sawdust, concrete washout, and other wastes. Additionally, grading activities can greatly increase erosion processes, leading to impacts on storm drains and sediment loading to storm runoff flows.

Two general strategies would be implemented to prevent soil materials from entering local storm drains. First, erosion control procedures would be implemented for those areas that must be exposed, and secondly, each residential development site would be secured to control off-site transport of pollutants. Implementation of these avoidance strategies would occur through compliance with the NPDES requirements outlined above and PMC Section 8.04.265 Chapter 70, *Excavation and Grading*.

Construction activities resulting from project implementation would be required to comply with the NPDES permit program, which controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Dischargers whose projects disturb 1.0 or more acres of soil or whose projects disturb less than 1.0 acre but are part of a larger common

plan of development that in total disturbs 1.0 or more acres, would be required to obtain coverage under the CGP, as described above. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The CGP requirements must be satisfied prior to beginning construction. Moreover, as specified in PMC Section 8.04.265 Chapter 70, Section 7013.6, *Storm Water Control Measures*, the permittee is required to put into effect and maintain all mitigation measures required under the NPDES permit issued to the City of Palmdale. Such measures are precautionary measures necessary to protect adjacent watercourses and public or private property from damage by erosion, flooding and deposition of mud, debris, and construction-related pollutants. The permittee is also required to maintain the site in such a manner as to minimize the impacts of storm water and construction-related pollutants due to the grading and related construction activities on adjacent public and private property and drainage courses. The required BMPs shall include, but not be limited to, those identified in PMC Section 8.04.265 Chapter 70, Section 7013.8, *Best Management Practices*.

Prior to issuance of any Grading or Building Permit, and as part of the future residential development's compliance with the NPDES requirements, a NOI would be prepared and submitted to the State Water Resources Control Board providing notification and intent to comply with the CGP. Development and implementation of a SWPPP would be required for the construction activities onsite. The SWPPP would be submitted for approval to the Director of Public Works and the City Engineer for water quality construction activities onsite. Section A of the CGP describes the elements that must be included in a SWPPP. It must contain a site map(s), which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the proposed development site. The SWPPP must list BMPs the discharger would use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain the following:

- A visual monitoring program;
- A chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs;
- A sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment; and
- Risk Level Site Assessment.

The SWPPP would outline the source control and/or treatment control BMPs that would avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." A copy of the SWPPP must be available and implemented at the construction site at all times. Projects submitting a NOI after August 2012 would be required to comply also with the pre- and post construction water balance requirements.

Additionally, construction activities associated with the anticipated residential development would be subject to compliance with Municipal Code Section 8.04.265 Chapter 70, *Excavation and Grading*, which sets forth regulations (i.e., minimum standards) for the control of excavation, grading, and earthwork construction, and for the control of grading site runoff, including erosion, sediments and construction related pollutants. These regulations also restrict grading activities (PMC Section 8.04.265 Chapter 70, Section 7010, *Stormwater Management Plan (Erosion Control*)). Compliance with Zoning Ordinance Section 86.01, *Landscaping Requirements*, and the City of Palmdale Engineering Department Design Standards, Section VI: Landscaping and Irrigation, which addresses the provision of ground cover and/or temporary

seeding for erosion control, would be required for all residential projects proposed or required to provide landscaping, as part of the development plan. Additionally, future residential development would be subject to compliance with GPEIR Policy ER5.2.3, which addresses the provision of erosion control measures on new development. Future residential development projects would be subject to compliance with Federal, State, and local water quality regulations involving erosion control measures, which would reduce short-term impacts to water quality to less than significant.

Mitigation Programs:

General Plan Policies:

Policy ER5.2.3: Require erosion control measures on new development, including covering soil with straw mats or use of chemical soil and dust binders, followed by seeding and watering as soon as possible after grading to prevent fugitive dust.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

LONG-TERM SURFACE WATER QUALITY

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD POTENTIALLY RESULT IN INCREASED RUN-OFF AMOUNTS AND DEGRADED WATER QUALITY.**

Impact Analysis: Implementation of the proposed project is anticipated to result in a net increase of approximately 13,000 dwelling units, which would have long-term effects on runoff once the development is complete. Urban development can affect water quality in three ways:

- Impervious surfaces associated with development increase the rate and volume of stormwater runoff, therefore increasing downstream erosion potential;
- Urban activities generate dry-weather or “nuisance” flows, which may contain pollutants and/or may change the ephemeral nature of streams and the degradation of certain habitats; and
- Impervious surfaces increase the concentration of pollutants during wet weather flows.

The potential for negative water quality effects is generally correlated to the density/intensity of development and the amount of impervious area associated with development. Within the rezone project area, increased residential densities would increase impervious surfaces by as much as 104 percent (refer to the *Hydrology and Drainage* Section below) and overall levels of activity. Detached residential development has the potential to generate sediments such as nutrients and organic substances (including fertilizers), pesticides (from landscape application), trash and debris (including household hazardous waste), oxygen demand, oil and grease (from driveways and roads) and bacteria and viruses. Attached residential developments share these potentialities, as well as an increased potential for concentration of pollutants from the larger parking lots typically associated with multiple family development projects.

Overall, the anticipated residential development would increase impervious surfaces and overall levels of activity, which would increase pollutant loadings immediately off the respective development sites and potentially violate water quality standards. The pollutants that would be expected with future residential development include pollutants typically found in stormwater runoff; refer to the *Existing Setting* Section above. Without mitigation, future residential development would be expected to increase pollutant loadings, including hydrocarbons, fertilizers, pesticides, trash, and sediment.

All future residential development would be subject to compliance with NPDES through the CGP. Beginning August 2012, the CGP will require post-construction controls on water quality including the incorporation of LID and BMPS for projects with over 1.0 acre of disturbance, as outlined in the CGP Pre and Post Construction Water Balance Performance Standard section. The residential development would be required to develop and implement a SWPPP, which would be submitted for approval to the Director of Public Works and the City Engineer.

Additionally, all future development would be subject to compliance with PMC Section 8.04.265 Chapter 70. The permittee (i.e., Applicant) would be required to carry out the proposed work in accordance with the approved plans and specifications and in compliance with all the requirements of the Palmdale Municipal Code (PMC Section 8.04.265 Chapter 70, Section 7013, *Responsibility*). The permittee is also required to put into effect and maintain all mitigation measures required under the NPDES permit issued to the City of Palmdale (PMC Section 8.04.265 Chapter 70, Section 7013.6, *Storm Water Control Measures*). Compliance with such measures would protect adjacent watercourses and property from damage by erosion, flooding, and deposition of mud, and debris. The required BMPs would include those identified in PMC Section 8.04.265 Chapter 70, Section 7013, among others. PMC Section 8.04.265 Chapter 70, Section 7018, *Drainage*, specifies that desilting basins, filter barriers, or other methods, as approved by the City Engineer, are required, in order to remove sediments from surface waters before such waters are allowed to enter streets, storm drains, or natural watercourses (PMC Section 8.04.265 Chapter 70, Section 7018, *Drainage*). Installation of multi-purpose detention basins or similar structural BMPs would achieve water quality enhancement through filtration and sedimentation. Stormwater management could also include smaller source controls within an individual development, whose main purpose is to decrease initial water runoff volumes and minimize pollutants. Through implementation at respective residential development sites, these measures would be effective at reducing runoff quality constituent concentrations in downstream receiving waters, as well as total pollutant loads per storm. Future developments would also be subject to compliance with the General Plan Policies outlined below, which require implementation of erosion control measures. Compliance with NPDES and PMC Section 8.04.265 Chapter 70 requirements, as well as General Plan Policies, would reduce post construction impacts to water quality to a less than significant level.

Mitigation Programs:

General Plan Policies:

Policy CD8.4.4: Landscaping shall be provided for erosion control where appropriate, as required in the City's Engineering Design Standards.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

DRAINAGE AND HYDROLOGY

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD ALTER DRAINAGE PATTERNS AND RUNOFF VOLUMES, IN A MANNER THAT COULD EXCEED THE DRAINAGE SYSTEMS CAPACITIES OR RESULT IN LOCALIZED FLOODING.**

Impact Analysis: Implementation of the proposed project is anticipated to result in the development of 16,039 dwelling units (a net increase of approximately 13,000 dwelling units) and potential removal of approximately 71,630 square feet of non-residential uses. Localized alterations to the existing drainage patterns of the development sites could occur due to project-related grading and increases in the amount of impermeable surfaces on the respective sites from structures (i.e., residential uses) and other improvements (i.e., parking lots, driveways, and other hardscapes).

Increased residential densities within the rezone project area would increase impervious surfaces by as much as 104 percent (refer to Table 5.7-1, *Changes in Impervious Surfaces – Rezone Project Area*) and overall levels of activity. As a result, impacts to hydrology would occur and would be expected to be potentially significant in the areas described in Table 5.7-1.

Table 5.7-1
Changes in Impervious Surfaces – Rezone Project Area

Area Description	Existing Impervious Fraction[1]	Proposed Impervious Fraction[2]	Percent Change
Area northeast of the 5th Street East and Avenue R intersection	SFR-3: 0.42	MHDR: 0.86	104%
Area encompassed by East Avenue Q-3, 6th Street East Alley, East Avenue Q-6, and 5th Street East	MFR: 0.86	HDR: 0.90	5%
Southeast of the Avenue Q and 12th Street East intersection	MDR: 0.59	MHDR: 0.86 HDR: 0.90	46% to 53%
Area northeast of the Avenue R and 15th Street East intersection	MDR: 0.59 SFR-3: 0.42	MHDR: 0.86	46% to 104%

1. Based on the existing Palmdale Land Use Map and the Los Angeles County Hydrology Manual.
2. Based on the proposed Palmdale Land Use Map (proposed GPA) and the Los Angeles County Hydrology Manual.

Legend:
SFR = Single Family Residential; MHDR = Medium High Density Residential; MFR = Multi-Family Residential; HD = High Density Residential; and MDR = Medium Density Residential.

Increases in impervious surface areas decrease the rate at which runoff percolates into the ground, thus increasing storm runoff entering the City storm drain system. Increases in storm runoff could exceed the capacity of the existing drainage system, potentially creating localized flooding. Storm runoff would be augmented by nuisance water flows from development, further contributing to street flooding. The anticipated residential development would increase the demands on the City's drainage system. In general, the residential development would increase impervious (paved) surfaces, thus, reducing the amount of water that would normally infiltrate into the soil. Rainfall, irrigation runoff, and nuisance flows accumulate on impervious surfaces and flow downstream via the storm drain system to surface waters.

Since the City's Master Plan is still in development and many facilities have not been constructed, as an interim flood control measure, the City would require that future residential development projects provide flood control facilities within their site to mitigate the impacts of storm runoff. Flood control lots within the respective project sites would serve as detention basins for storm runoff. All future development would be required to incorporate adequate drainage that would transport runoff to local catch basins and nearby storm channels. PMC Section 7018, *Drainage*, specifies that drainage facilities are required to be designed to carry surface waters to the nearest practical street, storm drain, or natural watercourse approved by the City Engineer or other appropriate governmental agency as a safe place to deposit such waters.

The City's Master Plan establishes a consistent policy and program for handling stormwater runoff in developed areas. The Master Plan recommends that detailed hydrologic and hydraulic studies by performed on a project-by-project basis and utilized in the design of the drainage facilities. All residential development within the City must comply with the Master Plan, which provides guidelines for handling nuisance water from developments before storm drain facilities are constructed, in addition to a program for mitigation of regional drainage impacts. The City generally implements the Master Plan through its capital improvement program. If a private developer dedicates and constructs facilities depicted on the Plan, then the City may also reimburse the developer for all or a portion of the cost of the facility, depending on the individual circumstances. Funding for construction of Master Plan of Drainage facilities is provided by a variety of sources as specified by the City's Capital Improvements Program, including special assessment districts and drainage impact fees collected from new developments. Future residential development within the City would be charged drainage impact fees, in order to pay for regional drainage improvements.

It is the City's goal (Goal PS3) to develop and maintain adequate storm drainage and flood control facilities. To this end, the City maintains and implements the City's adopted Master Drainage Plan (Objective PS3.1). It is also the City's goal (Goal PS1) to ensure that adequate public services and facilities are available to support development in an efficient and orderly manner. To this end, the City would ensure that all new development in the project area provides for the infrastructure and public services needed to support it (Objective PS1.1). Accordingly, all future development within the project area would be subject to compliance with the General Plan Policies outlined below. Compliance with the Palmdale Municipal Code and General Plan Policies outlined below would ensure that drainage system capacity impacts are reduced to a less than significant level.

Mitigation Programs:

General Plan Policies:

Policy S1.2.6: Require that grading and other methods of water diversion be used to retard water runoff, where appropriate.

Policy S1.2.7: Ensure that storm water drainage is designed for peak flow conditions.

Policy S1.2.11: Implement the City's Master Drainage Plan, through the development review process and capital improvement program.

Policy S1.2.12: Monitor and require continued maintenance of drainage basins throughout the City to ensure maximum flood protection from existing facilities and prevent downstream flood hazards.

Policy S1.2.13: Implement public financing programs where feasible, to provide for required drainage improvements, and coordinate design and construction of flood control improvements with adjacent jurisdictions where appropriate.

Policy PS1.1.1: Require all new development, including major modifications to existing development, to construct required on-site infrastructure improvements pursuant to City standards.

Policy PS1.1.2: Require all new development, including major modifications to existing development, to construct or provide a fair share contribution towards construction of required off-site improvements needed to support the project.

Policy PS1.1.3: Require that on- and off-site improvements are constructed prior to occupancy of a new development project, or phase thereof, unless otherwise approved by the City.

Policy PS1.1.4: Require that adequate provisions are made, as approved by the City, for maintenance of public improvements or any facility or land to be maintained by the City prior to approval of any new development project.

Policy PS1.1.5: When new development is proposed in vacant, rural areas which have not yet been master-planned for provision of infrastructure, require that development proponents provide for or contribute a fair share towards development of regional master facility plans for roads, sewer, water, drainage, schools, libraries, parks, fire and other community facilities, prior to granting conditional approval of development applications.

Policy PS1.2.1: Require that provision of streets, sewer, water, drainage and other needed infrastructure be coordinated in a logical manner between adjacent developments, so as to reduce cost of design, construction and maintenance.

Policy PS1.2.2: Require that individual development projects integrate with adjacent development with respect to backbone infrastructure (streets, sewer, water and drainage). If adjacent property is undeveloped, a conceptual plan should be prepared to show that the pending development will allow for future integration and development of adjacent properties in a manner which is reasonable from a design, construction and cost standpoint.

Policy PS1.2.3: Require that the proposed infrastructure design within a development project permit economical and efficient development of land, both on the subject property and on adjacent properties.

Policy PS1.2.4: Require that phasing of infrastructure requirements within a development consider adjacent properties to the extent feasible.

Policy PS1.2.5: Require that infrastructure be designed and constructed to meet ultimate capacity needs, pursuant to a master plan, so as to avoid the need for costly retrofitting.

Policy PS1.2.6: Where feasible, require that consideration be given to sharing drainage facilities between adjacent subdivisions, with the cost shared on a "fair share" basis.

Policy PS1.2.7: Ensure that street rights-of-way, drainage facilities, site grading, or other similar public infrastructure are not aligned in a manner that increases the developability of a single property at the expense of an adjacent property, unless so required by regional infrastructure plans.

Policy PS1.2.8: Distribute the costs of extending infrastructure equitably among those benefiting from the improvements.

Policy PS1.3.3: Encourage development, which fully utilizes existing infrastructure systems, while decreasing the need for costly extensions of infrastructure into undeveloped areas.

Policy PS1.3.4: Encourage clustering of development where appropriate, to maximize use of infrastructure.

Policy PS1.3.5: Adopt comprehensive planning documents such as area plans, specific plans and development agreements, to specify the nature, timing and financing of public improvements and services.

Policy PS1.3.6: Encourage mixed use development, to maximize use of infrastructure system.

Policy PS1.4.1: Adopt and annually update the City's Capital Improvement Program (CIP) to prioritize funding for public works projects in accordance with this General Plan.

Policy PS1.4.2: Adopt and implement service level standards for roads, drainage, and park facilities, through on-going monitoring of existing levels of service and through the CIP.

Policy PS1.4.3: Adopt, implement, and annually review user fee and impact fee programs, to support the cost of constructing capital facilities and providing services.

Policy PS1.4.4: Explore and implement a variety of public financing methods to fund infrastructure improvements, including assessment districts, Mello-Roos community facilities districts, redevelopment funds, block grant funds, and/or combinations of these and other available funding sources.

Policy PS1.4.7: Evaluate infrastructure facilities and service levels within developed areas which annex to the City, and promote programs to retrofit street, drainage, and sewer improvements, where warranted.

Policy PS1.5.1: Through the development review process, inform adjacent cities, town councils and/or county agencies of development proposals which may impact their infrastructure systems, and consider their input and recommendation in the land use decision process.

Policy PS1.5.2: Inform adjacent cities, town councils and county agencies of City-initiated planning and public works projects which may impact their infrastructure systems, and consider their input and recommendations in the land use decision process.

Policy PS1.5.4: Participate in regional efforts to gain State or Federal funding for area-wide improvements.

Policy PS3.1.1: Continue the drainage impact fee program and periodically adjust fees as needed.

Policy PS3.1.2: Evaluate the impact of all new development and expansion of existing facilities on storm runoff and ensure that the cost of upgrading existing drainage facilities to handle the additional runoff is paid for by the development that generates it.

Policy PS3.1.3: Make use of interim local drainage detention basins to slow stormwater runoff, until such time as permanent drainage facilities are constructed.

Policy PS3.1.4: Through the development review process, reserve land from development in appropriate locations for construction of drainage facilities.

Policy PS3.1.5: Require and provide for on-going maintenance of drainage and detention facilities, to ensure their continued effectiveness in controlling runoff.

Policy PS3.2.3: Where feasible, combine drainage facilities with opportunities for recreation, as in placement of trails within drainage easements, or placement of ball fields within detention areas.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

FLOOD HAZARDS

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD PLACE PEOPLE AND HOUSING WITHIN A 100-YEAR FLOOD HAZARD AREA.**

Impact Analysis: SOC Report Figure 2.0-5, Flood Plains, illustrates the boundaries of the City's floodplains and indicates that some of the residentially-zoned lands and portions of the

rezone project area are located within SFHAs subject to inundation by the one percent annual chance flood. Within the rezone project area, floodplains are associated with the Anaverde Creek drainage. Although site-specific development is not currently proposed, future residential development within the City could occur within SFHAs. The floodplains can pose a threat to life and property by the possibility of intermittent floods. Future development within a floodplain would require a Conditional Letter of Map Revision (CLOMR) and/or a Letter of Map Revision (LOMR) from the Federal Emergency Management Agency (FEMA).

All future residential development within the City's SFHAs would be subject to compliance with the Federal and State regulations, including the National Flood Insurance Program, Flood Disaster Protection Act of 1973, and National Flood Insurance Reform Act, among others. Where development in flood hazard areas is unavoidable, the project must be designed or modified so as to minimize the potential adverse impacts affecting floodplains and implement measures, which would mitigate or reduce the risk of flood loss. Mitigation would be required to protect life, property, and the natural and beneficial values of the floodplain.

Implementation of the City's Master Plan is expected to mitigate potential flooding impacts within the City, including the rezone project area. The City intends to update the Master Plan to reflect recent developments and provide updated land use planning. The City's Master Plan and Drainage Management Plan provide a framework for constructing flood control structures throughout the City. Implementation of these plans is on-going. Additionally, all future residential development would be subject to compliance with PMC Chapter 15.28, *Floodplain Management*, which specifies that no structure or land shall be constructed, located, extended, converted, or altered without full compliance with the terms of PMC Chapter 15.28 and other applicable regulations. Future residential development within any area of special flood hazard would require a Development Permit and its design would be pursuant to specific standards for construction, utilities, and subdivisions, among others.

It is the City's goal (Goal PS3) to develop and maintain adequate storm drainage and flood control facilities. To this end, the city intends to minimize hazards associated with flood plains (Objective S1.2). Compliance with the General Plan Policies outlined below, which address floodplain management in furtherance of this goal/objective, would be required. Overall, compliance with Federal and State standards, the City's Master Plan of Drainage, Palmdale Municipal Code regulations, and General Plan Policies would reduce potential impacts involving flood hazards to a less than significant level.

Mitigation Programs:

General Plan Policies:

Policy S1.2.1: Require that new development should not be exposed to flood hazards or contribute to an existing flood hazard, in accordance with the City's Floodplain Management Ordinance and related criteria within the City's Engineering Design Standards.

Policy S1.2.2: Require that building foundations be a minimum of one (1) foot above the 100-year flood elevation, unless alternative diversion methods are approved by the City Engineer.

Policy S1.2.3: Require that grading of floodways shall be in a manner which allows for groundwater recharge and protection of projects from flooding.

Policy S1.2.4: All required primary and secondary access and egress routes for all new development should be "dry" access located outside of the 100-year flood plain.

Policy S1.2.5: Consider the operability of natural gas, electric, water and sewer services during the occurrence of flooding in review of project design.

Policy S1.2.8: Ensure that new development complies with floodplain zoning and watershed management regulations.

Policy S1.2.9: Preserve and restore the natural and beneficial values served by floodplains to the extent feasible, consistent with public health, safety and welfare.

Policy S1.2.10: Promote open space and recreational uses in designated flood zones, unless mitigation of the hazard can allow other types of development.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

FLOODING/DAM INUNDATION

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD EXPOSE PEOPLE AND HOUSING TO FLOODING ASSOCIATED WITH FAILURE OF A LEVEE OR DAM.**

Impact Analysis: General Plan Exhibit S-6, Inundation Areas, illustrates the maximum flood level at different periods in the event of a failure associated with either Little Rock or Palmdale Dams. Flood waters associated with failure of Little Rock Dam could be as deep as 50 feet immediately below the Little Rock Dam and cover a 300-foot wide area for 0.25 mile north of the dam. Along this length, the water depth would vary from 50 feet to 15 feet and then turn eastward for 800 feet where the depth would be reduced to 10 feet. The water would then flow north again and dissipate to a depth that is no longer a risk to developments. Flooding associated with failure of Palmdale Dam would vary depending on the location of the damage. If the break occurs in the northern 20 percent of the dam, the potential inundation area would be approximately one square mile northeast of the dam. If the southern portion of the dam breaks, flooding would be over a wider area east and northeast of the dam.

Flooding could also occur in the event of failure associated with the California Aqueduct. The Department of Water Resources has installed flood control gates along the aqueduct to control flooding due to structural failure. By closing gates upstream, the section of the aqueduct within the Palmdale General Plan Planning Area would be isolated and would not receive water. Aqueduct water present during failure would be diverted to canal pools, which serve as detention basins. The aqueduct would be a risk to proximate land uses.

Future residential development associated with implementation of the proposed project could place people and housing within an area subject to flooding associated with failure of the Little Rock and Palmdale Dams and the California Aqueduct. Additionally, detention basins and reservoirs could also expose people and housing to flooding in the event of failure. It is the City's goal (Goal S2) to minimize damage associated with man-made hazards. To this end, the City intends to minimize damage from catastrophic failure of infrastructure (Objective S2.1). Compliance with General Plan Policies outlined below, which address potential hazards associated with the Little Rock and Palmdale Dams and the California Aqueduct in furtherance of this goal/objective, would be required. Overall, compliance with General Plan Policies would reduce potential impacts associated with dam, aqueduct, detention basin or reservoir failure to a less than significant level.

Mitigation Programs:

General Plan Policies:

Policy S2.1.1: Evaluate potential hazards associated with rupture of the California Aqueduct, to ensure that development in areas threatened with inundation are designed to minimize the threat to life and property.

Policy S2.1.2: Evaluate the potential for inundation from failure of the Lake Palmdale or Littlerock dams when reviewing development proposals within potential inundation areas.

Policy S2.1.3: Evaluate potential hazards associated with detention basin facilities, water main or reservoir rupture and minimize possible threat of inundation to life and property through design measures applied during the development review process.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.7.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD CUMULATIVELY IMPACT HYDROLOGY AND WATER QUALITY.**

Impact Analysis: For this topic, the cumulative impacts are analyzed in terms of impacts within the City of Palmdale, along with impacts to the regional drainage facilities under the jurisdiction of the Lahontan RWQCB.

Potential impacts associated with hydrology and water quality as a result of full implementation of the Palmdale General Plan were evaluated in GPEIR Section 4.2.3 (Water Resources) (pages 4-44 through 4-70). The GPEIR concluded the following:

- Urban contamination potential within stormwater discharge is a primary concern and new development would be required to obtain NPDES Permits. Short-term and long-

term water quality impacts would be reduced following compliance with NPDES requirements and General Plan Policies and programs. This impact was concluded to be less than significant.

- Flood hazards may be compounded with increased development, without sensitive planning of developments and completion of temporary detention or permanent Master Plan of Drainage facilities. Potential flooding hazards would be reduced following compliance with General Plan Policies and programs. This impact was concluded to be less than significant.

- Lack of a completed regional drainage system would continue to result in local flooding problems. Potential drainage and street flooding impacts would be reduced following completion of temporary detention or permanent Master Plan of Drainage facilities, and compliance with General Plan Policies and programs. This impact was concluded to be less than significant.

- The increase in the overall intensity of development at buildout would increase the demand for water resources to supply the needs of future residents and developments. It was also concluded groundwater resources would become a scarce commodity, without the implementation of measures to abate the lowering of the water table. Impacts to groundwater resources would be reduced with implementation of water conservation and recharge programs. This impact was concluded to be less than significant.

As concluded above, compliance with the established regulatory framework, City's Master Plan of Drainage, Palmdale Municipal Code regulations, and General Plan Policies would reduce potential impacts involving hydrology and water quality to less than significant levels.

Future development projects in the City of Palmdale and Lahontan region would be required to mitigate specific hydrologic impacts on a project-by-project basis. Additionally, the Palmdale Municipal Code incorporates Federal and State regulations and guidelines pertaining to stormwater runoff to avoid or reduce regional water quality impacts. Also, all future development within the City would be subject to compliance with the General Plan Policies. Impacts associated with future development in the City would be addressed at a site-specific level to ensure their compliance with the Master Plan and that their cumulative impact would be less than significant. Thus, implementation of the proposed project would not result in cumulatively considerable impacts to water quality and drainage.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.7.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Project implementation would result in less than significant impacts to water quality and hydrology with implementation of the General Plan Policies and programs.

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5.8 Biological Resources

5.8 BIOLOGICAL RESOURCES

The purpose of this section is to identify existing biological resources within the project area, analyze potential impacts to those resources from project implementation, and recommend mitigation measures to avoid or lessen the level of significance of the potential impacts. The discussion in this section is based on information obtained from the *Final Program EIR for the City of Palmdale General Plan* (GPEIR) (SCH No. 87120908) (February 1, 1993) and *City of Palmdale State of the City Report* (June 2009).

5.8.1 EXISTING SETTING

The biological resources that either occur or potentially occur within the proposed project area or in the immediate vicinity are described below. Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special status plant and wildlife species either known or potentially occurring are also discussed.

VEGETATION

The project area is located within the westernmost portion of the Mojave Desert, at the southern end of the Antelope Valley. The biological composition of the project area, and surrounding areas, is consistent with plant communities commonly found in desert conditions. The *City of Palmdale State of the City Report* (SOC Report) used Arc GIS to map the vegetation in the undeveloped portions of the Palmdale area. Plant communities were characterized based on field reconnaissance and examination of 2006 aerial imagery. Plant communities were characterized based on dominant plant species for the purpose of defining habitat types and quality of habitat for supporting sensitive plant and animal species. The primary plant communities in Palmdale's undeveloped portions were mapped, as classified by the California Department of Fish and Game (CDFG) in the Vegetation Classification and Mapping Program; refer to SOC Report Figure 4.2-1, *Vegetation Communities*. As illustrated on SOC Report Figure 4.2-1, the project area is primarily identified as Urban. However, portions of the project area are also identified as Agriculture, California Juniper Woodland, Disturbed, Joshua Tree Woodland, and [Mohavean] Desert Scrub. Since the vegetation was mapped from a broad perspective, additional less dominant plant communities may also exist in the undeveloped areas. Further, an extensive list of associated plant species occurring within the identified communities was not developed. Rather, the data presented in the SOC Report lists dominant plants that were observed or are likely to occur within the vegetation communities, as described in the Manual of California Vegetation.

California Juniper Woodland

As indicated by the title of this plant community, California juniper trees dominate this community. In areas where the junipers grow in lower densities, shrubs, grasses, and herbaceous plants grow between them; however, in other areas where this community dominates, there is very little understory of low-growing plant species. The predominant "scrub" plant species found within this community are similar to those found in the Mojavean Desert Scrub community and include species such as green ephedra (*Ephedra viridis*), bladder sage (*Salazaria mexicana*), and rubber rabbitbrush (*Chrysomthamnus nauseosus*). Dominant grasses typically observed within this community include downy brome (*Bromus tectorum*) and desert needlegrass (*Acnatherum speciosum*).

Joshua Tree Woodland

Joshua Tree Woodlands consist of emergent or abundant Joshua trees over a shrub canopy that typically consists of rubber rabbitbrush (*Chrysothamnus nauseosus*), box-thorn (*Lycium spp.*), cheesebush (*Hymenoclea salsola*), creosote bush (*Larrea tridentata*), bush buckwheat (*Eriogonum fasciculatum*), saltbush (*Atriplex spp.*), ephedras (*Ephedra spp.*), and big sagebrush (*Artemisia tridentata*). Dominant herbaceous plants and grasses commonly observed in the understory of Joshua Tree Woodlands include: annual bur sage (*Ambrosia acanthicarpa*), freckled milkvetch (*Astragalus lentiginosus*), brome grasses (*Bromus spp.*), poa grasses (*Poa spp.*), non-native fescue grasses (*Festuca spp.*), and mustard weeds. Joshua tree habitats are considered Rare by the CDFG and of "high priority for inventory."

Mojavean Desert Scrub

Mojavean Desert Scrub is composed mainly of shrubs, herbaceous plants, and native and non-native grasses. Scattered California juniper (*Juniperus californica*) and Joshua trees (*Yucca brevifolia*) often occur within this plant community as well. The dominant shrubs that typically occur within this plant community include green ephedra (*Ephedra viridis*), bladder sage (*Salizaria mexicana*), and California buckwheat (*Eriogonum fasciculatum var. polifolium*). Predominant herbaceous plants and grasses typically include: downy brome (*Bromus tectorum*), Mediterranean grass (*Schismus barbatus*), chia sage (*Salvia columbariae*), and desert needle grass (*Acnatherum speciosum*).

SIGNIFICANT ECOLOGICAL AREAS (SEAs)

"Significant Ecological Area (SEA)" is an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity for the purposes of protecting biotic diversity, as part of the City of Palmdale General Plan. SOC Report Figure 4.2-2, *Significant Ecological Areas*, illustrates the SEAs located in the Palmdale area and indicates the Ritter Ridge SEA is located within the northwestern portion of the project area. The majority of the vegetation cover in the Ritter Ridge SEA is comprised of Mojave desert scrub and California buckwheat scrub with Joshua tree woodlands and California juniper woodlands on the northern slopes. Four-wing saltbush and rabbitbrush typically dominate the understory of the Joshua tree and juniper communities. Arroyo willows, desert olive, and cottonwood trees grow in the seeps and arroyos along the north facing slopes of Ritter Ridge as well as along Amargosa Creek.

WILDLIFE

Wildlife in Palmdale includes a variety of native and introduced species. The Palmdale area is expected to support many of the wildlife species dependent upon the low- to mid-elevation desert scrub plant community throughout the area. Reptiles, small mammals, and a number of bird species may occur within the project area. Several sensitive animal species may also be present, as indicated by their preferred habitats; refer to *Sensitive Wildlife Species* section below.

Reptiles expected to commonly occur in the Palmdale area include the gopher snake (*Pituophis melanoleucus*), the side-blotched lizard (*Uta stansburiana*), desert horned lizard (*Phrynosoma platyrhinos*), western whiptail (*Cnemiodophorus tigris*), and Mojave rattlesnake (*Crotalus scutulatus*).

Small mammals expected to occur in the range of habitats within the planning include the western harvest mouse (*Reithrodontomhys megalotis*), desert woodrat (*Neotoma lepida*), desert cottontail (*Sylviagus audubonii*), Merriam's chipmunk (*Eutamias merriami*), little pocket mouse (*Perognathus longimembris*), several other species of mice (*Peromyscus* spp.), antelope ground squirrel (*Ammospermophilus leucurus*), and the California ground squirrel (*Spermophilus beecheyi*). Larger mammals expected to occur include the black-tailed jack rabbit (*Lepus californicus*) and coyote (*Canis latrans*).

A number of bird species are expected to reside or forage throughout the Palmdale area, including the house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), common flicker (*Colaptes auratus*), and the common raven (*Corvus corax*). Also expected in the desert scrub area are the black-throated sparrow (*Amphispiza bilineata*) and raptors (birds of prey), including the red-tailed hawk (*Buteo jamaicensis*), prairie falcon (*Falco mexicanus*), and American kestrel (*Falco sparverius*).

SENSITIVE BIOLOGICAL RESOURCES

A query of the CDFG's California Natural Diversity Database (CNDDB) (CDFG 2012) and California Native Plant Society database (CNPS 2012) was conducted in January 2012, in order to identify special-status plant or wildlife species previously recorded in the Palmdale area. The CNDDB lists historical and recently recorded occurrences of both special-status plant and wildlife species, and the CNPS database lists historical and recent occurrences of special-status plant species. The potential for special-status species to occur in the City is based on the proximity of the recorded occurrences listed in the CNDDB and CNPS databases, geographic ranges of all special-status plant and wildlife species (whether recorded in the CNDDB or not) known to occur in the region, on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, and habitat preferences. The areas searched include the US Geological Survey (USGS) 7.5-minute quadrangle for Palmdale, as well as the surrounding eight USGS quadrangles: Acton, Alpine Butte, Juniper Hills, Lancaster East, Lancaster West, Littlerock, Pacifico Mountain, and Ritter Ridge.

Special-Status Plant Species

According to the CNDDB and CNPS, the following special status plant species could potentially occur in the Palmdale area:

- White pygmy-poppy (*Canbya candida*);
- Sagebrush loeflingia (*Caryophyllaceae*); and
- Short-joint beavertail (*Opuntia basilaris var. brachyclada*).

SOC Report Table 4.2-1, *Special-Status Plant Species Potentially Occurring in the Planning Area*, also lists the special-status plant species with the potential to occur within the Palmdale area and describes the habitat requirements for each species and the locations within the Palmdale area where the species could occur, based on knowledge of habitat types and plant communities throughout the Palmdale area. According to SOC Report Table 4.2-1, the

following special-status plant species could potentially occur within the project area, where suitable habitat (i.e., California Juniper Woodland, Joshua Tree Woodland, and Mohavean Desert Scrub, among others) is present:

- Alkali mariposa (*lily Calochortus striatus*);
- Mt. Gleason Indian paintbrush (*Castilleja gleasonii*); and
- Short-joint beavertail (*Opuntia basilaris var. brachyclada*).

SOC Report Figure 4.2-3, *CNDDB Recorded Species Occurrence*, indicates the locations of the CNDDB-recorded occurrences of special-status plant species in the Palmdale area. As indicated SOC Report Figure 4.2-3, the following special status plant species have been sighted in the project area:

- Alkali mariposa (*lily Calochortus striatus*); and
- Short-joint beavertail (*Opuntia basilaris var. brachyclada*).

Special-Status Plant Communities

Special-status plant communities are those that are considered to be unique or support sensitive plant and/or wildlife species. Joshua tree habitats are considered Rare by the CDFG and of "high priority for inventory." The City's Joshua Tree and Native Desert Vegetation Preservation Ordinance addresses these resources; refer to discussion below.

Special-Status Wildlife Species

According to the CNDDB, the following special status wildlife species could potentially occur in the Palmdale area:

- Burrowing owl (*Athene cunicularia*);
- Coast horned lizard (*Phrynosoma blainvillii*);
- Cooper's hawk (*Accipiter cooperii*);
- Least Bell's vireo (*Vireo bellii pusillus*);
- Le Conte's thrasher (*Toxostoma lecontei*);
- Loggerhead shrike (*Lanius ludovicianus*);
- Mohave ground squirrel (*Xerospermophilus mohavensis*);
- San Joaquin pocket mouse (*Perognathus inornatus inornatus*);
- Silvery legless lizard (*Anniella pulchra pulchra*); and
- Tricolored blackbird (*Agelaius tricolor*).

SOC Report Table 4.2-2, *Special-Status Wildlife Species Potentially Occurring in the Planning Area*, also lists the special-status wildlife species with the potential to occur within the Palmdale area and describes the habitat requirements for each species and the locations within the Palmdale area where the species could occur. According to SOC Report Table 4.2-2, the following special-status wildlife species could potentially occur in the project area, where suitable habitat is present:

- American badger (*Taxidea taxus*);
- Arroyo toad (*Bufo californicus*);
- Burrowing owl (*Athene cunicularia*);

- Coast (California) horned lizard (*Phrynosoma coronatum (frontale population)*);
- Coast (San Diego) horned lizard (*Phrynosoma coronatum (blainvillii population)*);
- Desert tortoise (*Gopherus agassizi*);
- Le Conte's thrasher (*Toxostoma lecontei*);
- Merlin (*Falco columbarius*);
- Mohave ground squirrel (*Spermophilus mohavensis*);
- Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*);
- Prairie falcon (*Falco mexicanus*);
- San Joaquin pocket mouse (*Perognathus inornatus inornatus*);
- Short-eared owl (*Asio flammeus*);
- Silvery legless lizard (*Anniella pulchra pulchra*);
- Southern grasshopper mouse (*Onychomys torridus Ramona*);
- Swainson's hawk (*Buteo swainsoni*);
- Tricolored blackbird (*Agelaius tricolor*);
- Two-striped garter snake (*Thamnophis hammondii*); and
- White-tailed kite (*Elanus leucurus*).

SOC Report Figure 4.2-3 illustrates the locations of the CNDDB-recorded occurrences of special-status wildlife species in the Palmdale area. As indicated SOC Report Figure 4.2-3, the following special-status wildlife species have been sighted within the project area or its vicinity:

- Coast (California) horned lizard (*Phrynosoma coronatum (frontale population)*);
- Coast (San Diego) horned lizard (*Phrynosoma coronatum (blainvillii population)*);
- Cooper's hawk (*Accipiter cooperii*);
- Le Conte's thrasher (*Toxostoma lecontei*);
- Mohave ground squirrel (*Spermophilus mohavensis*);
- San Joaquin pocket mouse (*Perognathus inornatus inornatus*); and
- Silvery legless lizard (*Anniella pulchra pulchra*).

Additionally, focused burrowing owl (*Athene cunicularia*) surveys, conducted as part of the Palmdale Transit Village Specific Plan/General Plan Amendment and Zone Change Final Environmental Impact Report, (SCH No. 2006081052) (July 2007), identified a single historic burrow on vacant land within the center of the Specific Plan area. Although, no evidence of recent occupation was observed at or immediately surrounding the burrow entrance and no owls were observed in the vicinity of the burrow during any of the surveys, suitable habitat for burrowing owl occurs on vacant land within the Specific Plan area. Thus, burrowing owls could occur within the Specific Plan portion of the project area.

JURISDICTIONAL WATERS AND WETLANDS

The Palmdale area is located within the Antelope Valley watershed. There are four major watercourses that drain from the southern mountain ranges and eventually flow north across the Palmdale area: Little Rock Wash; Big Rock Wash; Anaverde Creek; and Amargosa Creek. These watercourses are intermittent or ephemeral, meaning surface water is not present continuously throughout the year. SOC Report Figure 4.2-5, *Jurisdictional Resources*, illustrates the watercourses and wetlands within the Palmdale area. According to SOC Report Figure 4.2-5, jurisdictional drainage features or wetland areas associated with Anaverde and/or Amargosa Creeks, and potentially under the jurisdiction of the United States Army Corps of

Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or the CDFG, occur within the western portion of the project area.

WILDLIFE MOVEMENT CORRDORS

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat, separating different populations of a single species. Corridors effectively act as links between these populations. Development exists throughout the project and adjacent areas, interspersed with vacant properties. The existing development currently limits wildlife movement through the project area. The project area does not provide connectivity between large areas of open space on a local or regional scale. However, Anaverde and Amargosa Creeks flow northeasterly through the Palmdale area from the Sierra Pelona Range and Ritter Ridge in the southwest. These creeks, which include some segments having permanent surface water, could function as a wildlife movement corridor within the project area.

5.8.2 REGULATORY SETTING

Threatened and endangered species are listed by the United States Fish and Wildlife Service (USFWS) and CDFG. In California, three agencies generally regulate activities within inland streams, wetlands, and riparian areas: USACE; the CDFG; and the RWQCB. The USACE Regulatory Branch regulates activities pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. The CDFG regulates activities under CDFG Code Sections 1600-1607. The RWQCB regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Act.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (50 CFR 17) is intended to protect plants and animals that have been identified as being at risk of extinction and classified as either threatened or endangered. FESA also regulates the "taking" of any endangered fish or wildlife species, per Section 9 of the Act. A responsible agency or individual landowners are required to submit to a formal consultation with the USWFS to assess potential impacts to listed species as the result of a development project, pursuant to FESA Sections 7 and 10. The USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified.

Federal Clean Water Act

Section 404

The USACE maintains regulatory authority over the discharge of dredged or fill material into the waters of the United States, pursuant to Section 404 of the CWA. The USACE and U.S. Environmental Protection Agency (EPA) define "fill material" as any "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the

United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States." Fill material may include sand, rock, clay, construction debris, wood chips, or other similar "materials used to create any structure or infrastructure in the waters of the United States." The term "waters of the United States" includes the following:

- All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
- Wetlands;
- All waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of water mentioned above;
- All tributaries of waters mentioned above;
- Territorial seas; and
- All wetlands adjacent to the waters mentioned above.

In the absence of wetlands, the USACE's jurisdiction in non-tidal waters extends to the Ordinary High Water Mark (OHWM), which is defined as "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR 328.3(e))."

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are jointly defined by the USACE and EPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b))."

Section 401

The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions). Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed Federally-permitted activity that may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by the USACE, pursuant to Section 404 of the CWA. The RWQCB is required to provide "certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards," pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards, which are given as objectives in each of the RWQCB's Basin Plans.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the State is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a

Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

STATE

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The CDFG is given the responsibility by the State to assess development projects for their potential to impact listed species and their habitats. State listed special-status species are also addressed through the issuance of a 2081 permit (Memorandum of Understanding).

California Fish and Game Code

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFG. The Fish and Game Commission and/or the CDFG are responsible for issuing permits for the take or possession of protected species. The following sections of the Fish and Game Code address the protected species: Section 3511 (birds); Section 4700 (mammals); Section 5050 (reptiles and amphibians); and, Section 5515 (fish).

California Department of Fish and Game Lake and Streambed Alteration Agreements

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to California Fish and Game Code Sections 1600-1607; however, on January 1, 2004, legislation went into effect that repealed Fish and Game Code Sections 1600-1607 and instead, added Fish and Game Code Sections 1600-1616. This action eliminated the separation between private/public notifications (previously 1601/1603). Section 1602 of the Fish and Game Code requires any person, state, or local governmental agency, or public utility to notify the CDFG before commencing any activity that would result in one or more of the following:

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

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes within the State of California. While the jurisdictional limits are similar to the limits defined by USACE regulations, CDFG jurisdiction includes riparian habitat supported by a river, stream, or lake with or without the presence or absence of saturated soil conditions or hydric soils. CDFG jurisdiction generally includes to the top of bank of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Any project that occurs within or in the vicinity of a river, steam, lake, or their tributaries typically requires notification of the CDFG, including rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and

watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

Migratory Bird Treaty Act of 1918

The Federal Migratory Bird Treaty Act (MBTA) was originally drafted to end the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, nests, eggs, or other avian products. The USFWS is responsible for enforcing the MBTA.

California Environmental Quality Act

In addition to specific Federal and State statutes for the protection of threatened and endangered species, California Environmental Quality Act (CEQA) Guidelines Section 15380(b) provides that a species not listed on the Federal or State list of protected species may be considered rare or endangered if it can be shown that the species meets certain specified criteria. Modeled after definitions in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals, these criteria are given in *CEQA Guidelines* Section 15380(b). The effect of Section 15380(b) is to require public agencies to undertake reviews to determine if projects would result in significant effects on species not listed by either the USFWS or CDFG (i.e., candidate species). Through this process, agencies are provided with the authority to protect additional species from the potential impacts of a project until the appropriate government agencies have an opportunity to designate the species as protected, if deemed appropriate.

NATURAL COMMUNITY CONSERVATION PLAN

The Natural Community Conservation Act (the Act), codified at Fish and Game Code Sections 2800-2840, authorizes the preparation of Natural Community Conservation Plans (NCCPs) to protect natural communities and species, while allowing a reasonable amount of economic development. The project area is not within the jurisdiction of any NCCP or Habitat Conservation Plan (HCP). The City of Palmdale will be subject to the West Mojave Habitat Conservation Plan once adopted; however, a draft of this document has not yet been released.

CITY OF PALMDALE MUNICIPAL CODE

Chapter 14.04, Joshua Tree and Native Desert Vegetation Preservation

The City's Native Plant Ordinance is codified in *Municipal Code* Chapter 14.04, *Joshua Tree and Native Desert Vegetation Preservation*. This Chapter is intended to protect and preserve desert vegetation, and particularly Joshua Trees, so as to retain the unique natural desert aesthetics in some areas of this City. The design of development projects is required to strive to protect and maintain the most desirable and significant of the healthy desert vegetation in a manner consistent with the City General Plan and CEQA.

According to *Municipal Code* Section 14.04.040, *Prohibition of Removal*, desert vegetation shall not be removed, nor caused to be removed, on or from any parcel of land, except as provided by the provisions of this Chapter. Additionally, a Native Desert Vegetation Removal Permit shall

be required prior to the removal of any native desert vegetation, as defined in this Chapter. According to *Municipal Code* Section 14.04.050, *Desert Vegetation Preservation Plan Requirements*, all development proposal applications for sites containing native desert vegetation are required to include a Desert Vegetation Preservation Plan, submitted with the development application, containing specific information, containing the following components, among others:

A. A written report and a site plan which depicts the location of each Joshua tree and California juniper, discusses their age and health, identifies and locates all trees and shrubs which can be saved in place or relocated. The report shall be prepared by a desert native plant specialist.

B. A site landscaping plan showing the proposed location of those Joshua trees or California junipers, and any other native desert vegetation that will remain on-site.

C. A long-term maintenance program for any desert vegetation preserved on the site.

The minimum standard of preservation is two Joshua trees per gross acre for the gross site area covered by the development application. Where soil conditions prohibit preservation of Joshua trees or where the total number of healthy trees per gross acre is not equal to two per acre, the minimum standard is determined by a desert native plant specialist.

Section 86.01, Landscaping Requirements

Pursuant to *Municipal Code* Section 86.01, *Landscaping Requirements*, in all projects proposed or required to provide landscaping as part of the development plan, all landscaping shall conform to provisions of Section 14.04, *Joshua Tree and Native Desert Vegetation Preservation*. Additionally, except in the A-1 and R-1 zones, all plants utilized in required landscape areas shall be from the City of Palmdale Recommended Plant List or from plants listed as being suitable for Palmdale's climate.

Chapter 10 Article 100, Hillside Management

The City's Hillside Ordinance is codified in *Zoning Ordinance* Chapter 10 Article 100, *Hillside Management*. This Article is intended to implement the General Plan goals and policies, as they relate to development and resource management in the City's hillside areas. These Code provisions allow for orderly and sensitive development in hillside areas in conjunction with the preservation of natural open space on steeper terrain. The specific goals and policies that reflect those contained in the General Plan and provide the purpose and intent for this Chapter include the following, among others:

- To encourage retention of natural drainage patterns and the preservation of significant riparian areas, both of which are commonly located in hillside areas; and

- To allow density transfers where appropriate to facilitate development in more developable locations while retaining significant natural slopes and areas of environmental sensitivity.

5.8.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (Section 8.0, Effects Found Not to be Significant).

CEQA Guidelines Section 15065(a), *Mandatory Findings of Significance*, states that a project may have a significant effect on the environment if it would have "... the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species ..."

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

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

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

5.8.4 IMPACTS AND MITIGATION MEASURES

SPECIAL STATUS PLANT AND WILDLIFE SPECIES

- **PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON SPECIES IDENTIFIED AS A CANDIDATE, SENSITIVE, OR SPECIAL STATUS.**

Impact Analysis: According to the CNDDB, CNPS, and SOC Report Tables 4.2-1 and 4.2-2, various special status plant and wildlife species could potentially occur within the project area, where suitable habitat is present. Additionally, as illustrated on SOC Report Figure 4.2-3, some of the plant and wildlife species identified as potentially occurring in the Palmdale area have been sighted within the project area or its vicinity.

Future housing development would occur as both new development on vacant properties and redevelopment/reuse of previously developed/disturbed properties. Future housing development occurring on vacant parcels could significantly impact, either directly, or through habitat modifications, special status plant and wildlife species. This would occur through removal of the existing vegetation/habitat for building pad development, and building, hardscape, and landscape construction. Although site-specific plans are not available, the conversion of vacant sites into residential developments could substantially reduce the habitat available for special status wildlife species and could cause the direct loss of special status plant species. Given the conceptual nature of the residential development anticipated by the proposed project, new development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to special status plant and wildlife species. Compliance with Mitigation Measures BIO-1 through BIO-4, which require a Biological Resources Assessment, focused surveys for special status plant and wildlife species, a pre-construction Burrowing Owl Survey, and focused Trapping Surveys for the Mohave ground squirrel, if warranted, would reduce potential impacts to special status plant/wildlife species to less than significant. Additionally, the future residential development would be subject to compliance with General Plan Policies Policy ER2.1.1 through Policy ER2.1.5, which would further minimize potential impacts to special status plant and wildlife species.

Mitigation Programs:

General Plan Policies:

Policy ER2.1.1: The following broadly defined areas will be designated as a Significant Ecological Area (SEA) overlay on the General Plan Land Use Map: Big Rock Wash, Little Rock Wash, Ritter Ridge, and Portal Ridge. Biological surveys should be performed to determine the nature and extent of their ecological significance prior to any approval of new developments within the overlay area. Development will not be permitted in these areas if the development is likely to significantly degrade important environmental resources.

Policy ER2.1.2: Promote only compatible and, where appropriate, passive recreational uses in natural areas determined to be ecologically significant, consistent with the particular needs and characteristics of each SEA as determined by approved field observation reports.

Policy ER2.1.2: Promote only compatible and, where appropriate, passive recreational uses in natural areas determined to be ecologically significant, consistent with the particular needs and characteristics of each SEA as determined by approved field observation reports.

Policy ER2.1.3: Solicit and use all available sources of local, regional, state, and federal funds to acquire significant wetland areas, in order to minimize the disturbance and prevent damage from erosion, turbidity, siltation, a loss of wildlife and vegetation, or the destruction of the natural habitat.

Policy ER2.1.4: Preserve natural drainage courses and riparian areas where significant concentrations of ecological resources exist.

Policy ER2.1.5: Maintain significant Joshua tree woodlands and other significant habitat areas.

Project Mitigation Measures:

BIO-1 A site-specific Biological Resources Assessment shall be conducted for future development projects in known or suspected natural habitat areas by a qualified Biologist, prior to an application being deemed complete, to determine the potential presence/absence of candidate, sensitive, or special status species, as well as the presence/absence of habitat that would support these species.

BIO-2 If deemed necessary by the site-specific Biological Resources Assessment, a Focused Survey of the proposed development site shall be conducted by a qualified Biologist, prior to any ground disturbance, for sensitive plant and wildlife species that are federally- or state-listed as endangered or threatened, having moderate to high potential for occurrence on the proposed development site.

BIO-3 If deemed necessary by the Biological Resources Assessment, a pre-construction Burrowing Owl Survey shall be conducted to determine the presence/absence of the

burrowing owl on the proposed development site, before any ground disturbance occurs. The Survey shall be conducted by a qualified Biologist according to the standard protocol established by CDFG and the Burrowing Owl Consortium (BOC). If burrowing owls are determined to be present on the development site, mitigation for potential impacts to owls shall follow the guidelines outlined by the BOC, including passive relocation during the non-breeding season.

BIO-4 If deemed necessary by the Biological Resources Assessment, focused Trapping Surveys shall be conducted to determine the presence/absence of the Mohave ground squirrel on the proposed development site prior to any ground disturbance. The Surveys shall be conducted according to the guidelines established by CDFG. If Mohave ground squirrel is determined to be present onsite, a State Permit shall be obtained pursuant to CDFG Code Section 2081.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

RIPARIAN HABITAT/SENSITIVE NATURAL COMMUNITY

- **PROJECT IMPLEMENTATION COULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY.**

Impact Analysis: The project area includes several native habitats including Joshua tree habitat, which is considered Rare by the CDFG and of "high priority for inventory." According to SOC Report Figure 4.2-2, the Ritter Ridge SEA is located within the southwestern portion of the project area. This SEA contains Joshua tree woodlands and California juniper woodlands, among other sensitive natural communities (refer to the Joshua Tree and Native Desert Vegetation Preservation Ordinance Section below for a discussion of potential impacts to Joshua tree and California juniper woodlands). Additionally, as illustrated on SOC Report Figure 4.2-5, drainage features (i.e., Anaverde Creek, Amargosa Creek, and their tributaries) that could include riparian habitat traverse the project area.

Future housing development occurring on vacant parcels could have a substantial adverse effect on riparian habitat or other sensitive natural community. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to riparian habitat or other sensitive natural community. Future development would be subject to compliance with Policy ER2.1.1, which requires that Biological Surveys be performed to determine the nature and extent of the ecological significance of the SEA, prior to approval of new developments within the area. Development would not be permitted in the SEA if the development is likely to significantly degrade important environmental resources. Policy ER2.1.2 specifies that the City would promote only compatible and, where appropriate, passive recreational uses in natural areas determined to be ecologically significant, as determined by approved field observation reports. Policy ER2.1.4 requires that natural drainage courses and riparian areas be preserved where significant concentrations of ecological resources exist. Compliance with Mitigation Measure BIO-1, which requires a site-specific Biological Resources Assessment, would also be required. Project implementation would result in a less than significant impact upon riparian habitat or other sensitive natural community, following compliance with General Plan Policies ER2.1.1, ER2.1.2, and ER2.1.4, and Mitigation Measure BIO-1.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies ER2.1.1, ER2.1.2, and ER2.1.4, outlined above.

Project Mitigation Measures: Refer to Mitigation Measure BIO-1.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

JURISDICTIONAL WATERS AND WETLANDS

- **PROJECT IMPLEMENTATION COULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON FEDERALLY PROTECTED WETLANDS.**

Impact Analysis: SOC Report Figure 4.2-5 illustrates the watercourses and wetlands within the Palmdale area and indicates that jurisdictional drainage features or wetland areas associated with Anaverde and Amargosa Creeks occur within the western portion of the project area. These jurisdictional waters/wetlands would potentially be under the jurisdiction of the USACE, RWQCB, and/or the CDFG.

Future housing development traversing these jurisdictional drainage features/wetlands or located in their proximity could have a substantial adverse effect through their removal, filing, hydrological interruption, or other means. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to jurisdictional waters and wetlands. With implementation of Mitigation Measure BIO-5, which requires a site-specific wetland delineation of all jurisdictional waters, this impact would be reduced to less than significant. Additionally, compliance with Policy ER2.1.3, which addresses significant wetland areas and is intended to minimize the disturbance and prevent damage from erosion, turbidity, siltation, a loss of wildlife and vegetation, or the destruction of the natural habitat, would be required.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policy ER2.1.3, outlined above.

Project Mitigation Measures:

BIO-5 Prior to approval of a Tentative Tract or Parcel Map, a qualified wetland specialist shall conduct a wetland delineation of all jurisdictional waters within a site, in accordance with USACE methodology. If needed, the specialist shall also submit a request for a streambed alteration agreement from CDFG, and prepare/submit a request for a jurisdictional determination to the USACE or CDFG. For waters not under the jurisdiction of the USACE, but under the jurisdiction of the RWQCB, the specialist shall submit the delineation documents along with the USACE jurisdictional determination to the RWQCB and request an assessment of jurisdiction. If the areas are subject to USACE or RWQCB jurisdiction, then the regulatory requirements of these agencies shall be implemented.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

MOVEMENT OF MIGRATORY SPECIES

- **IMPLEMENTATION OF THE PROPOSED PROJECT COULD INTERFERE WITH THE MOVEMENT OF A NATIVE RESIDENT OR MIGRATORY SPECIES.**

Impact Analysis: Anaverde and Amargosa Creeks, which traverse the western portion of the project area, could function as a wildlife movement corridor. Future housing development could interfere with the movement of wildlife species through these creek corridors. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to wildlife movement corridors. With implementation of Mitigation Measure BIO-1, which requires a site-specific Biological Resources Assessment, this impact would be reduced to less than significant.

The project area could support migratory bird species, including both raptors and songbirds. Nesting activity typically occurs from February 1 to September 1. Disturbing or destroying active nests is a violation of the Federal Migratory Bird Treaty Act and would be considered a potentially significant impact. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to migratory bird species. Compliance with Mitigation Measures BIO-6 and BIO-7, which require full evaluation of potential impacts and restrict construction activities to outside of the breeding bird season, would reduce potential impacts to less than significant.

Mitigation Programs:

General Plan Policies: No General Plan Policies have been identified.

Project Mitigation Measures: Refer to Mitigation Measure BIO-1 in addition to the following:

BIO-6 Impacts to migratory wildlife potentially impacted by future development shall be fully evaluated, including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds.

BIO-7 If deemed necessary by the Biological Resources Assessment, project construction activities (including disturbances to vegetation) shall take place outside of the breeding bird season (February 1 to September 1), in order to avoid take (including disturbances, which would cause abandonment of active nests containing eggs and/or young). If project construction activities cannot avoid the breeding season, nest surveys shall be conducted and active nests shall be avoided and provided with a minimum buffer, as determined by a biological monitor.

Level of Significance: Less Than Significant Impact with Mitigation Incorporated.

JOSHUA TREE AND NATIVE DESERT VEGETATION PRESERVATION ORDINANCE

- **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT CONFLICT WITH THE JOSHUA TREE AND NATIVE DESERT VEGETATION PRESERVATION ORDINANCE.**

Impact Analysis: As illustrated on SOC Report Figure 4.2-1, portions of the project area are identified as California Juniper Woodland and Joshua Tree Woodland. Scattered California junipers and Joshua trees often occur within the Mojavean Desert Scrub, which is also present within the project area. Future housing development occurring on vacant parcels could impact the native desert vegetation. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to native desert vegetation, including Joshua trees and California junipers. In compliance with *Municipal Code* Chapter 14.04, *Joshua Tree and Native Desert Vegetation Preservation*, the design of future residential development projects must strive to protect and maintain the most desirable and significant of the healthy desert vegetation. Pursuant to *Municipal Code* Section 14.04.040, desert vegetation would not be removed except as provided by the provisions of Chapter 14.04. All development proposal applications for sites containing native desert vegetation would be required to prepare a Desert Vegetation Preservation Plan, which would contain specific information regarding Joshua trees and California junipers, and obtain a Native Desert Vegetation Removal Permit prior to the removal of any native desert vegetation. Compliance with *Municipal Code* Chapter 14.04 would reduce potential impacts to native desert vegetation, including Joshua trees and California junipers, to less than significant.

Mitigation Programs:

GPEIR Mitigation Measures and Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact.

5.8.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO BIOLOGICAL RESOURCES.**

Impact Analysis: Potential impacts to biological resources as a result of full implementation of the General Plan were evaluated in GPEIR Section 4.2.4 (Biological Resources) (pages 4-71 through 4-75). The GPEIR concluded development allowed by the Land Use Plan would significantly impact biological resources by causing the loss of Joshua trees and other native vegetation, destroying rare and endangered species and their habitat, disrupting wildlife movement corridors, and introducing imported plant and animal species. Development in riparian and oak woodlands, two plant communities considered sensitive by the CDFG, would result in the loss of these sensitive plant communities and consequently the loss of habitat for associated animal species. Overall, impacts on biological resources resulting from development

accommodated by the General Plan were considered significant. As concluded above, impacts on biological resources resulting from project implementation are considered less than significant with mitigation incorporated.

When viewed in conjunction, the loss of native vegetation and wildlife habitat, and the displacement of wildlife species in the project area resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the location of the project and the level of mitigation required on a project-by-project basis. However, compliance with the General Plan Policies would mitigate the impacts of development under the General Plan combined with the proposed project to less than significant. These involve the adoption/compliance with standards and ordinances that protect biological resources from damage and destruction, including the following:

- Municipal Code Chapter 14.04, *Joshua Tree and Native Desert Vegetation Preservation*;
- Zoning Ordinance Section 86.01, *Landscaping Requirements*;
- Zoning Ordinance Chapter 10 Article 100, *Hillside Management*;
- Open Space and Conservation Plan (provides for acquisition and maintenance of open space areas, which would assist in preserving sensitive habitats and species);
- Adoption of Significant Ecological Areas (SEA); and
- Participation in the West Mojave Coordinated Management Plan (provides management prescriptions for desert tortoise and Mojave ground squirrel).

The City would continue to promote the protection of sensitive, rare, threatened, and endangered species found in the project area through the required biological assessments. For each development project, impacts to biological resources would be mitigated through compliance with the City's standards and ordinances, the CEQA process, and where appropriate, acquisition of the required regulatory approvals from the resource agencies. Therefore, cumulative impacts to biological resources, which would be mitigated on a project-by-project basis and in accordance with the City's Municipal Code, General Plan goals, policies, and programs, and the established regulatory framework, would be less than significant.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: Refer to Mitigation Measures BIO-1 through BIO-7.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

5.8.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Biological impacts associated with implementation of the proposed project would be less than significant with adherence to and/or compliance with the recommended mitigation measures and the *Palmdale Municipal Code*. No significant unavoidable impacts to biological resources would occur as a result of project implementation.

5.9 Cultural Resources

5.9 CULTURAL RESOURCES

The purpose of this section is to examine the potential for cultural resources (including historic, prehistoric, and paleontological) to occur within and around the project area and to assess their significance. Mitigation measures are recommended to minimize impacts to cultural resources as a result of project implementation. The information in this section is based on the following documentation:

- *City of Palmdale General Plan*, Environmental Resources Element (January 25, 1993);
- *Final Program EIR for the City of Palmdale General Plan* (GPEIR) (SCH No. 87120908) (February 1, 1993); and
- *City of Palmdale State of the City Report* (June 2009).

5.9.1 EXISTING SETTING

HISTORICAL RESOURCES

Historic Background

Recorded history begins in the Antelope Valley in the late 1700s. Between 1772 and 1857, a number of travelers came through the Valley. Cattle and sheep herding began in the western end of the Valley in 1855 with Edward Beale's purchase of the La Liebre Ranch. Other settlers came in the 1860s and set up ranches in the Elizabeth Lake region and the southern foothills and the first school was established at Elizabeth Lake. Dry farming and orchards began to develop in the 1890s.

The Southern Pacific Railroad completed the San Francisco-Los Angeles line through the Valley in 1876. The inexpensive and rapid transportation it provided allowed homesteading and farming to flourish. This, combined with the wet years of the late 1880s and early 1890s, caused the first boom of the Antelope Valley to occur.

The community of Palmenthal was established in the 1880s by 60 to 70 German immigrant families from Nebraska and Illinois near the present 20th Street East and Avenue R. In 1890, the name of the post office was changed from Palmenthal to Palmdale, and by 1899 the community had moved to the area of the new railroad station.

The Palmdale Irrigation District (Palmdale Water District) was formed in 1918 and began a joint five-year construction project with the Little Rock Creek Irrigation District in 1918 for the completion of the Little Rock Dam. The communities of Pearland and Pearblossom were established in the 1920s and pear orchards replaced almonds. By the 1920s, pumped irrigation water became relatively inexpensive, and alfalfa spread over the Valley. Ample water and the resulting pear orchards brought the second agricultural boom to the Antelope Valley in the 1920s.

World War II saw training activities established at Muroc Dry Lake (now Edwards Air Force Base), War Eagle Field (now Mira Loma), and a training facility for B-52 pilots at Palmdale Airport (now Air Force Plant 42). Tremendous increases were made in the agricultural output of the Valley to support the war effort.

The third boom in the Antelope Valley was brought about by the aircraft industry. After World War II, the Air Force established Plant 42, and during the early 1950s aircraft industries moved to the Valley from more congested areas of the Los Angeles basin.

The construction of the California Aqueduct and the Antelope Valley Freeway in the 1970s brought additional water and accessibility to the Valley. The increased availability of water and improved transportation made the Valley a desirable place to locate industrial development and homes for commuters, from the Los Angeles basin.

The most recent boom in the Valley occurred during the 1980s when affordable housing available to commuters from the Los Angeles basin brought a residential construction boom, and increased production at Air Force Plant 42 brought jobs to the area. The vastly increased residential, commercial, office, and industrial development in the City of Palmdale during the 1980s made if the fastest growing community in California during the decade, according to the 1990 Census.

Historic Structures

National Historic Landmarks (NHL) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. There are no NHL located within the City of Palmdale.[1] The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. There are no National Register listings located within the City of Palmdale.[2]

California Historical Landmarks (CHL) are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. There are no CHL located within the City of Palmdale.[3] The California Register of Historical Resources (California Register) includes buildings, sites, structures, objects, and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. There are no California Register listings located within the City of Palmdale.[4]

The *General Plan* includes a list of the City's potential historic structures, which was compiled by the Antelope Valley Historical Society in 1989; refer to *General Plan* Table ER-1, *Potential Historic Structures*. It is noted the list is based solely on the structure's existence for at least 50 years. Historical significance should not be inferred from this listing until such time as these (and potentially other) structures are evaluated to determine their significance. The locations of the potential historic structures outlined in *General Plan* Table ER-1 are illustrated in GPEIR

[1] National Park Service National Historic Landmarks Program, Lists of National Historic Landmarks Updated July 2011, http://www.cr.nps.gov/nhl/designations/Lists/CA01.pdf, Accessed January 4, 2012.

[2] National Park Service, National Register of Historic Places Database, http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome, Accessed January 4, 2012.

[3] State of California Office of Historic Preservation, California Historical Resources, http://ohp.parks.ca.gov/listed_resources/, Accessed January 4, 2012.

[4] Ibid.

Exhibit 3-54, *Potential Historic Structures*. A review of *General Plan* Table ER-1 and GPEIR Exhibit 3-54 indicates there are several potential historic structures located within or immediately adjacent to the project area.

ARCHAEOLOGICAL RESOURCES

Archaeological Background

Palmdale lies at the intersection of two natural transportation corridors that have been the major routes to and through the Antelope Valley since prehistoric time. Soledad Canyon, one of the few passes through the San Gabriel Mountains, provides access to the Los Angeles basin and other coastal regions. The mouth of Soledad Canyon is a natural terminus for routes across the Antelope Valley to the Owens, Tehachapi, and San Joaquin Valleys. The San Andreas Fault through the foothills and along the base of the San Gabriel Mountains is a well-watered route from Cajon Pass and the Mojave River through the Leona Valley to Tejon Pass and the San Joaquin Valley. These natural transportation corridors were used by the early Native American occupants of the Valley, as well as later explorers and historic settlers.

The majority of archaeological investigations in the Antelope Valley have been conducted in the past 20 years. Archaeologists have learned that the Antelope Valley has been inhabited for the past 5,000 years, and possibly prior to that. The earliest cultural period for which there is evidence is the Pinto Period, which dates back to at least 6,000 years ago. Definitive evidence to specify a time span for the earliest occupation of the Antelope Valley and the Palmdale area has not been identified. The first known inhabitants of the Antelope Valley were Native Americans of several tribes who camped on the Valley floor and in the foothills. The cultural identities of the earlier prehistoric peoples are unknown.

The June 2006 archival records search conducted at the California State University Archaeological Information Center in Fullerton identified 317 recorded prehistoric and historical archaeological sites within the Palmdale area, according to USGS Quadrangles. The project area is located within the Palmdale Quadrangle where 106 sites have been identified.

SOC Report Figure 4.5-1, *Areas of Cultural Resource Sensitivity*, illustrates the locations within the Palmdale area that have the highest density of cultural resources on record. As indicated in SOC Report Figure 4.5-1, portions of the project area are identified as having concentrations of cultural resources.

Sacred Lands

As discussed in the *Government Code Section 65352.3, SB 18/Sacred Lands File Search* Section below, the Native American Heritage Commission (NAHC) performed a Sacred Lands File search of the project area in January 2012. The NAHC's search determined that no Native American cultural resources were found within one-half mile radius of the area of potential effect (APE).

PALEONTOLOGICAL RESOURCES

A paleontologic sensitivity study was prepared citywide as part of the GPEIR. Research included an examination of geologic mapping, paleontologic and geologic literature, and

institutional site records searches. Twelve rock units were identified citywide, as part of the study. The units were evaluated for both identified paleontological sensitivity and potential paleontological resources. SOC Report Figure 4.5-2, *Areas of Paleontological Sensitivity*, illustrates the locations within the Palmdale area that have low and high potential for paleontological resources. As indicated in SOC Report Figure 4.5-2, the western portions of the project area are identified as having both high and low potential for paleontological resources.

5.9.2 REGULATORY SETTING

Numerous laws and regulations require Federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (i.e., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, the California Environmental Quality Act (CEQA), and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary Federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance. The applicable regulations are discussed below.

FEDERAL

National Historic Preservation Act of 1966

Enacted in 1966 and amended in 2000, the National Historic Preservation Act (NHPA) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the Federal, State and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP or National Register), established the position of State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage and created the Advisory Council on Historic Preservation (ACHP).

Section 106 Process

Through regulations associated with the NHPA, an impact to a cultural resource would be considered significant if government action will affect a resource listed in or eligible for listing in the National Register. The NHPA codifies a list of cultural resources found to be significant within the context of national history, as determined by a technical process of evaluation. Resources that have not yet been placed on the National Register, and are yet to be evaluated, are afforded protection under the Act until shown to be not significant.

Section 106 of the NHPA and its implementing regulations (36 Code of Federal Regulations Part 800) note that for a cultural resource to be determined eligible for listing in the National Register, the resource must meet specific criteria associated with historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing on the National Register are applied within an analysis when there is some question as to the significance of a cultural resource. The criteria for evaluation are defined as the quality of

significance in American history, architecture, archeology, engineering, and culture. This quality must be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- *Criterion A*: It is associated with events that have made a significant contribution to the broad patterns of our history; or

- *Criterion B*: It is associated with the lives of persons significant in our past; or

- *Criterion C*: It embodies 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

- *Criterion D*: It has yielded, or may be likely to yield, information important in prehistory or history.

Criterion (D) is usually reserved for archaeological resources. Eligible cultural resources must meet at least one of the above criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

The Section 106 evaluation process does not apply to projects undertaken under City environmental compliance jurisdiction, however, should the undertaking require funding, permits or other administrative actions issued or overseen by a federal agency, analysis of potential impacts to cultural resources following the Section 106 process will likely be necessary. The Section 106 process typically excludes cultural resources created less than 50 years ago unless the resource is considered highly significant from the local perspective. Finally, the Section 106 process allows local concerns to be voiced and the Section 106 process must consider aspects of local significance before a significance judgment is rendered.

Secretary of the Interior's Standards for the Treatment of Historic Properties

Evolving from the *Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards* that were developed in 1976, the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* were published in 1995 and codified as 36 CFR 67. Neither technical nor prescriptive, these standards are "intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources." "Preservation" acknowledges a resource as a document of its history over time, and emphasizes stabilization, maintenance, and repair of existing historic fabric. "Rehabilitation" not only incorporates the retention of features that convey historic character but also accommodates alterations and additions to facilitate continuing or new uses. "Restoration" involves the retention and replacement of features from a specific period of significance. "Reconstruction," the least used treatment, provides a basis for recreating a missing resource. These standards have been adopted, or are used informally, by many agencies at all levels of government to review projects that affect historic resources.

STATE

California Environmental Quality Act

As defined in Section 21083.2 of CEQA, a "unique" archaeological resource is 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 high probability that it meets any of the following criteria:

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

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is unique archaeological resource. The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15-64.5(c)(4)).

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) is "an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- *Criterion 1*: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- *Criterion 2*: It is associated with the lives of persons important in our past.

- *Criterion 3*: It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

- *Criterion 4*: It has yielded, or may be likely to yield, information important in history or prehistory.

California Points of Historical Interest

California Points of Historical Interest (Points) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a landmark and a "point." If a point is subsequently granted status as a landmark, the point designation will be retired. There are no Points located in the City of Palmdale.[5]

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- The first, last, only or most significant of its type within the local geographic region (city or county);

- Associated with an individual or group having a profound influence on the history of the local area; or

- A prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

State Historical Building Code

Created in 1975, the State Historical Building Code (SHBC) provides regulations and standards for the preservation, restoration, rehabilitation, or relocation of historic buildings, structures, and properties that have been determined by an appropriate local or State governmental jurisdiction to be significant in the history, architecture, or culture of an area. Rather than being prescriptive, the SHBC constitutes a set of performance criteria. The SHBC is designed to help facilitate restoration or change of occupancy in such a way as to preserve original or restored elements and features of a resource; to encourage energy conservation and a cost-effective approach to preservation; and to provide for reasonable safety from earthquake, fire, or other hazards for occupants and users of such "buildings, structures and properties." The SHBC also serves as a guide for providing reasonable availability, access, and usability by the physically disabled.

[5] Ibid.

Government Code (Section 65352.3, SB 18/Sacred Lands File Search)

Pursuant to Government Code Section 65352.3, prior to the adoption or any amendment of a city or county's general plan (proposed on or after March 1, 2005), the city or county shall conduct consultations with California Native American tribes that are on the contact list maintained by the Native American Heritage Commission (NAHC) for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that are located within the city or county's jurisdiction.

The NAHC conducted a Sacred Lands File search in January 2012 and determined that no Native American cultural resources are identified within one-half mile radius of the APE. The NAHC provided a List of Culturally Affiliated Native American contacts and the listed Native American contacts were subsequently consulted by the City. The Culturally Affiliated Native American contacts did not report the presence of any Native American cultural resource within the project area.

California Health and Safety Code (Section 7050.5)

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the California Public Resources Code stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendents shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CITY OF PALMDALE GENERAL PLAN

The *Palmdale General Plan* Environmental Resources Element addresses the City's historical, archaeological, and paleontological resources. *General Plan* Table ER-1 lists the City's

potential historic structures and Exhibit ER-6 illustrates their general locations. In addition to age, the City considers the following factors when evaluating a structure's significance:

1. Architectural features unique to the region, such as:

    a. Outstanding example within the region of an architectural style or of a particular architect's work.
    b. Use of construction techniques or materials unique to the region.

2. Importance of the structure in the history of Palmdale.

3. Existing or restorable condition of the structure.

4. Physical and economic feasibility of possible relocation.

5. Physical and economic feasibility of possible restoration.

6. Potential reuse for the structure following restoration/relocation.

The following goal and objective are specified in the Environmental Resources Element regarding cultural resources:

Goal ER7: Protect historical and culturally significant resources which contribute to the community's sense of history.

Objective ER7.1: Promote the identification and preservation of historic structures, historic sites, archaeological sites, and paleontological resources in the City.

5.9.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The purpose of this analysis is to identify any potential cultural resources within or adjacent to the project area, and to assist the Lead Agency in determining whether such resources meet the official definitions of "historical resources," as provided in the Public Resource Code, in particular CEQA.

SIGNIFICANCE GUIDELINES

Historical Resources

Impacts to a significant cultural resource that affect characteristics that would qualify it for the NRHP or that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (*CEQA Guidelines*, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration "in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register" (*CEQA Guidelines* Section 15064.5[b][2][A]).

Archaeological Resources

A significant prehistoric archaeological impact will occur if grading and construction activities will result in a substantial adverse change to archaeological resources determined to be "unique" or "historic." "Unique" resources are defined in Public Resources Code Section 21083.2; "historic" resources are defined in Public Resources Code Section 21084.1 and *CEQA Guidelines* Section 15126.4.

Public Resources Code Section 21083.2(g) states:

As used in this section, "unique archaeological resource" means 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; or

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Paleontological Resources

An impact on paleontological materials would be considered a significant impact if the project results in the direct or indirect destruction of a unique or important paleontological resource or site. The following criteria are used to determine whether a resource is unique or important:

- The past record of fossil recovery from the geologic unit(s);
- The recorded fossil localities in the project site;
- Observation of fossil material on-site; and
- The type of fossil materials previously recovered from the geologic unit (vertebrate, invertebrate, etc.).

CEQA SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study includes questions relating to cultural resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5;

- Cause a substantial adverse change in the significance of an archaeological resources pursuant to § 15064.5;

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and/or

- Disturb any human remains, including those interred outside of formal cemeteries.

Based on these standards/criteria, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." If a potentially significant impact cannot be reduced to a less than significant level through the application of goals, policies, standards, or mitigation, it is categorized as a significant and unavoidable impact. The standards used to evaluate the significance of impacts are often qualitative rather than quantitative because appropriate quantitative standards are either not available for many types of impacts or are not applicable for some types of projects.

5.9.4 IMPACTS AND MITIGATION MEASURES

HISTORICAL RESOURCES

- **PROJECT IMPLEMENTATION WOULD NOT CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE.**

Impact Analysis: As concluded above, there are no NHL, National Register listings, CHL, or California Register listings located within the City of Palmdale. However, structures that are potentially historic are located within the City. A review of *General Plan* Table ER-1 and GPEIR Exhibit 3-54 indicates there are various potential historic structures located within or immediately adjacent to the project area. Also, since the listing would not be verified until such time as these (and potentially other) structures are evaluated to determine their significance, additional historic structures may be present in the project area.

Future housing development would occur as both new development on vacant properties and redevelopment/reuse of previously developed/disturbed properties. Future housing development occurring as redevelopment/reuse of previously developed properties could cause a substantial adverse change in the significance of a historical resource. Given the conceptual nature of the residential development anticipated by the proposed project, new development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to historical resources. It is the City's goal to protect historical and culturally significant resources, which contribute to the community's sense of history (Goal ER7). To this end, the City continuously promotes the identification and preservation of historic structures and sites (Objective ER7.1). Accordingly, all future residential development within the project area would be subject to compliance with the General Plan Policies, which would reduce potential impacts to historical resources to less than significant. Policy ER7.1.1 requires that historic landmarks be identified and Policy ER7.1.2 addresses their maintenance, rehabilitation, and appropriate reuse. Policy ER7.1.3 requires that new development protect significant historic resources or provide for other appropriate mitigation. Policy ER 7.1.4 requires that special studies/surveys be prepared for any development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the cultural resources sensitivity map (SOC Report Figure 4.5-1). Additionally, the City would discourage historic landmark properties from being altered in such a manner as to significantly reduce their cultural value to the community (Policy ER7.1.8). Potential impacts to historical

resources from future residential development are considered less than significant with adherence to the specified General Plan Policies.

Mitigation Programs:

General Plan Policies:

Policy ER7.1.1: Identify and recognize historic landmarks from Palmdale's past.

Policy ER7.1.2: Promote maintenance, rehabilitation, and appropriate reuse of identified landmarks where feasible.

Policy ER7.1.3: Require that new development protect significant historic, paleontological, or archaeological resources, or provide for other appropriate mitigation.

Policy ER7.1.4: Develop and maintain a cultural sensitivity map. Require special studies/ surveys to be prepared for any development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the sensitivity map.

Policy ER7.1.6: Cooperate with private and public entities whose goals are to protect and preserve historic landmarks and important cultural resources.

Policy ER7.1.7: Promote recognition, understanding and enjoyment of unique historical resources within the community by identifying resources through the use of landmark designation plaques, directional signage, self-guided tours, school curriculum, programs and events.

Policy ER7.1.8: Discourage historic landmark properties from being altered in such a manner as to significantly reduce their cultural value to the community.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

ARCHAEOLOGICAL RESOURCES

- **PROJECT IMPLEMENTATION COULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE.**

Impact Analysis: SOC Report Figure 4.5-1 illustrates the locations within the Palmdale area that have the highest density of cultural resources on record and indicates that portions of the project area potentially contain high concentrations of cultural resources. Therefore, future housing development occurring on vacant properties could cause a substantial adverse change in the significance of an archaeological resource. Ground-disturbing activities associated with future residential development could unearth undocumented subsurface archaeological resources. Impacts on these resources include direct impacts where grading and earth moving activities physically remove the resource, and indirect impacts due to vandalism in resource sites that are accessible to the public. New residential development projects would undergo

environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to archaeological resources. As previously noted, it is the City's goal to protect culturally significant resources, which contribute to the community's sense of history (Goal ER7). Accordingly, all future residential development within the project area would be subject to compliance with General Plan Policy ER 7.1.4, which requires that special studies/surveys be prepared for any development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the cultural resources sensitivity map (SOC Report Figure 4.5-1). Policy ER7.1.3 requires that new development protect significant archaeological resources or provide for other appropriate mitigation, and Policy ER7.1.6 requires that the Applicant cooperate with private and public entities whose goals are to protect and preserve important cultural resources. Future residential development would also be subject to compliance with Mitigation Measure CUL-1, which outlines the procedural requirements, in the event resources are unearthed during excavation and grading activities. Potential impacts to archaeological resources within the project area are considered less than significant with adherence to General Plan Policy ER 7.1.4 and Mitigation Measure CUL-1.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies 7.1.3, 7.1.4, and 7.1.6, outlined above.

Project Mitigation Measures:

CUL-1 In the event that archeological and/or paleontological resources are unearthed during excavation and grading activities of future residential development, the contractor shall cease all earth-disturbing activities within a 100-meter radius of the area of discovery and shall retain a qualified archaeologist and/or paleontologist to evaluate the significance of the finding and appropriate course of action. Salvage operation requirements pursuant to Section 15064.5 of the *CEQA Guidelines* shall be followed. Work within the area of discovery shall resume only after the resource has been appropriately mitigated.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

PALEONTOLOGICAL RESOURCES

- **PROJECT IMPLEMENTATION COULD DIRECTLY OR INDIRECTLY DESTROY A UNIQUE PALEONTOLOGICAL RESOURCE.**

Impact Analysis: SOC Report Figure 4.5-2, *Areas of Paleontological Sensitivity*, illustrates the paleontological sensitivity within the Palmdale area and indicates that the western portions of the project area have both low and high potential for paleontological resources. Therefore, grading and earth moving activities associated with future housing development could directly or indirectly destroy a unique paleontological resource. Additionally, ground-disturbing activities could unearth undocumented subsurface paleontological resources. New residential development projects would undergo environmental review pursuant to *CEQA Guidelines* on a project-by-project basis, in order to determine potential impacts to paleontological resources. All future residential development within the project area would be subject to compliance with General Plan Policy ER 7.1.4, which requires that special studies/surveys be prepared for any

development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the paleontological sensitivity map (SOC Report Figure 4.5-2). Policy ER7.1.3 requires that new development protect significant paleontological resources or provide for other appropriate mitigation, and Policy ER7.1.6 requires that the Applicant cooperate with private and public entities whose goals are to protect and preserve important cultural resources. Future residential development would also be subject to compliance with Mitigation Measure CUL-1. Potential impacts to paleontological resources within the project area are considered less than significant with adherence to General Plan Policy ER 7.1.4 and Mitigation Measure CUL-1.

Mitigation Programs:

GPEIR Mitigation Measures and Policies: Refer to General Plan Policies 7.1.3, 7.1.4, and 7.1.6, outlined above.

Project Mitigation Measures: Refer to Mitigation Measure CUL-1.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

HUMAN REMAINS

- **PROJECT IMPLEMENTATION COULD DISTURB HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES.**

Impact Analysis: No conditions exist that suggest human remains are likely to be found within the project area. Due to the level of past disturbance in the area, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during earth removal or disturbance activities. Moreover, the NAHC performed a Sacred Lands File search of the project area and determined that no Native American cultural resources were found within one-half mile radius of the APE. Notwithstanding, Palmdale lies at the intersection of Soledad Canyon and the San Andreas Fault, which are natural transportation corridors that have been the major routes to and through the Antelope Valley since prehistoric time. These natural transportation corridors were used by the early Native American occupants of the Valley, as well as later explorers and historic settlers. Therefore, ground-disturbing activities, such as grading or excavation, from future development within the project area have the potential to disturb human remains. If human remains were encountered, those remains would require proper treatment, in accordance with applicable laws.

State of California Public Resources Health and Safety Code Sections 7050.5 through 7055 describe the general provisions regarding human remains, including the requirements if any human remains are accidentally 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 overly adjacent remains until the County coroner has been called out, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with

State regulations, which detail the appropriate actions necessary in the event human remains are encountered, potential impacts to human remains would be less than significant.

Mitigation Programs:

GPEIR Mitigation Measures and Policies: No General Plan Policies have been identified.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact.

5.9.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO CULTURAL RESOURCES.**

Impact Analysis: Potential impacts associated with cultural resources a result of full implementation of the Palmdale General Plan were evaluated in GPEIR Section 4.2.16 (Cultural Resources) (pages 4-255 through 4-258). Study conducted as part of the GPEIR determined the Palmdale area contains identified cultural resources and there is a high probability that additional, as yet unidentified, resources are present. Buildout according to the Land Use Plan would result in impacts to or loss of more cultural resources. Impacts on archaeological sites would include direct impacts where grading and earth moving activities for structures, roadways, or infrastructure physically remove the site, and indirect impacts due to vandalism in sites that are accessible to the public. Paleontological resources would also be directly impacted by the implementation of the Land Use and Circulation Elements. Direct impacts include demolition and removal of sites by earth moving activities, while indirect impacts would include collection of artifacts and vandalism. Impacts to historical resources would result from increases in development density under the proposed General Plan, which would encourage redevelopment that would result in the loss of historical structures. Overall, impacts on paleontological, archaeological, and historical resources from development accommodated by the General Plan are considered potentially significant. As concluded above, impacts on cultural resources resulting from project implementation are considered less than significant with mitigation incorporated.

The City would continue to review development plans on a case-by-case basis, and would require that special studies/surveys be prepared for any development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the sensitivity maps. When resources are identified, appropriate testing and preservation, mitigation, or salvage would be required. The degree of significance would depend upon the location of the proposed development and its proximity to a cultural resource. When viewed in conjunction with other developments planned for the City, the impacts to cultural resources in the project area could be considered an adverse cumulative effect. However, the General Plan's goals, policies, and programs would serve as mitigation for the environmental impacts of development under the General Plan.

When viewed in conjunction, impacts on historical, archaeological, and paleontological resources resulting from development allowed by the Land Use Plan and proposed project are considered potentially significant. The degree of significance would depend upon the location of the proposed development and its proximity to a cultural resource. However, cumulative impacts to cultural resources would be mitigated on a project-by-project basis through compliance with the General Plan Policies, the CEQA process, and where appropriate, site-specific mitigation. Therefore, cumulative impacts to cultural resources would be less than significant.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: Refer to Mitigation Measures CUL-1.

Level of Significance: Less Than Significant Impact with General Plan Policies and Mitigation Incorporated.

5.9.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts related to cultural resources associated with project implementation are considered less than significant following adherence to the established regulatory framework, General Plan Policies, and recommended mitigation measures.

5.10 Police Protection

5.10 POLICE PROTECTION

This section identifies existing law enforcement conditions within the project area, analyzes potential police protection impacts associated with the proposed project, and recommends mitigation measures to avoid or lessen the significance of potential impacts, as needed.

5.10.1 EXISTING SETTING

Law enforcement services (i.e., police protection, crime prevention, and traffic enforcement) within the City of Palmdale are provided by contract with the Los Angeles County Sheriff's Department (LACSD). The LACSD provides services to the City of Palmdale, as well as 700 square miles of unincorporated County area from the Wrightwood ski area to Lake Hughes, from the Palmdale Sheriff's Station located at 750 East Avenue Q in Palmdale. The Lancaster Station, which is located at 501 West Lancaster Boulevard, also provides services to the City of Palmdale, as needed.

The Palmdale Sheriff's Station is a full service station, housing the City's jail facilities, detective bureau, and traffic and patrol services. There are currently 188 sworn personnel and 54 professional staff (crime analysts, dispatchers, computer technicians, and secretaries) at the Palmdale Station.[1] The LACSD's target service ratio is one police officer to 1,160 persons. Additionally, the Palmdale Sheriff's Station has established target response times of five minutes for emergency calls, 20 minutes for priority calls, and 60 minutes for routine calls. The LACSD does not assess fees for new developments in the City.

The City of Palmdale Department of Public Safety and Community Relations oversees the Neighborhood and Business Watch programs, Partners Against Crime program, Public Security Officers, community service officers, crime prevention and community-based policing efforts, graffiti abatement and restitution, crime prevention through the development plan review process, and parking enforcement programs.

5.10.2 REGULATORY SETTING

CALIFORNIA PENAL CODE

The California Penal Code establishes the basis for the application of criminal law in California.

CITY OF PALMDALE GENERAL PLAN

Public Services Element

The Public Services Element provides a plan to ensure that public services and infrastructure are available to permit orderly growth and to promote public health, safety, and welfare. The policies and implementation programs in the Public Services Element are designed to ensure that adequate infrastructure will be available to serve the development identified in the Land Use Element.

[1] Telephone Communication: Sergeant Jeff Biehl, Los Angeles County Sheriff's Department - Palmdale Station, April 19, 2012.

Safety Element

The General Plan Safety Element addresses natural and man-made hazards present in the City of Palmdale. The Safety Element is intended to guide development by reducing the levels of risk posed by these hazards within the City and its Planning Area. Specifically, the Safety Element identifies present conditions and public concerns, sets policies and standards for improved public safety, and plans for protection from potential disasters. It seeks to minimize physical harm, as well as economic and social disruptions.

5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study includes questions relating to police protection. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact, if it causes the following to occur:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

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

5.10.4 IMPACTS AND MITIGATION MEASURES

POLICE PROTECTION SERVICES

- **PROJECT IMPLEMENTATION WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF POLICE PROTECTION SERVICES.**

Impact Analysis: Police protection services for the project area would be provided by the LACSD. Implementation of the proposed project is anticipated to result in a net increase of approximately 13,000 dwelling units, with a resultant population growth of approximately 46,368 persons[2], as well as an increase in traffic volumes. Increased population densities and traffic volumes would increase the calls for police emergency response and the demand for police protection facilities and services. Increased demands for police protection services could also deteriorate response times within the service area. Based on the project's forecast population

[2] The population growth assumes 3.5665 persons per dwelling unit (State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2001-2011, with 2010 Benchmark*. Sacramento, California, May 2011).

growth of approximately 46,368 persons and LACSD's target service ratio of one officer to 1,160 persons, the proposed project could create a demand for approximately 40 officers. In addition to population, the additional demand for police protection services would consider the area's crime rate, size, resources, and desired level of service. The degree of impacts to police protection services would be dependent upon the size and location of the residential development. The environmental impacts associated with the provision of new or physically altered police protection facilities would be dependent upon the location and nature of the needed facilities, and would undergo separate environmental review pursuant to *CEQA Guidelines*.

The City supports the provision of adequate law enforcement services through continued coordination with the LACSD, thereby ensuring that adequate staffing and service levels would be provided to meet the community's needs. Future residential projects would be reviewed through the City's development plan review process on a case by case basis, in order to adequately identify potential impacts to police protection services and facilities. The City also minimizes potential crime by reviewing site plan design, in order to ensure that developments are designed to maximize safety and the security of users. Additionally, the City annually reviews the contract with the LACSD for police protection services, to determine the need for adjustments to service levels based on population increases, response times, crime trends, and traffic problems. The LACSD would make recommendations to the City for any necessary adjustments in service levels to ensure that adequate police protection facilities and services are available to address the City's needs. Finally, it is the City's objective (Objective PS5.2) to support the provision of adequate law enforcement services to meet the needs of City residents. To this end, the City would continue to monitor staffing and service levels for law enforcement services and work with the LACSD to ensure adequate staffing to meet service level needs of the community (Policy PS5.2.3). Following compliance with the City's development plan review process and General Plan Policy PS5.2.3, as well as the City's and LACSD's coordinated efforts to ensure adequate law enforcement services are available to meet the needs of the community, project implementation would result in a less than significant impact involving police protection services.

Mitigation Programs:

General Plan Policies:

Policy PS5.2.2: Coordinate with and provide input to the Sheriff's Department regarding planning for sheriff's facilities serving Palmdale, with the goal of ultimately obtaining a full-service sheriff's station and satellite stations as needed to serve the community.

Policy PS5.2.3: Monitor staffing and service levels for law enforcement services and work with the Sheriff's Department to ensure adequate staffing to meet service level needs of the community.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.10.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO POLICE PROTECTION SERVICES.**

Impact Analysis: Potential impacts associated with police protection as a result of full implementation of the Palmdale General Plan were evaluated in General Plan EIR Section 4.2.10 (Public Services) (pages 4-150 through 4-153). The GPEIR concluded the demand for police protection would increase with the rate of development within the City. With implementation of General Plan policies, programs, and mitigation measures, impacts would be reduced to a less than significant level. As concluded above, impacts on police protection services resulting from project implementation are considered less than significant following compliance with General Plan Policies.

When viewed in conjunction, the increased demand for police protection services to the service area resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the location and nature of the project, and the current availability of police protection resources. All future residential and non-residential development within the City would be reviewed on a project-by-project basis to ensure that adequate police protection services are available to meet the increased demands. Additionally, individual projects would be required to comply with conditions of approval set forth by the LACSD and any recommended mitigation applicable to the project, as well as the City's General Plan Policies and development standards. Therefore, cumulative impacts to police protection services, which would be mitigated on a project-by-project basis and in accordance with the City's Municipal Code and General Plan Policies, would be less than significant.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Impacts related to police protection services resulting from project implementation would be less than significant following compliance with the City's development review process and General Plan policies.

5.11 School Facilities

5.11 SCHOOL FACILITIES

This section provides existing conditions and background information necessary to determine potential impacts resulting from implementation of the proposed project. Mitigation measures are recommended to avoid or reduce potential impacts to less than significant levels. This section is based on information from the Palmdale School District and Antelope Valley Union High School District.

5.11.1 EXISTING SETTING

The project area extends into the jurisdiction of three school districts: Palmdale School District (PSD); Westside Union School District (WUSD); and Antelope Valley Union High School District (AVUHSD).

PALMDALE SCHOOL DISTRICT

The PSD, which encompasses over 75 square miles, offers Kindergarten (K) through 8th grade education at the following schools:[1]

Elementary Schools (Grades K – 6)

- Barrel Springs;
- Buena Vista;
- Chaparral;
- Cimarron;
- Desert Rose;
- Dos Caminos;
- Golden Poppy;
- Joshua Hills;
- Manzanita;
- Mesquite;
- Ocotillo;
- Palm Tree;
- Quail Valley;
- Tumbleweed; and
- Yucca.

Elementary/Intermediate Schools (Grades K – 8)

- Los Amigos;
- Oak Tree;
- Palmdale Learning Plaza;
- Summerwind Avid Academy; and
- Yellen Learning Center.

[1] Palmdale School District Website: http://www.palmdalesd.org/page/9, Accessed April 3, 2012.

Intermediate Schools (Grades 7 - 8)

- Cactus;
- Desert Willow;
- Juniper; and
- Shadow Hills.

WESTSIDE UNION SCHOOL DISTRICT

The WUSD, which covers approximately 346 square miles and has an enrollment of approximately 9,000 students, offers K through 8th grade education at the following schools:[2]

Elementary Schools (Grades K – 6)

- Cottonwood;
- Esperanza;
- Quartz Hill;
- Rancho Vista;
- Sundown; and
- Valley View.

Elementary/Middle Schools (Grades 1 – 8)

- Anaverde Hills (on Cottonwood Campus);
- Del Sur; and
- Leona Valley.

Middle Schools (Grades 7 - 8)

- Del Sur;
- Hillview;
- Joe Walker; and
- Leona Valley.

Portable/temporary classrooms are used at Anaverde Hills Elementary, Cottonwood Elementary, Rancho Vista Elementary, and Hillview Middle Schools. According to the WUSD, the existing facilities are not suitable and the District is unable to meet the demand for school facilities resulting from growth in the community.[3] WUSD is in the process of modernizing two of their existing schools: Cottonwood Elementary; and Rancho Vista Elementary. Additionally, two new schools are under construction: Anaverde Hills Elementary (K – 8, scheduled to open August 2013); and Gregg Anderson Elementary (K – 6, scheduled to open August 2012). The WUSD currently assesses the following Developer Fees against new developments: $2.97 per square foot for residential uses; and $0.377 per square foot for commercial/industrial uses.

School Facilities Needs Analysis

According to the School Facilities Needs Analysis Table 5, *Existing School Facilities Capacity and Student Enrollment*, the WUSD's elementary and middle schools are currently over

[2] Westside Union School District Website: http://www.westside.k12.ca.us/district/about.htm, Accessed April 24, 2012.

[3] Ms. Nellie Thomas, Administrative Assistant, Westside Union School District, April 23, 2012.

capacity.[4] More specifically, with a capacity of 5,606 and an enrollment of 6,367, the WUSD elementary schools are 761 students over capacity. Similarly, with a capacity of 1,742 and an enrollment of 2,158, the WUSD middle schools are 416 students over capacity.

ANTELOPE VALLEY UNION HIGH SCHOOL DISTRICT

The AVUHSD offers 9th through 12th grade education at the following high schools:

- Quartz Hill;
- Highland;
- Palmdale; and
- Knight.

5.11.2 REGULATORY SETTING

California's system for financing school facilities can be generally described as a cooperative effort between the state and local school districts. The state provides districts with financial support for new school construction and modernization projects through the School Facility Program (SFP). It funds the SFP through statewide, voter-approved bonds. Local school districts finance their share of school construction and modernization project costs primarily with revenue raised through local General Obligation (GO) bond elections.

ASSEMBLY BILL 2926

The State of California has traditionally been responsible for the funding of local public schools. To assist in providing facilities to serve students generated by new development projects, the State passed Assembly Bill 2926 (AB 2926) in 1986. This bill allowed school districts to collect impact fees from developers of new residential and commercial/industrial building space. Development impact fees were also referenced in the 1987 Leroy Greene Lease-Purchase Act, which required school districts to contribute a matching share of project costs for construction, modernization, or reconstruction.

SENATE BILL 50 AND PROPOSITION 1A

Senate Bill 50 (SB 50) and Proposition 1A, both of which passed in 1998, provided a comprehensive school facilities financing and reform program, in part by authorizing a $9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murrieta court cases. Specifically, the bond funds are to provide $2.9 billion for new construction and $2.1 billion for reconstruction/modernization needs.

The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate, and reinstates the school facility fee cap for legislative actions (e.g., General Plan amendments, specific plan adoption, zoning plan amendments) as was allowed under the Mira, Hart and Murrieta court cases. The statutes state that these fees are the exclusive means of considering as well as mitigating school impacts caused by new development. Accordingly, these fees limit the scope of impact

[4] Westside Union School District School Facilities Needs Analysis, Dolinka Group, LLC, March 15, 2012.

review in an Environmental Impact Report, the mitigation that can be imposed, and the findings a lead agency must make in justifying its approval of a project. Government Code Sections 65995-65996. See also, Chawanakee Unified School District v. County of Madera (2011) 196 Cal.App.4th 1016. Under Chawanakee, the impacts of new school construction (including reasonably foreseeable new school construction necessitated by new residential development) on the non-school environment and such impacts as traffic impacts of increased student busing to and from a school facility do have to be examined, if applicable to a particular project, but the project's impacts in causing school overcrowding or inadequate classroom facilities do not. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." These provisions remain in place as long as subsequent State bonds are approved and available.

SB 50 also establishes three levels of Developer Fees that may be imposed upon new development by the governing board of a school district depending upon certain conditions within a district. Level One Fees are the statutory fees, which can be adjusted for inflation every two years. Level Two Fees allow school districts to impose fees beyond the base statutory cap, under specific circumstances. Level Three Fees come into effect if the State runs out of bond funds after 2006, which would allow school districts to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies. The school fee amounts provided for in Government Code Sections 65995, 65995.5 and 65995.7 would constitute full and complete mitigation for school facilities.

In order to accommodate students from new development projects, school districts may alternatively finance new schools through special school construction funding resolutions and/or agreements between developers, the affected school districts, and occasionally, other local governmental agencies. These special resolutions and agreements often allow school districts to realize school mitigation funds in excess of the developer fees allowed under SB 50.

The passage of Proposition 1A in 1998 created the School Facilities Program (SFP), in order to streamline the process districts go through to obtain state funding. Pursuant to the SFP, funding for new construction and modernization is provided by the State in the form of per-pupil grants. Generally, projects also require local matching funds. The SFP also implemented numerous reforms intended to streamline the application process, simplify the state facilities program, and create a more transparent and equitable funding mechanism.

5.11.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to schools. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact, if it causes the following to occur:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for school services.

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

5.11.4 IMPACTS AND MITIGATION MEASURES

SCHOOL FACILITIES

- **PROJECT IMPLEMENTATION WOULD NOT RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF SCHOOL FACILITIES AND SERVICES.**

Impact Analysis: Implementation of the proposed project is anticipated to result in a net increase of approximately 13,000 dwelling units, thereby, increasing the student population within the PSD, WUSD, and AVUHSD. Table 5.11-1, *Project Student Population*, provides an estimate of the student population growth associated with the proposed project. As indicated in Table 5.11-1, the increase in student population resulting from project implementation would be approximately 4,174 students, including 2,298 elementary, 405 intermediate, and 1,471 high school.

Table 5.11-1
Project Student Population

Land Use	Dwelling Units	Student Generation Rate per Dwelling Unit	Forecast Student Population
Elementary School			
Residential Development (Multifamily)	16,039	0.1803[1]	2,892
Residential Removed (Single Family)	-204	0.4079[1]	-83
Residential Removed (Multifamily)	-2,834	0.1803[1]	-511
Subtotal Elementary School			*2,298*
Intermediate School			
Residential Development (Multifamily)	16,039	0.0328[1]	526
Residential Removed (Single Family)	-204	0.13695[1]	-28
Residential Removed (Multifamily)	-2,834	0.0328[1]	-93
Subtotal Intermediate School			*405*
High School			
High Density Residential Development	16,039	0.115[2]	*1,845*
High Density Residential Removed	*-2,834*	0.115[2]	*-326*
Low Density Residential Removed	-204	0.233[2]	*-48*
Subtotal High School			*1,471*
Total All Schools			*4,174*

1. The Student Generation Rates are from the Palmdale School District School Facilities Needs Analysis (March 2011) and Westside Union School District School Facilities Needs Analysis (March 2012)
2. The Student Generation Rates are from Antelope valley Union High School District School Facilities Needs Analysis (September 2011).

Project implementation would increase the student population, potentially contributing to the PSD, WUSD, and AVUHSD schools exceeding their designed capacities and requiring new school facilities and/or improvements to existing facilities. The degree of impacts to schools would be dependent upon the size and location of the residential development and the existing condition of the school facilities serving the area. The environmental impacts associated with the provision of new or physically altered school facilities would be dependent upon the location and nature of the needed facilities, and would undergo separate environmental review pursuant to CEQA Guidelines. Due to the conceptual nature of the future residential development, proposals would require individual assessments of potential impacts to public services, including demands on school facilities and services. As part of the development review process, school districts assess Developer Fees against developments, in order to mitigate impacts resulting from the increased demand for school-related facilities and services. Therefore, impacts to school facilities would be mitigated to less than significant through payment of Developer Fees on a project specific basis. If necessary, additional mitigation would be required to reduce potential impacts to a less than significant level at the time of project specific approvals.

It is the City's goal to ensure that adequate public services and facilities are available to support development in an efficient and orderly manner (Goal PS1). It is also the City's goal to support the provision of local educational opportunities for community residents (Goal PS4). To this end, the City would cooperate with school districts serving the City of Palmdale to develop and implement strategies for obtaining school sites and construction financing (Objective PS4.1). General Plan Policy PS1.5.3 requires that the City coordinate planning issues with school districts to promote coordinated master planning for these services. Policy PS4.1.1 requires that the City coordinate with school districts to identify appropriate sites and consider school district master plans in evaluating development proposals, and Policy PS4.1.4 requires that the City condition approvals of development projects to meet the funding requirements of applicable school districts to the extent permitted by law.

Mitigation Programs:

General Plan Policies:

Policy L6.1.1: On the Land Use Map, designate land for public uses to meet community needs for schools, parks, community facilities, open space, utilities, and infrastructure. The following land use designations have been established on the land use map to meet these needs.

1. Open Space: The Open Space (OS) designation is intended to identify and reserve land for both natural and active open space uses, including City parks. The designation identifies existing and acquired but not yet built park sites within the community, as well as lands dedicated to the City for open space purposes. The designation is appropriate to protect sites with physical limitations such as flood plains, very steep terrain (slopes steeper than 50 percent), or significant natural resources. Typical uses permitted within the open space designation include recreational uses, horticulture, agriculture, animal grazing or similar uses.

2. Public Facilities: The Public Facilities (PF) designation identifies land which is or will be utilized for various types of public facilities, including but not limited to schools, parks, libraries, hospitals, public safety and governmental facilities, sewer and water treatment plants, and landfills.

Existing or acquired public facility sites are designated PF on the land use map; however, public facilities may be allowed in other land use designations as established by the underlying zoning. Within the PF designation, uses are specifically identified by use type on the land use map. The maximum floor area designation within this designation is 1.0.

Policy PS1.5.3: Coordinate planning issues with outside service provider representatives, such as the school districts, sheriff's department, fire district, water districts, and sanitation district, to promote coordinated master planning for these services.

Policy PS4.1.1: Coordinate with school districts to identify appropriate sites and consider school district master plans in evaluating development proposals.

Policy PS4.1.2: Offer administrative, planning and engineering assistance to the school districts in reviewing school site plans with respect to City plans for drainage, traffic, adjacent land uses and other considerations.

Policy PS4.1.3: In review of development adjacent to school sites, ensure that street and lot placement, grades, walls and other design considerations are incorporated into the design so as to minimize potential conflicts with school uses.

Policy PS4.1.4: Condition approvals of development projects to meet the funding requirements of applicable school districts to the extent permitted by law.

Policy PS4.1.5: Support joint use of school and City park facilities, where appropriate, to meet the needs of the local community, through site location and planning, and assistance with construction funds.

Policy PS4.1.6: Provide demographic and growth data to the districts so as to assist them in development of facility master plans.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.11.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO SCHOOL FACILITIES AND SERVICES.**

Impact Analysis: Potential impacts associated with school facilities as a result of full implementation of the Palmdale General Plan were evaluated in GPEIR Section 4.2.10 (Public Services) (pages 4-154 through 4-158). According to the GPEIR, the proposed Land Use Plan would increase the City's residential development capacity resulting in a larger student population and a need for more schools. The Land use Plan would result in an elementary/ intermediate school population of 50,847 students and a high school population of 27,841 students. The GPEIR concluded implementation of City programs would reduce the impact on schools to less than significant, although, existing deficiencies would remain until new programs and facilities were implemented. As concluded above, impacts on school services and facilities resulting from project implementation are considered less than significant following compliance with the General Plan Policies.

When viewed in conjunction, the increased demand for school services and facilities within the respective school districts resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the location and density of the project, and the current enrollment and capacity of the respective school facility. However, all future development would require individual assessments of potential impacts to school facilities and services. Cumulative impacts to school facilities would be mitigated to less than significant through payment of Developer Fees on a project-by-project basis. Additionally, all new development would be subject to compliance with the General Plan Policies outlined above, in furtherance of the City's Goals and Objectives.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.11.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts associated with school facilities would occur as a result of project implementation.

5.12 Parks and Recreational Facilities

5.12 PARKS AND RECREATIONAL FACILITIES

The section identifies potential impacts to parks and recreation facilities that could result from implementation of the proposed project. Information in this section was provided by the City of Palmdale Parks and Recreation Department.

5.12.1 EXISTING SETTING

RECREATION PROGRAMS

The City of Palmdale offers a variety of recreation programs for all ages. Programs include sports, aquatics, visual and performing arts, early childhood classes, after school fun centers/day camps, and senior activities. Program offerings are year-round and seasonal.

PARKS AND RECREATION FACILITIES

According to SOC Report Table 7.8-2, *Public Park Facilities 2008*, there were 21 public park facilities totaling approximately 298 acres in the City, as of June 2008. SOC Report Figure 7.5-1 illustrates the locations of these facilities. Since preparation of the SOC Report, two facilities have been added, totaling approximately 14.8 acres.[1]

Currently, the City contains a total of approximately 333 acres of developed parkland with an additional 483.1 acres identified for future park development, including neighborhood, community, and special use parks.[2]

PARKS AND RECREATION DEMAND

The City has an established parkland-to-population requirement of 5.0 acres of parkland per 1,000 persons (General Plan Policy PS5.4.1). Based on this requirement and the City's existing 2011 population of approximately 153,334 persons, the City's current parkland demand is approximately 767 acres. Given the City currently maintains approximately 333 acres; there is an existing parkland deficiency of approximately 434 acres.

5.12.2 REGULATORY SETTING

CITY OF PALMDALE GENERAL PLAN

Parks, Recreation, and Trails Element

The General Plan Parks, Recreation, and Trails Element guides future development of parks, recreational facilities, multi-use trails, bikeways, and open space areas to serve the recreation needs of existing and future residents. The goals, objectives, and policies within the Element are designed to establish standards identifying the need for parkland and programs, as well as for the future provision of facilities.

[1] Written Communication: Ms. Mica Schuler, Administrative Technician, City of Palmdale Parks and Recreation Department, April 30, 2012.

[2] Ibid.

Public Services Element

The General Plan Public Services Element provides a plan to ensure that public services and infrastructure are available to permit orderly growth and to promote public health, safety, and welfare. The policies and implementation programs in the Public Services Element are designed to ensure that adequate infrastructure will be available to serve the development identified in the Land Use Element. To this end, Objective PS5.4 of the Public Services Element is to provide adequate park and recreation facilities to meet the needs of existing and future residents. The Public Services Element Policies that are relevant to the proposed project are outlined in the *Impacts and Mitigation Measures* Section below.

CITY OF PALMDALE MUNICIPAL CODE

Chapter 3.34, Parkland Dedication

Each person who constructs any dwelling unit or units containing bedrooms in the City shall pay a fee or dedicate land in lieu of the fee. Additionally, each person who constructs a bedroom unit within any existing dwelling unit in the City shall pay a fee or dedicate land in lieu of such fee. Where the acceptance of land in lieu of fees will better serve the purpose of the citizens of Palmdale, such land may be accepted based upon findings by the Planning Commission. All fees collected pursuant to Chapter 3.34 shall be deposited in the "City of Palmdale Parks Development Reserve Fund." All such fees shall be used solely for the purpose of providing park and recreational facilities for the benefit of the City.

Chapter 16.110, Dedications and Improvements

The subdivider is required to construct all required improvements, both on-site and off-site, in accordance with the standards approved by City Council ordinance and applicable City standards as provided by this title. Additionally, the applicant is required to pay all impact fees, pursuant to the applicable impact fee ordinances, in the amount that is in effect at the time such fees are due.

Section 16.110.070.A, *Dedication for Bicycle Paths*. This Section requires that the subdivider of any map, which contains 200 or more parcels, dedicate such additional land as may be necessary to construct any bicycle paths, as shown in the City's Parks, Recreation, and Trails Element or as required by the Planning Commission as a condition of approval of the tentative map, which are within or adjacent to the unit of land to be subdivided.

5.12.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the *CEQA Guidelines*, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of the EIR. The Initial Study includes questions relating to parks and recreation. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project could create a significant environmental impact if it causes the following to occur:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, need for new or physically altered park facilities, the

construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for park services.

- Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; and/or

- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? Refer to Section 8.0, Effects Found Not to be Significant.

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

5.12.4 IMPACTS AND MITIGATION MEASURES

PARKLAND DEMAND

- **PROJECT IMPLEMENTATION COULD RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW PARKLAND.**

Impact Analysis: Implementation of the proposed project is anticipated to result in a net increase of approximately 13,000 dwelling units[3], with a resultant population growth of approximately 46,368 persons. Based on the City's parkland to population requirement of 5.0 acres of parkland per 1,000 persons, future residential development within the City would create a demand for approximately 232 acres of additional parkland. As stated above, there is an existing parkland deficiency of approximately 434 acres. Project implementation would create a demand for additional parkland, which would further contribute to this existing deficiency. However, the City has 483.1 acres identified for future park development, including neighborhood, community, and special use parks, which would partially provide the necessary parkland to serve the City's existing demand combined with the future demand associated with the proposed project. The residential development anticipated by the proposed project would occur over approximately 28 years (between 2012 and 2040), based on market demand; thus, any increase in demand for parkland and recreation facilities would occur gradually as additional residential uses are developed. Future residential development would be required to pay the parkland dedication fee or dedicate land in lieu of the fee, in accordance with Municipal Code Chapter 3.34. Compliance with the City's Code requirements would reduce potential impacts to parks and recreational facilities to a less than significant level. Additionally, it is the City's intent to ensure that adequate facilities are available to serve existing and future development within the City, consistent with the Land Use Plan. The City has established specific standards to ensure the provision of adequate active and passive parkland and open space to serve the community (Policy PRT1.1.1) and to ensure that parks sites are provided throughout the City to maximize access (PRT1.1.2). All future residential development within the City would be

[3] The net increase in dwelling units is based on the future development of 16,039 units and removal of 3,038 units.

subject to compliance with the General Plan Policies and Municipal Code requirements, which are intended to lessen potential impacts to parks and recreational facilities.

Refer to Section 5.2, Transportation and Circulation, of this EIR for a detailed discussion of potential impacts to existing and planned bicycle facilities.

Mitigation Programs:

General Plan Policies:

Policy PRT1.1.1: Of the 5 acres/1,000 population, active park land must comprise no less than 3 acres per 1,000 population; open space may comprise 1 acre per 1,000 population; and the remainder can be composed of other public recreational facilities including Desert Aire Golf Course, portions of school sites which provide recreation facilities or play fields accessible to the public, or other comparable facilities. Of the 3 acre/1,000 population standard for active park land, develop 2 acres as community or specialty parks and 1 acre as neighborhood parks.

Policy PRT1.1.2: Ensure that park sites are located equitably, throughout the City, to maximize access to parks for all residents.

Policy PRT1.1.3: Provide a variety of parks throughout the City, including community and neighborhood parks, to meet the needs of all residents.

Policy PRT1.1.4: Adopt the park standards, described in Table PRT-1, which establish the type of parks and adopt the guidelines for the facilities to be developed in future parks.

Policy PRT1.2.1: Collect park fees and review this fee annually, to provide financing for improvement of parkland in Palmdale (Policy PS5.4.4).

Policy PRT1.2.2: Consider formation of a city-wide public financing district to provide funding for design, acquisition, construction and maintenance of parks throughout the City.

Policy PRT1.2.3: Continue to use the City's Capital Improvement Program as the mechanism for short-term planning for acquisition of park land and construction of park facilities.

Policy PRT1.2.4: Where appropriate, remodel or recycle existing vacant buildings, such as large retail or industrial buildings, for recreation uses.

Policy PRT1.2.5: When reviewing reclamation plans for quarries, incorporate provisions which allow reclaimed quarries to be used for appropriate recreational purposes.

Policy PRT1.2.6: Consider the following criteria when evaluating future park sites for acquisition or dedication. In the event that a park site is proposed for dedication in lieu of payment of park fees, the proponent of the project

shall provide information, to the satisfaction of the Director of Parks and Recreation and the Director of Planning, in order that the criteria listed below may be evaluated. (Note: This Policy is provided in part. Refer to General Plan Parks, Recreation, and Trails Element for complete text.)

Policy PRT1.3.1: Where feasible, utilize parks for joint use as flood control facilities (Policy PS5.4.7).

Policy PRT1.3.2: Incorporate fire stations, maintenance yards, park-and-ride lots and other public facilities into parks, to share costs associated with land acquisition, provision of infrastructure and access and provision of shared parking, so long as the use does not conflict with providing active recreation opportunities.

Policy PRT1.3.3: Co-locate schools and parks, where possible, to provide extended opportunities to construct play areas, ball fields, basketball courts and other similar facilities which benefit both students and the general public.

Policy PRT1.3.4: Develop recreational facilities jointly with non-profit incorporated recreation organizations, such as Little League or AYSO, to assist in meeting City residents' demands for organized recreational opportunities.

Policy PRT1.3.5: Seek opportunities to develop regional parks or recreational facilities, which provide recreational benefits to a wide range of residents of the Antelope Valley, as a joint effort with the City of Lancaster.

Policy PRT1.4.1: Create linear parks along drainage courses, utility easements or other such features. Linear parks can include pedestrian paths, bikeways or par courses (fitness courses).

Policy PRT1.4.2: Where previous development patterns preclude acquisition of large sites, consider developing tot lots or pocket parks to provide neighborhood recreation amenities.

Policy PRT1.4.3: Where unique recreational demands exist, either within a neighborhood or city-wide, develop specialty parks, such as equestrian centers, sports complexes, amphitheater sites, arboretums or nature centers, to provide specific recreational opportunities.

Policy PRT2.1.1: Encourage organized youth sports programs; work with nonprofit organizations to provide sufficient playfields and practice areas for activities such as soccer, baseball, T-ball, softball and football.

Policy PRT2.1.2: Develop more youth/recreation centers, like the existing Hammack Center, in locations throughout the City, to provide more locations for children and teen-agers to recreate.

Policy PRT2.1.3: Provide a range of activities, such as crafts classes, excursions, day camps, dance classes, karate/exercise classes, for children after-school or during off-track periods.

Policy PRT2.1.4: In addition to the activities offered at community parks, provide recreational opportunities at the other park sites throughout the City and at remote locations in neighborhoods not served by parks.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

EXISTING RECREATIONAL FACILITIES

- **PROJECT IMPLEMENTATION COULD INCREASE THE USE OF EXISTING RECREATIONAL FACILITIES, CAUSING THEIR PHYSICAL DETERIORATION.**

Impact Analysis: As described in the General Plan Parks, Recreation, and Trails Element, and as indicated above, the City contains approximately 333 acres of developed parkland and various recreational facilities. The proposed project anticipates the development of approximately 13,001 dwelling units, which would increase the City's population, thereby potentially increasing the use of the existing recreational facilities. However, their increased use would not be such that substantial physical deterioration would occur or be accelerated. As concluded above, the residential development anticipated by the proposed project would occur over approximately 28 years. Additionally, future residential development would be required to pay the parkland dedication fee or dedicate land in lieu of the fee, in accordance with Municipal Code Chapter 3.34. Compliance with the City's Code requirements would ensure that the increased demands associated with the new residential development are met, thus, ensuring that the usage of existing recreational facilities would not significantly increase. Therefore, a less than significant impact would occur in this regard.

Mitigation Programs:

GPEIR Mitigation Measures and Policies: Refer to General Plan Policies PRT1.1.1, PRT1.1.2, PRT1.1.3, PRT1.1.4, PRT1.2.1, PRT1.2.2, PRT1.2.3, PRT1.2.4, PRT1.2.5, PRT1.2.6, PRT1.3.1, PRT1.3.2, PRT1.3.3, PRT1.3.4, PRT1.3.5, PRT1.4.1, PRT1.4.2, PRT1.4.3, PRT2.1.1, PRT2.1.2, PRT2.1.3, and PRT2.1.4, outlined above.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.12.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO PARKS AND RECREATIONAL FACILITIES.**

Impact Analysis: Potential impacts associated with parks and recreational facilities as a result of full implementation of the Palmdale General Plan were evaluated in Section 4.2.10 (Public Services) of the GPEIR (pages 4-146 through 4-170). The GPEIR concluded that buildout of the General Plan would increase the demand on parks and recreation facilities; however,

General Plan policies and programs would reduce impacts to a less than significant level. As concluded above, impacts on parks and recreational facilities resulting from project implementation are considered less than significant following compliance with Code requirements and General Plan Policies.

When viewed in conjunction, the increased demand for parkland and recreational facilities resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the location and density of the project, and the current availability of parkland and recreational facilities. It is anticipated, however, that some future site-specific development projects would provide on-site park and open space facilities to serve the proposed development. The inclusion of recreational amenities into the development of future projects would be assessed on a project-by-project basis. Additionally, all future development within the City would be subject compliance with Municipal Code Chapter 3.34, thereby mitigating the impacts of the new development on parks and recreational facilities. Such fees can be used by the City to acquire and develop additional parkland or to augment recreational facilities in existing public parks and recreational facilities as necessary to mitigate the potential of the project to substantially deteriorate existing facilities. Therefore, cumulative impacts on parks and recreational facilities would be less than significant following compliance with Code requirements and General Plan Policies.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.12.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Potential impacts to parks and recreational facilities resulting from implementation of the proposed project would be less than significant following compliance with the Municipal Code requirements and General Plan Policies. As such, no significant unavoidable impacts to parks and recreation facilities would result from project implementation.

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5.13 Water

5.13 WATER

This section identifies existing conditions within the City of Palmdale regarding water supply, distribution, and treatment, and analyses the potential impacts that could result from implementation of the proposed project. This section is based on the Palmdale Water District 2010 Urban Water Management Plan (RMC, June 2011) and the 2010 Integrated Regional Urban Water Management Plan for the Antelope Valley (June 2011).

5.13.1 EXISTING SETTING

PALMDALE WATER DISTRICT 2010 URBAN WATER MANAGEMENT PLAN

The Palmdale Water District (PWD) provides retail water service to the central and southern portions of the City of Palmdale and adjacent unincorporated areas of Los Angeles County. Their primary service area covers approximately 46 square miles and distribution system encompasses approximately 400 miles of pipeline, multiple well sites, booster pumping stations, and water storage tanks maintaining a total storage capacity of over 50 million gallons (mg).

The 2010 Urban Water Management Plan (UWMP) prepared by the PWD describes and evaluates demand projections, sources of water supply, reliability, efficiency, and other information about various programs within the PWD. It fulfills the requirements of an UWMP for the PWD.

Water Sources and Supplies

UWMP Table 4-1, *Existing and Planned Sources of Water*, summarizes PWD's current and planned water supply sources. In 2010, PWD received 19,800 acre feet (AF) of water from three sources: approximately 49 percent was imported water from the State Water Project (SWP); approximately 40 percent was groundwater; and approximately ten (10) percent was from the Littlerock Dam Reservoir.

IMPORTED WATER (STATE WATER PROJECT)

Imported water from the SWP is the PWD's current primary source of water supply. The California Aqueduct, which is an approximately 450-mile long artificial concrete-lined channel that conveys water from Northern to Southern California, is the SWP's main transport structure. The SWP also includes pumping and power plants, reservoirs, lakes, storage tanks, canals, tunnels and pipelines that capture, store, and convey water to 29 contract water agencies. The PWD (and all of the Antelope Valley) take delivery of SWP water from the East Branch of the California Aqueduct, which passes through the service area. From the East Branch, SWP water is then conveyed to Lake Palmdale via a pipeline. Lake Palmdale acts as a forebay for the PWD's 35 million gallon daily (mgd) water treatment plant and stores approximately 4,250 AF of SWP water and Littlerock Dam Reservoir water. The PWD is contractually entitled to receive 21,300 AF per year of SWP water. Availability of SWP water varies from year to year and depends on precipitation, regulatory restrictions, legislative restrictions, and operational conditions. Availability is greatly reduced during dry years. The factors affecting the reliability of imported water supplies from the SWP include legal, environmental, water quality, and climatic.

GROUNDWATER

Groundwater pumping from the Antelope Valley Groundwater Basin (Basin) currently makes up 40 percent of the PWD'S supplies during a normal year. The Basin is comprised of two primary aquifers: the principal aquifer; and deep aquifer. The principal aquifer is an unconfined aquifer. The deep aquifer, which is separated from the principal aquifer by clay layers, is generally considered to be confined. The Basin is divided into twelve subunits. UWMP Figure 4-2, *District Groundwater Subbasins*, illustrates the Antelope Valley Groundwater Basin's subbasins and indicates the PWD overlies the Lancaster, Buttes, and Pearland groundwater subbasins. The Basin is principally recharged by deep percolation of precipitation and runoff from the surrounding mountains and hills. There are 25 active PWD wells currently drawing from the aquifer. This water is treated with chlorine disinfection and pumped directly into the PWD's potable distribution system. The PWD produces on average 10,310 AFY of groundwater. The availability of groundwater supply for the PWD does not vary throughout the course of a year.

The Antelope Valley Groundwater Basin is not currently adjudicated. However, the County of Los Angeles Water Works District No. 40 filed a civil complaint in late 2004 for the adjudication of all the groundwater rights in the Basin. The PWD later joined in the adjudication. Although, an adjudication process is underway, the Superior Court has made a preliminary finding that the Basin is overdrafted. Since the Basin's water rights have not yet been fully adjudicated but it has been found to be in overdraft, there are no restrictions yet on pumping. However, water rights may be determined and limited as part of the adjudication process. The PWD has not adopted a groundwater management plan for the Basin.

Groundwater is traditionally considered a highly reliable supply, since it is not immediately susceptible to changes in climate and surface flows. However, the two main factors impacting the reliability of groundwater supplies are legal, since the Antelope Valley Groundwater Basin is in overdraft and in the adjudication process, and water quality (the need to meet drinking water standards).

SURFACE WATER

Littlerock Dam Reservoir, which has a storage capacity to 3,500 AF or 1.1 billion gallons of water, is the PWD's local surface water supply source. Littlerock Dam reservoir is fed by natural run-off from snow packs in the San Gabriel Mountains and from rainfall. The Littlerock Dam Reservoir intercepts flows from the Littlerock and Santiago Canyons. Littlerock and Big Rock Creeks, which flow north from the San Gabriel Mountains, are the principal tributary streams to the PWD service area. Various intermittent streams also flow into the service area, however, in lesser amounts. Runoff from the 65 square mile watershed in the Angeles National Forest to the reservoir is seasonal and varies widely from year to year. The water is transferred from Littlerock Dam Reservoir to Palmdale Lake by pipeline.

The PWD shares water from Littlerock Dam Reservoir with Littlerock Creek Irrigation District (LCID). The District and LCID jointly hold water rights to divert 5,500 AFY from Littlerock Creek flows. Per an agreement between the two districts, the first 13 cubic feet per second (cfs) of creek flow is available to LCID (with modifications). Any flow above 13 cfs is shared between PWD and LCID, with 75 percent going to the PWD and 25 percent to LCID. Each of the districts is entitled to 50 percent of the reservoir's storage capacity.

Rehabilitation of the dam was completed in 1995. An agreement reached between PWD and LCID gave the PWD the authority to manage the reservoir, and LCID granted ownership of its water rights to the PWD for the 50-year term of the agreement in lieu of contributing financially for the rehabilitation work. LCID is currently entitled to purchase from the PWD, in any one calendar year, 1,000 AF of water or 25 percent of the yield from Littlerock Dam Reservoir, whichever is less.

The PWD expects that 4,000 AF of Littlerock Dam Reservoir water will be available for supply in all years. The PWD recognizes that annual climatic changes can impact the reliability of Littlerock Dam Reservoir water in amounts above 4,000 AF.

PLANNED SOURCES OF WATER

The PWD currently does not have recycled water supplies, however, is in the process of developing the use of non-potable water. Additionally, the PWD is developing new sources of water supply including groundwater banking and anticipated new supplies from transfer and exchange opportunities; refer to UWMP Table 4-1.

WATER DELIVERIES

The PWD primarily delivers potable water to municipal, residential, irrigation, commercial, industrial, and institutional groups within its service area. Because the PWD's primary service area boundary does not coincide with the City boundary, the PWD's projected population through 2035 is based on their Strategic Water Resources Plan (SWRP), which used Southern California Association of Governments (SCAG) data. Table 5.13-1, *Total Water Deliveries - PWD*, presents PWD's total service area water deliveries in 2010 and 2035. It is noted that most of PWD's service area population lives in the City of Palmdale.[1] Notwithstanding, the data presented in Table 5.13-1 includes populations outside of the City limits.

Table 5.13-1
Total Water Deliveries - PWD

Land Use	2010			2035		
	Metered Accounts	Population	Volume (AFY)	Metered Accounts	Population	Volume (AFY)
Total All Sectors	26,041		19,800[1]	79,007		60,000[2]
Single-Family[3]	24,396		15,766	73,904		47,760
Multi-Family[4]	562		1,689	1,697		5,100
Residential Total	*24,958*	*109,395*	*17,455*	*75,601*	*280,206*	*52,860*
Residential % Total			*88%*			*88%*

Source: RMC Water and Environment, *Palmdale Water District 2010 Urban Water Management Plan Tables 2-2, 3-4, and 3-9*, June 2011.
1. Based on a distribution system population of 109,395 persons, represents per capita water use of approximately 0.18 AFY.
2. Based on a distribution system population of 280,206 persons, represents per capita water use of approximately 0.21 AFY.
3. Approximately 3.78 persons per connection for SF.
4. Approximately 10.46 persons per connection for MF.

[1] RMC Water and Environment, *Palmdale Water District 2010 Urban Water Management Plan*, June 2011, Page 2-5.

2010 INTEGRATED REGIONAL URBAN WATER MANAGEMENT PLAN FOR THE ANTELOPE VALLEY

The 2010 Integrated Regional Urban Water Management Plan for the Antelope Valley (IRUWMP) fulfills the requirements of an UWMP for Los Angeles County Waterworks District No. 40, Antelope Valley (District 40) and the Quartz Hill Water District (QHWD).

District 40 was formed to supply water for urban use throughout the Antelope Valley. It is governed by the Los Angeles County Board of Supervisors with the Waterworks Division of the County Department of Public Works providing administration, operation, and maintenance of their facilities. District 40 is comprised of eight regions serving customers in the cities of Lancaster and Palmdale (Regions 4 and 34), among others. Regions 4 and 34 are integrated and are operated as one system.

QHWD occupies approximately 6.0 square miles located in the City of Lancaster and unincorporated portions of the County of Los Angeles. No portion of the City of Palmdale is located within the QHWD.

Water Sources and Supplies

IRUWMP Table 2-9, *Current and Planned Water Supplies*, summarizes District 40's current and planned water supply sources. In 2010, District 40 received 46,800 AF of water from two sources: approximately 84 percent was imported water from the SWP; and approximately 16 percent was groundwater.

IMPORTED WATER (STATE WATER PROJECT)

The single imported water supply for District 40 is SWP water contracted through the Antelope Valley-East Kern Water Agency (AVEK). As indicated in IRUWMP Table 2-9, District 40 received 39,200 AF from the SWP in 2010. Besides fluctuations in the availability of SWP water due to periods of drought-related or regulatory supply interruptions within the State, the IRUWMP concludes that sufficient infrastructure exists such that there are no restrictions on the ability of District 40 (and QHWD) to use SWP water from AVEK to meet water demands in the Study Area even during peak summer demand periods.[2] It is estimated that approximately 76 percent of AVEK's available allocation each year will be available to serve District 40 (70 percent) and QHWD (seven percent).[3] Notwithstanding, the availability of SWP water varies from year to year, depending on precipitation, regulatory restrictions, legislative restrictions, and operational conditions, and is especially unreliable during dry years.

GROUNDWATER

Refer to the *Palmdale Water District 2010 Urban Water Management Plan - Groundwater* Section above for a description of the Antelope Valley Groundwater Basin. Currently District 40 has 49 active wells and five new wells are under construction. As indicated in IRUWMP Table 2-9, District 40 produced 7,600 AF from the Basin in 2010.

[2] Los Angeles County Department of Public Works Waterworks District No. 40 and Quartz Hill Water District, *2010 Integrated Regional Urban Water Management Plan for the Antelope Valley*, June 2011, Page 14.

[3] Ibid.

According to the IRUWMP, three phases of trial have been completed in the Basin adjudication process, which resulted in the Court determining the Basin boundaries, the safe yield at 110,000 AFY, and that it has been in a state of overdraft for over 50 years. Later phases of the trial are expected to result in rulings regarding rights to groundwater. Although District 40 has an entitlement claim for over 32,000 AFY of the safe yield, District 40's present settlement position involves sharing the native safe yield along a 15 : 85 percent split between Municipal and Industrial (M&I), and the overlying landowners. District 40 has reached settlements consistent with this split, which have been approved by its governing body, the Los Angeles County Board of Supervisors. District 40 is currently in the process of negotiating settlements with other parties based on this same proposed split. Their proposed split would result in less groundwater to District 40 than their entitlement claim. Nonetheless, District 40 utilized the proposed settlement pumping amounts for purposes of projections in the IRUWMP.

PLANNED SOURCES OF WATER

The IRUWMP concluded that projected water demands for the Study Area will exceed the existing available water supply in the foreseeable future.[4] Efforts are currently underway to develop a regional recycled water distribution system in the Antelope Valley (i.e., AV Backbone). Additionally, the Antelope Valley water purveyors are evaluating various transfer and exchange opportunities as they arise. Specific projects have not been selected at this time. However, future water supply project plans are anticipated to involve groundwater banking and will focus on the following, among others: limiting the dependence on imported water by maximizing use of recycled water; expanding conservation efforts; acquiring new imported supplies by introducing the New Water Supply (Developer Fee); and creating a combination of local surface spreading facilities to percolate untreated SWP water and Aquifer Storage and Recovery (ASR) wells to inject potable water.

WATER DELIVERIES

Table 5.13-2, *Total Water Deliveries – District 40*, presents District 40's total service area water deliveries in 2010 and 2035.

WATER DEMANDS – REZONE PROJECT AREA

The rezone project area is located within the PWD service area. Table 5.13-3, *Total Water Deliveries – Rezone Project Area*, identifies water deliveries for the rezone project area's existing land uses. As indicated in Table 5.13-3, the water deliveries for the rezone project area's existing land uses total 1,960 AFY.

INFRASTRUCTURE

Local water agencies provide a network of water distribution pipelines within the developed portions of the City. Water main lines are located in existing roadways and typically range from 4 to 12 inches in diameter.

[4] Ibid., Page 21.

Table 5.13-2
Total Water Deliveries – District 40

Land Use	2010			2035		
	Population District 40	Population Palmdale	Volume (AFY)	Population District 40	Population Palmdale	Volume (AFY)
Total All Sectors			45,500[1]			130,800[2]
Single-Family			30,900			76,700
Multi-Family			3,400			4,980
Residential Total	*261,800*	*53,100[3]*	*34,300*	*493,900*	*134,200[3]*	*81,680[4]*
Residential % Total			*75%*			*62%*

Source: RMC Water and Environment, *Palmdale Water District 2010 Urban Water Management Plan Tables 2-2, 3-4, and 3-9*, June 2011.
1. Based on a distribution system population of 261,800 persons, represents per capita water use of approximately 0.17 AFY.
2. Based on a distribution system population of 493,900 persons, represents per capita water use of approximately 0.26 AFY.
3. Palmdale's population represents approximately 20 percent and 27 percent of District 40's 2010 and 2035 populations, respectively.
4. Does not include residential uses within Specific Plan areas.

Table 5.13-3
Total Water Deliveries – Rezone Project Area

Land Use	Population or Square Feet	Water Use Factor	Existing Water Delivery (AFY)
Residential			
Single-Family (204 DU)	728 persons[1]		
Multi-Family (2,834 DU)	10,107 persons[1]		
Sub-Total Residential (3,038 DU)	*10,835 persons*	*0.18 AFY per capita[2]*	*1,950.30*
Non-Residential			
Civic	1,714 sf		
Public Facility	30,000 sf		
Religious Assembly	39,916 sf		
Sub-Total Non-Residential	*71,630 sf*	*0.13452 AFY per ksf[3]*	*9.64*
Total			*1,960*

SF = square feet; AFY = acre feet yearly; DU = dwelling units; ksf = thousand square feet; and gpd = gallons per day.
1. Based on 3.5665 persons per household (California Department of Finance).
2. Based on the UWMP's per capita water use factor; refer to Table 5.13-1 above.
3. 120 gpd/ksf; City of Palmdale, *Final Program EIR for the City of Palmdale General Plan Table 4-16*, February 1, 1993.

5.13.2 REGULATORY SETTING

URBAN WATER MANAGEMENT ACT

The Urban Water Management Plan Act (UWMP Act) was passed in 1983 and codified as California Water Code Sections 10610 through 10657. Since its passage in 1983, the Act has been amended on several occasions. In 2004, the Act was amended to require additional discussion of transfer and exchange opportunities, non-implemented demand management measures, and planned water supply projects. Most recently, in 2005, the Act was amended to require water use projections (required by California Water Code Section 10631) to include projected water use for single-family and multi-family residential housing needed for lower income households. In addition, Government Code Section 65589.7 was amended to require local governments to provide a copy of the adopted housing element to water and sewer providers. The Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually (AFY), to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." Urban water suppliers must file these plans with the California Department of Water Resources every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by the Memorandum of Understanding Regarding Urban Water Conservation in California and Assembly Bill 11X (1991), the 2005 UWMP Act, incorporated water conservation initiatives, and a Water Shortage Contingency Plan.

SENATE BILL 610

SB 610 requires a detailed report regarding water availability and planning for additional water supplies that is included with the environmental document for specified projects. Under SB 610, water supply assessments are required to be included in environmental documentation for certain projects, as defined in Water Code 10912[a], subject to CEQA. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. Thus, no future action is necessary under the provisions of SB 221 and 610. All projects that meet any of the following criteria require the water availability assessment:

- 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 and motel having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or an 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; or

- 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.

While SB 610 primarily affects the Water Code, SB 221 principally applies to the Subdivision Map Act. The primary effect of SB 221 is to condition every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier (PWS) has sufficient water supply available to serve it. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. SB 221 applies to any subdivision, defined as:

- A proposed residential development of more than 500 dwelling units (if the PWS has more than 5,000 service connections); or

- Any proposed development that increases connections by 10 percent or more (if the PWS has fewer than 5,000 connections).

On December 22, 2011, the City of Palmdale requested Palmdale Water District prepare a Water Supply Assessment. As of the publication of this Draft EIR, a response has not been received.

ANTELOPE VALLEY INTEGRATED REGIONAL WATER MANAGEMENT PLAN

The Antelope Valley Integrated Regional Water Management Plan (IRWMP) provides a vision and direction for the sustainable management of water resources in the Antelope Valley Region through 2035. The IRWMP identifies existing key water-related challenges being faced by the residents of the Antelope Valley Region, along with projections of how these challenges will change by 2035. In response to current and expected challenges, this IRWMP provides a thorough inventory of possible actions to address the challenges, along with estimated costs and benefits of implementing each action.

ANTELOPE VALLEY EASTER KERN WATER DISTRICT 2008 URBAN WATER MANAGEMENT PLAN

The Antelope Valley East Kern Water District (AVEK) is a supplier of imported water from the SWP for the Antelope Valley region. AVEK wholesales water to area retail purveyors, including the PWD and District 40. The Urban Water Management Plan (UWMP) evaluates sources of water supply, efficient uses of water, demand management measures, implementation strategy and schedule, and other relevant information and programs, consistent with the UWMP Act.

CITY OF PALMDALE GENERAL PLAN

The Public Services Element provides a plan to ensure that public services and infrastructure are available to permit orderly growth and to promote public health, safety, and welfare. The policies and implementation programs in the Public Services Element are designed to ensure that adequate infrastructure will be available to serve the development identified in the Land Use Element. Goal 1 of the General Plan Public Services Element is to “ensure that adequate public services and facilities are available to support development in an efficient and orderly manner.”

CITY OF PALMDALE MUNICIPAL CODE

Chapter 14.05, Water Efficient Landscape

Palmdale Municipal Code Chapter 14.05 was adopted to: "Promote the values and benefits of landscaping while recognizing the need to utilize water and other resources as efficiently as possible; Use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount; Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects; Establish provisions for water management practices and water waste prevention for existing landscapes; and Implement water conservation policies contained in the City's General Plan."

CITY OF PALMDALE ZONING ORDINANCE

Section 86.01, Landscaping Requirements

Pursuant to Palmdale Zoning Ordinance Section 86.01, *Landscaping Requirements*, in all projects proposed or required to provide landscaping as part of the development plan, the landscaping shall be provided in accordance with the following provisions, among others:

B. All landscaping shall conform at all times to provisions of Section 14.05 (Landscape Water Conservation) of the City of Palmdale Municipal Code. In addition, landscape area design shall be based upon the principles of water conservation; grouping of plant materials based upon similar water requirements, ecological requirements, climatic conditions, and selection of drought tolerant plant materials.

C. Landscape areas shall be provided with a permanent, fixed automatic irrigation system adequate to meet the water needs of all landscape material. Irrigation systems shall be designed to minimize maintenance and water consumption, and the irrigation systems shall be properly designed and installed to ensure that overspray onto fences, walls and structures is eliminated to the maximum extent feasible.

H. Graded, undeveloped portions of project sites proposed for future expansion shall be kept in a weed free condition and appropriate ground cover may be required for erosion control. Graded pad sites may require temporary seeding and irrigation for erosion control and to mitigate visual impacts.

5.13.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study Checklist includes questions relating to water supply. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project could create a significant environmental impact if it causes one or more of the following to occur:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;

- Substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).

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

5.13.4 IMPACTS AND MITIGATION MEASURES

WATER SUPPLIES

- **SUFFICIENT WATER SUPPLIES MAY NOT BE AVAILABLE TO SERVE THE PROJECT FROM EXISTING ENTITLEMENTS AND RESOURCES; NEW OR EXPANDED ENTITLEMENTS COULD BE NEEDED.**

Impact Analysis: Project implementation is anticipated to result in a net increase of approximately 13,000 dwelling units by 2040, with a resultant population of approximately 46,368 persons. Of these 13,000 dwelling units, approximately 79 percent (10,215 dwelling units) would be located within the PWD service area and the remainder within the District 40 service area. Table 5.13-4, *Total Water Deliveries – Proposed Project 2010*, provides an estimate of the water deliveries associated with the proposed project under existing 2010 conditions. As indicated in Table 5.13-4, the increased water deliveries resulting from project implementation would total approximately 8,337 AFY, based on an existing (2010) per capita water use of approximately 0.18 AFY. Within the PWD, the increased water deliveries resulting from project implementation would total approximately 6,548 AFY, or approximately 33 percent over the existing water deliveries from all sectors of approximately 19,800 AFY. Within District 40, the increased water deliveries resulting from project implementation would total approximately 1,789 AFY, or approximately four (4) percent over the existing water deliveries from all sectors of approximately 45,500 AFY.

Table 5.13-5, *Total Water Deliveries – Proposed Project 2035*, forecasts the water deliveries associated with the proposed project under future 2035 conditions. As indicated in Table 5.13-5, the increased water deliveries resulting from project implementation would total approximately 9,728 AFY, based on a future (2035) per capita water use of approximately 0.21 AFY. Within the PWD, the increased water deliveries resulting from project implementation would total approximately 7,641 AFY, or approximately 13 percent over the forecast 2035 water deliveries from all sectors of approximately 60,000 AFY. Within District 40, the increased water deliveries resulting from project implementation would total approximately 2,087 AFY, or approximately two (2) percent over the forecast 2035 water deliveries from all sectors of approximately 130,800 AFY.

Table 5.13-4
Total Water Deliveries – Proposed Project - 2010

Land Use	Population[1] or Square Feet	Water Use Factor (AFY)	Water Delivery (AFY)
PALMDALE WATER DISTRICT (PWD)			
Existing 2010 PWD			
All Land Use Sectors			19,800
Proposed Project			
Dwelling Units Removed (-3,038 DU)	-10,835	0.18 per capita[2]	-1,950.30
Civic Removed (SF)	-1,714	0.13452 per ksf[3]	-0.23
Public Facility Removed (SF)	-30,000	0.13452 per ksf	-4.04
Religious Assembly Removed (SF)	-39,916	0.13452 per ksf	-5.37
Dwelling Units Developed (+13,253 DU)	47,267	0.18 per capita	+8,508.03
Sub-Total Project PWD			*+6,548*
Existing/Project Implemented Total PWD			*26,348*
Existing/Project Implemented % Change PWD			*+33%*
DISTRICT NO. 40 (D40)			
Existing 2010 D40			
All Land Use Sectors			45,500
Proposed Project			
Dwelling Units Developed (+2,786 DU)	9,936	0.18 per capita	1,788.53
Sub-Total Project D40			*1,789*
Existing/Project Implemented Total D40			*47,289*
Existing/Project Implemented % Change D40			*+4%*
TOTAL PROJECT			*8,337*

SF = square feet; AFY = acre feet yearly; DU = dwelling units; ksf = thousand square feet; and gpd = gallons per day.
1. Based on 3.5665 persons per household (California Department of Finance).
2. Based on the UWMP's per capita water use factor; refer to Table 5.13-1 above.
3. 120 gpd/ksf; City of Palmdale, *Final Program EIR for the City of Palmdale General Plan Table 4-16*, February 1, 1993.

Both PWD and District 40 anticipate water demand would exceed available supplies in the near future. In the event water demands exceed supplies, water purveyors would impose mandatory conservation measures, reducing the potential impact. However, PWD and District 40 depend upon imported water from the SWP to adequately meet water demand. Over recent years, the SWP has reduced the Table A allotments to contractors. It is anticipated that the SWP's inability to deliver the full entitlement of contractors throughout the State would continue. Although it is anticipated that a supply source to meet future demands would be solidified, water supply cannot currently be guaranteed. With the reduced availability and reliability of the SWP water supply, reliance on groundwater to meet water demand would be greater. As stated, the Basin is currently in overdraft. Additionally, an adjudication process is currently underway. Since the Basin's water rights have not yet been fully adjudicated but it has been found to be in overdraft, there are no restrictions yet on pumping. However, water rights may be determined and limited as part of the adjudication process. Therefore, it cannot be determined whether adequate water supply would be available to serve the anticipated demands associated with project implementation.

Table 5.13-5
Total Water Deliveries – Proposed Project - 2035

Land Use	Population[1] or Square Feet	Water Use Factor (AFY)	Water Delivery (AFY)
PALMDALE WATER DISTRICT (PWD)			
Future 2035 PWD			
All Land Use Sectors			60,000
Proposed Project			
Dwelling Units Removed (-3,038 DU)	-10,835	0.21 per capita[2]	-2,275.36
Civic Removed (SF)	-1,714	0.13452 per ksf[3]	-0.23
Public Facility Removed (SF)	-30,000	0.13452 per ksf	-4.04
Religious Assembly Removed (SF)	-39,916	0.13452 per ksf	-5.37
Dwelling Units Developed (+13,253 DU)	47,267	0.21 per capita	9,926.03
Sub-Total Project PWD			*7,641*
Future/Project Implemented Total PWD			*67,641*
Future/Project Implemented % Change PWD			*13%*
DISTRICT NO. 40 (D40)			
Future 2035 D40			
All Land Use Sectors			130,800
Proposed Project			
Dwelling Units Developed (+2,786 DU)	9,936	0.21 per capita	2,086.62
Sub-Total Project D40			*2,087*
Future/Project Implemented Total D40			*132,887*
Future/Project Implemented % Change D40			*2%*
TOTAL PROJECT			*9,728*

SF = square feet; AFY = acre feet yearly; DU = dwelling units; ksf = thousand square feet; and gpd = gallons per day.
1. Based on 3.5665 persons per household (California Department of Finance).
2. Based on the UWMP's per capita water use factor; refer to Table 5.13-1 above.
3. 120 gpd/ksf; City of Palmdale, *Final Program EIR for the City of Palmdale General Plan Table 4-16*, February 1, 1993.

Future development within the project area would increase water demand above existing conditions. Each future development project would have a specific impact on demand, depending on the proposed land use type. It is the City's goal to ensure that adequate public services and facilities are available to support development in an efficient and orderly manner (Goal PS1). The City requires new development to obtain adequate water service to meet the increased demand generated by that development (Policy PS2.1.1). Additionally, the City requires new development to construct on-site improvements necessary to serve the development (PS1.1.1) and the City Engineer to review and approve designs and plans from water agencies. However, impacts to water supply associated with the future residential development anticipated by the proposed project would be significant and unavoidable because: the Basin is currently in overdraft and groundwater resources could potentially be depleted; water rights may be determined and limited as part of the adjudication process that is currently underway; and SWP water allocations have been reduced and cannot be guaranteed.

Mitigation Programs:

General Plan Policies:

Policy ER4.1.1: Incorporate the use of flood control measures which maximize groundwater recharge and the use of floodways as native habitat.

Policy ER4.1.2: Restrict building coverage and total impervious area in the vicinity of natural recharge areas.

Policy ER4.2.1: Promote water conserving landscape techniques, through the use of native and drought tolerant plant species and landscape design standards.

Policy ER4.2.2: Utilize native plants or drought resistant planting materials and drip irrigation systems where feasible within the Landscape Assessment District areas.

Policy ER4.2.3: Require the use of water conserving appliances and plumbing fixtures in all new construction.

Policy ER4.2.4: Coordinate with local water agencies to monitor ground water levels, State water allocations and development approvals, to assure that development does not outpace long-term water availability. In the event applicable water agencies notify the City that ground water levels and State water allocations are insufficient to serve existing development or projected development, the City will determine whether it is appropriate to reevaluate this General Plan and take other appropriate actions, as permitted by law.

Policy ER4.3.1: Assess the feasibility of utilizing reclaimed water for landscape irrigation on a city-wide basis. Factors to be considered include the potential quantities of reclaimed water as determined by the Sanitation Districts, and costs associated with developing infrastructure and delivery systems to facilitate utilization. Within those areas in which it is determined to be feasible to utilize reclaimed water, consider establishment of an ordinance requiring installation of secondary water delivery systems to service landscaped areas.

Policy ER4.3.2: Work with local water purveyors to assess the potential for capturing local run-off and utilization of imported water (water banking) for groundwater recharge within the Planning Area; through the land use planning process, ensure that important recharge areas are retained for that use.

Policy ER4.3.3: Continue to seek out long-range water management techniques as new technology is developed; promote implementation of systems which are feasible and appropriate to the Planning Area.

Policy ER4.3.4: Encourage residents and businesses to recycle water where feasible, and where water recycling does not result in health and safety concerns, within their homes and/or businesses.

Policy ER4.3.5: Participate in regional efforts to retain imported water allocations and seek out other sources as they become available.

Policy PS1.1.1: Require all new development, including major modifications to existing development, to construct required on-site infrastructure improvements pursuant to City standards.

Policy PS1.1.2: Require all new development, including major modifications to existing development, to construct or provide a fair share contribution towards construction of required off-site improvements needed to support the project.

Policy PS1.1.3: Require that on- and off-site improvements are constructed prior to occupancy of a new development project, or phase thereof, unless otherwise approved by the City.

Policy PS1.2.1: Require that provision of streets, sewer, water, drainage and other needed infrastructure be coordinated in a logical manner between adjacent developments, so as to reduce cost of design, construction and maintenance.

Policy PS1.2.2: Require that individual development projects integrate with adjacent development with respect to backbone infrastructure (streets, sewer, water and drainage). If adjacent property is undeveloped, a conceptual plan should be prepared to show that the pending development will allow for future integration and development of adjacent properties in a manner which is reasonable from a design, construction and cost standpoint.

Policy PS1.5.1: Through the development review process, inform adjacent cities, town councils and/or county agencies of development proposals which may impact their infrastructure systems, and consider their input and recommendation in the land use decision process.

Policy PS1.5.3: Coordinate planning issues with outside service provider representatives, such as the school districts, sheriff's department, fire district, water districts, and sanitation district, to promote coordinated master planning for these services.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.13.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD CUMULATIVELY IMPACT WATER SUPPLIES AND SYSTEMS.**

Impact Analysis: Potential impacts associated with water supply as a result of full implementation of the Palmdale General Plan were evaluated in GPEIR Section 4.2.11 (Public Utilities) (pages 4-171 through 4-216). The GPEIR concluded that General Plan buildout would result in a water demand of 135.93 mgd. The GPEIR notes that if water deliveries from the SWP to the water purveyors are reduced, it would be difficult for water purveyors to meet their future water demands. With implementation of City programs and General Plan Policies, impacts to water service would be minimized, but would remain significant. However, City requirements to make project approvals contingent upon water availability would reduce impacts to a less than significant level. It was also concluded groundwater resources would become a scarce commodity, without the implementation of measures to abate the lowering of the water table. Impacts to groundwater resources were concluded in the GPEIR to be less than significant with implementation of water conservation and recharge programs.

Future development associated with the proposed project and other cumulative projects would increase demand for water over existing and future conditions. Water availability would be determined on a project-by-project basis. Adequate water supplies may not be available to serve the proposed project and future projects within the service boundaries of PWD and District 40. In accordance with SB 610, a water supply assessment would be required for projects exceeding established development thresholds. Additionally, the availability and reliability of the SWP water supply has been reduced and cannot be guaranteed. Because, it cannot be determined whether adequate water supply would be available to serve the proposed project and related cumulative projects, cumulative impacts to water supply are considered significant and unavoidable.

Mitigation Programs:

General Plan Policies: Refer to the General Plan Policies outlined above.

Project Mitigation Measures: No additional mitigation has been identified.

Level of Significance: Significant and Unavoidable Impact.

5.13.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would result in significant unavoidable impacts associated with the availability of water supplies under project and cumulative project conditions. If the City of Palmdale approves the proposed Housing Element Update, the City shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

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5.14 Wastewater

5.14 WASTEWATER

This section identifies existing wastewater service conditions within the City of Palmdale and provides an analysis of potential impacts to wastewater facilities that could result from implementation of the proposed project. This section is based on the State of the City (SOC) Report and the following sources:

- City of Palmdale Sewer Master Plan Final Report (RMC Water and Environment, September 2009);
- City of Palmdale Sewer System Management Plan (RMC Water and Environment, May 2009); and
- County Sanitation Districts of Los Angeles County.

5.14.1 EXISTING SETTING

WASTEWATER CONVEYANCE

The Palmdale Sewer Maintenance District owns, operates, and maintains the City's wastewater collection system, which includes 396 miles of local collector and lateral sewer lines, 8,441 manholes, and two pump stations. The sewer lines, which range in size from 8 to 21 inches in diameter, operate almost entirely by gravity, having only two small pump stations. The majority of gravity pipe is vitrified clay pipe (VCP) and less than 15 inches in diameter. Over 80 percent of the sewer system was built after 1980 and is less than 30 years old.[1] Wastewater flows are discharged to local collector and lateral sewer lines for conveyance to trunk mainlines. Although Palmdale is primarily served by existing sewer systems, there are parcels within the project area that are served by septic systems.[2]

There are two existing pump stations in the City's system. A third pump station was approved by the City as part of the Ritter Ranch development. The Ritter Ranch pump station is a temporary lift station, required until the sewer main line, located within Avenue S and Bridge Road within the adjacent City Ranch Specific Plan, is completed. The pump station is located at the eastern terminus of Westland Drive and has been partially constructed.

The County Sanitation Districts of Los Angeles County (Districts) own, operate, and maintain only the trunk mainline sewers that form the backbone of the regional wastewater conveyance system. There are approximately 48 miles of large-diameter trunk sewers in the Palmdale area that are owned and operated by the Districts, and that convey the City's wastewater to the Districts' reclamation facilities for treatment.

[1] Palmdale Sewer Maintenance District, Sewer System Management Plan, May 2009.

[2] Palmdale Sewer Master Plan Final Report, Figure 2-3 (Parcels on Septic Systems), September 2009.

WASTEWATER TREATMENT

The wastewater generated by the City is collected by the Districts and conveyed for treatment to the Palmdale Water Reclamation Plant (PWRP) or the Lancaster Water Reclamation Plant (LWRP).[3] The PWRP has a design capacity of 15 million gallons per day (mgd) and currently processes an average flow of 9.6 mgd (or 64 percent capacity). The LWRP has a design capacity of 16 mgd and currently processes an average flow of 13.6 mgd (or 85 percent capacity).

PALMDALE SEWER MASTER PLAN

The Palmdale Sewer Master Plan (the Plan) analyzes flows and determines sewer system capacity deficiencies and improvements necessary to serve the growth identified for the City. Although Districts and Consolidated Sewer Maintenance District (CSMD) facilities are not City responsibility, they were included in the analysis to identify deficiencies. Additionally, the Plan assumed parcels currently served by septic tanks would be added to the City's sewer system. The wastewater flows were estimated for three time periods: 2006; 2030; and Buildout. Table 5.14-1, *Sewer Master Plan Estimates*, outlines the Plan's assumptions regarding housing and population, and the estimated average dry weather flow from the study area (sum of flow to PWRP and LWRP). The estimated flow was based on unit flow factors (e.g., flow per capita and per employee) and 24-hour flow profiles. As indicated in Table 5.14-1, the estimated total average dry weather flow under 2006 conditions was 10.4 million gallons daily (mgd), including 9.2 mgd from residential uses. Based on a current population of 153,334 persons and a per capita unit flow factor of 65.18 gpd,[4] the estimated average dry weather flow from residential uses under existing 2011 conditions is approximately 10 mgd.

Table 5.14-1
Sewer Master Plan Estimates

Land Use	Housing (Dwelling Units)	Population (Persons)	Residential Average Dry Weather Flow (mgd)	Total Average Dry Weather Flow (mgd)
Existing (2006)	39,831	141,759	9.2[1]	10.4
2030	64,212	228,531	15.6	20.2
Buildout	72,971[2]	259,703[2]	20.9	27.6

Source: RMC Water and Environment, City of Palmdale Sewer Master Plan Final Report Tables 2-3 and 4-1, September 2009.

1. Results in a per-capita unit flow factor of approximately 65.18 gpd under existing conditions.
2. These forecasts are significantly less than the Palmdale GP/GPEIR's buildout forecasts of approximately 139,205 dwelling units and 441,280 persons.

[3] Written Correspondence: Adriana Raza, Customer Service Specialist, County Sanitation Districts of Los Angeles County, January 26, 2012.

[4] Based on a 2006 population of 141,759 persons and residential average dry weather flow of 9,240,000 gpd.

The capacity of the modeled sewers was assessed under peak dry weather flow (DWF) and peak wet weather flow (WWF) for existing and future (2030) flow conditions. The analysis was conducted to ensure they would have adequate hydraulic capacity to convey future wastewater flows. The findings concluded there were very few City sewers that violated the hydraulic deficiency criteria. The Plan's key findings are summarized below.

Existing (2006) Conditions

The estimated total average dry weather flow under existing (2006) conditions is 10.4 mgd, including 9.2 mgd from residential uses; refer to Table 5.14-1.

2006 DWF Conditions. Under 2006 DWF conditions (Sewer Master Plan Figure 5-1), the only sewers that exceed the 75 percent full criteria are trunk sewers (e.g., 45th Street East). At a few locations on the trunk sewers and at one location on a City sewer there is back up of flow for a short distance. These situations are not considered to be capacity deficiencies.

2006 WWF Conditions. Under 2006 WWF conditions (Sewer Master Plan Figure 5-2), some surcharging is apparent primarily on the trunks. One of the major surcharging trunks was the existing 18-inch sewer on Technology Drive/Avenue P-8 between Division Street and 15th Street. This deficiency was relieved by construction of the new 42-inch Trunk A Relief Sewer from Division Street to the Palmdale Water Reclamation Plant on 30th Street East. As illustrated on Sewer Master Plan Figure 5-6, there are two short reaches of City sewers that are shown as surcharging, although the amount of surcharging is not sufficient to trigger a capital improvement project. The trunk sewer was added to the model in the 2030 DWF and WWF scenarios, and was determined to eliminate the projected surcharging in both cases (see Sewer Master Plan Figures 5-3 and 5-4).

2030 Conditions

The estimated total average dry weather flow under 2030 conditions is 20.2 mgd, including 15.6 mgd from residential uses.

2030 DWF Conditions. Under 2030 DWF conditions (Sewer Master Plan Figure 5-3), several additional trunk sewers are projected to surcharge:

- Trunk sewer along 45th Street East (including a possible overflow);
- Trunk sewer along 55th Street East; and
- Westbound trunk sewer on Avenue P-8 leading to the PWRP. However, as noted above, there is no longer a deficiency due to the completion of a 42" trunk line from Division Street to 30th Street East.

The only projected capacity deficiency in the City is the sewer along 45th Street East, between Avenues R and S.

2030 WWF Conditions. Under 2030 WWF conditions (Sewer Master Plan Figure 5-4), the problems for trunk sewers identified above for 2030 DWF conditions become more severe (trunk sewers along 45th Street East, 55th Street East and westbound Avenue P-8), and extensive surcharging in the Avenue Q trunk is also predicted. Additionally, according to Sewer Master Plan Figure 5-8, the problem at the City sewer along 45th Street East between Avenues R and S is also exacerbated, and a second deficiency is projected in the vicinity of 30th Street

West, downstream of the California Aqueduct siphon at Joshua Ranch (considered a low priority).

As described above, only two potential deficiencies on City sewers were identified in the hydraulic capacity analysis. In both cases, the deficiencies do not exist under existing (2006) DWF or WWF conditions, rather are projected to occur under 2030 conditions. The Plan proposed solutions to these two deficiencies (Project 1: 45th Street East between Avenue R and Avenue S; and Project 2: Joshua Ranch Sewer near 30th Street West). Sewer Master Plan Section 5.4, *Capital Improvement Projects*, discusses the capital improvement projects that are recommended based on the findings of the capacity analysis.

2030 Conditions With Septic Tank Conversions

Since flow in the 45th Street East City sewer would be affected by 110 upstream septic tank conversions, an analysis was performed to determine if this future capacity deficiency is contingent on the assumption that all parcels on septic tanks would be sewered by 2030. Sewer Master Plan Figure 5-9 shows surcharging is projected to occur along 45th Street East between Avenues R and S with septic tank conversions. Because the same surcharging is identified prior to septic tank conversions, no new deficiencies resulting from septic tank conversion would occur.

5.14.2 REGULATORY SETTING

CITY OF PALMDALE GENERAL PLAN

The Public Services Element provides a plan to ensure that public services and infrastructure are available to permit orderly growth and to promote public health, safety, and welfare. The policies and implementation programs in the Public Services Element are designed to ensure that adequate infrastructure will be available to serve the development identified in the Land Use Element. Goal 1 of the *General Plan* Public Services Element is to “ensure that adequate public services and facilities are available to support development in an efficient and orderly manner.” To this end, it is the City’s objective to:

Objective PS1.2: Ensure that new development is coordinated with provision of backbone infrastructure within the site and with adjacent properties, to promote cost efficient construction and maintenance, and ease of access to facilities.

Objective PS1.3: Utilize land use strategies to maximize use of infrastructure facilities.

Objective PS1.4: Develop and implement City programs to plan for, construct, and maintain municipal facilities.

Objective PS1.5: Coordinate with other jurisdictions in the Antelope Valley to provide for regional infrastructure improvements, minimize impacts of Palmdale development on adjacent jurisdictions, and provide unified support for mutually beneficial improvements requiring outside approvals and/or funding.

CITY OF PALMDALE MUNICIPAL CODE

Chapter 13.08, Permits, Fees, Design, and Inspection Requirements

ARTICLE I, SEWER PERMIT REQUIRED

Palmdale Municipal Code Section 13.08.010, *Sanitary Sewer Policy*, requires that all new buildings constructed for human occupancy in the City of Palmdale be connected to a public sewer unless the parcel complies with General Plan Policy PS 2.2.4.

Municipal Code Section 13.08.090, *Sewer Permit – Determination of Capacity – Agreement on Future Assessments*, states that no sewer permit shall be issued for the direct connection of any lot to a public sewer which was not designed for and intended to directly serve such lot unless the City first determines that there is additional capacity available in such sewer beyond that required to serve the property for which it was designed.

ARTICLE II, FEES

Municipal Code Section 13.08.120, *Connection to Public Sewer – Payment of Fees Required*, states that any person desiring to connect to a public sewer shall, as a prerequisite to obtaining the permits required by Chapter 13.08, pay all fees or charges which may be required by the City of Palmdale.

ARTICLE III, DESIGN STANDARDS

Article III establishes the legal authority for the City to require new developments and/or sewer connections to the public sewer be designed, constructed, and inspected according to defined standards for all infrastructure.

5.14.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist adopted by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study Checklist includes questions relating to wastewater systems. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes the following to occur:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board; refer to Section 8.0, Effects Found Not to be Significant.

- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; refer to Section 5.7, Hydrology and Water Quality.

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

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

5.14.4 IMPACTS AND MITIGATION MEASURES

WASTEWATER CONVEYANCE/TREATMENT FACILITIES

- **PROJECT IMPLEMENTATION COULD REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW WASTEWATER CONVEYANCE/TREATMENT FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

Impact Analysis: Project implementation is anticipated to result in a net increase of approximately 13,000 dwelling units by 2040, with a resultant population of approximately 46,368 persons. Table 5.14-2, *Project Wastewater Flow*, provides an estimate of the wastewater flow associated with the proposed project. As indicated in Table 5.14-2, the increased wastewater flow resulting from project implementation would be approximately 5.1 mgd, or approximately 51 percent over the existing wastewater flow from residential uses of approximately 10.0 mgd.

Table 5.14-2
Project Wastewater Flow

Land Use	Unit (DU / SF)	Wastewater Flow Rate (gpd / DU)[1]	Wastewater Flow Rate (gpd / TSF)[1]	Wastewater Flow (gpd)
Residential				
High Density Residential Development (13,253 DU)	16,039	390		6,255,210
High Density Residential Removed (-2,834 DU)	-2,834	390		-1,105,260
Low Density Residential Removed (-204 DU)	-204	260		-53,040
Subtotal Residential	*13,001*			*5,096,910*
Non-Residential				
Civic (based on Office LU Category) (SF)	-1,714		200	-343
Public Facility (Based on Office LU Category) (SF)	-30,000		200	-6,000
Religious Assembly (SF)	-39,916		50	-1,996
Subtotal Non-Residential	*-71,630*			*-8,339*
Project Implemented Total				*5,088,571*
Existing Residential				9,994,471[2]
Exiting / Project				*15,083,042*
Exiting / Project % Change				*51%*

1. County Sanitation Districts of Los Angeles County Website, *Table 1 - Loadings for Each Class of Land Use*, http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=3531, Accessed April 15, 2012.
2. Based on population for approximately 153,334 persons (CA DOF) and a per capita unit flow factor of 65.18 gpd.

As indicated in Table 5.14-1, the Sewer Master Plan forecasts the wastewater flow from residential uses would be approximately 15.7 mgd by 2030. The wastewater flow from existing and project uses combined would be approximately 15.1 mgd. Although, buildout of the anticipated residential uses is not anticipated to occur until 2040 assuming all of the anticipated residential development would occur by 2030, project implementation would not cause the residential wastewater flows forecast for 2030 to be exceeded.

WASTEWATER CONVEYANCE

As discussed above, the Sewer Master Plan identifies existing and future capacity deficiencies within the City's wastewater conveyance facilities. The increased wastewater flows resulting from project implementation would place greater demands on City wastewater conveyance facilities. Therefore, project implementation could aggravate existing deficiencies. However, as indicated above, project implementation would not cause the Sewer Master Plan's residential wastewater flows forecast for 2030 to be exceeded, and thus it is not anticipated that project implementation would aggravate the future deficiencies identified in the *2030 Conditions* Section above, or create new deficiencies. The availability of sewer capacity would depend upon the scale and location of the project, and timing of connection to the sewerage system. Due to the conceptual nature of the future residential development, proposals would require individual assessments of potential wastewater generation and impacts to facilities on a project-by-project basis. Sewer line extensions or construction of new facilities could be required in order to meet the increased demand. If necessary, mitigation would be required to reduce potential impacts to a less than significant level. Moreover, it is the City's intent to ensure that adequate facilities are available to serve existing and future development within the City, consistent with the Land Use Plan. The City requires that new development construct on-site improvements pursuant to City standards and construct or provide a fair share contribution to off-site improvements necessary to serve the development. The City also adopts and annually updates the City's Capital Improvement Program to prioritize funding for public works projects and coordinates with the Districts for regional sewer facilities within the City. Additionally, both the General Plan and the City's Municipal Code require payment of applicable fees for future development projects to connect to the public sewer system in order to ensure the City's sewer system is maintained and capacity is increased, as necessary. Future residential development anticipated by the project would also be subject to compliance with the City's General Plan Policies outlined below, which are intended to lessen potential impacts to wastewater facilities. Therefore, project implementation would result in a less than significant impact regarding the City's wastewater conveyance facilities.

The Sewer Master Plan identifies existing and future deficiencies to the Districts' trunk sewers. The availability of trunk sewer capacity would be verified as individual projects are proposed. The Districts would review residential development projects on a project-by-project basis, in order to determine if adequate capacity exists within the Districts' trunk system to serve the development and if Districts' facilities would be impacted. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. The connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate the proposed project. Individual development projects would be required to pay the connection fee before a permit to connect to the sewer is issued. Therefore, payment of fees would result in a less than significant impact to the Districts' wastewater conveyance facilities.

WASTEWATER TREATMENT

The City's future housing needs would generate increased wastewater flows, placing greater demands on wastewater treatment facilities. The wastewater generated by the project would be collected by the Districts and conveyed for treatment to the PWRP, which is currently at 64 percent capacity, or the LWRP, which is currently at 85 percent capacity. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the Los Angeles County, among others. The available capacity of the Districts' treatment facilities would, therefore, be limited to levels associated with the approved growth identified by SCAG. The Districts have expressed their intent to provide service up to the levels that are legally permitted. As previously noted, the Districts would review residential development projects on a project-by-project basis, in order to determine if adequate capacity exists within the Districts' wastewater treatment facilities to serve the development and if Districts' facilities would be impacted. Therefore, project implementation would result in a less than significant impact regarding the City's wastewater treatment facilities.

Mitigation Programs:

General Plan Policies:

Policy PS1.1.1: Require all new development, including major modifications to existing development, to construct required onsite infrastructure improvements pursuant to City standards.

Policy PS1.1.2: Require all new development, including major modifications to existing development, to construct or provide a fair share contribution towards construction of required offsite improvements needed to support the project.

Policy PS1.1.3: Require that on and offsite improvements are constructed prior to occupancy of a new development project, or phase thereof, unless otherwise approved by the City.

Policy PS1.1.4: Require that adequate provisions are made for maintenance of public improvements, prior to approval of any new development project.

Policy PS1.1.5: When new development is proposed in vacant, rural areas which have not yet been master-planned for provision of infrastructure, require that development proponents provide for or contribute a fair share towards development of backbone plans for roads, sewer, water, drainage and community facilities, prior to granting conditional approval of development applications.

Policy PS1.2.1: Require that provision of streets, sewer, water, drainage and other needed infrastructure be coordinated in a logical manner between adjacent developments, so as to reduce cost of design, construction, and maintenance.

Policy PS1.2.5: Require that infrastructure be designed and constructed to meet ultimate capacity needs, pursuant to a master plan, so as to avoid the need for costly retrofitting.

Policy PS1.2.8: Distribute the costs of extending infrastructure equitably among those benefiting from the improvement.

Policy PS1.4.1: Adopt and annually update the city's Capital Improvement Program (CIP) to prioritize funding for public works projects in accordance with this General Plan.

Policy PS1.4.3: Adopt, implement, and annually review user fee and impact fee programs, to support the cost of constructing capital facilities and providing services.

Policy PS1.5.3: Coordinate planning issues with outside service provider representatives, such as the school districts, sheriff's department, fire district, water districts, and sanitation district, to promote coordinated master planning for these services.

Policy PS2.2.1: Coordinate with the Los Angeles County Sanitation District to evaluate the sewage disposal system as often as necessary (at least biannually), to ensure adequacy of the system to meet changes in demand and changes in types of waste which occur as a result of development.

Policy PS2.2.2: Require new development to pay necessary fees for expansion of the sewage disposal system to the appropriate agencies, to handle the increased load which it will generate.

Policy PS2.2.3: Support the Los Angeles County Sanitation District in preparation of a master plan for regional sewer facilities in Palmdale.

Policy PS2.2.4: Require that all commercial, industrial, institutional, multiple family and single-family residential uses with lot sizes of less than one acre be connected to a public sewer system.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact with General Plan Policies Incorporated.

5.14.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED DEVELOPMENT COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS INVOLVING WASTEWATER.**

Impact Analysis: Potential impacts associated with wastewater as a result of full implementation of the Palmdale General Plan were evaluated in Section 4.2.11 (Public Utilities) of the GPEIR (pages 4-171 through 4-216). The GPEIR concluded development under the Land Use Plan would result in the need for new sewage treatment plants and sewer trunk lines. Buildout of the Land Use Plan was anticipated to generate a wastewater flow of 112.71 mgd. General Plan policies and programs would reduce impacts to a less than significant level. As concluded above, impacts on wastewater conveyance and treatment facilities resulting from project implementation are considered less than significant following compliance with General Plan Policies, and the Districts' and City's development review process. Additionally, project implementation would not cause the Sewer Master Plan residential wastewater flows forecast for 2030 to be exceeded.

When viewed in conjunction, the increased demand for wastewater conveyance and treatment resulting from development allowed by the Land Use Plan and proposed project could be considered a negative cumulative effect. The degree of significance would depend upon the scale and location of the project, and timing of connection to the sewerage system. All future residential and non-residential development within the City would be reviewed on a project-by-project basis by the City and the Districts to determine the availability of adequate treatment capacity along with the continuous assessment of capacity flows. Individual development projects would be required to verify that existing capacity exists to convey and treat the potential wastewater generated with the new development. Development projects would be subject to payment of fees prior to connecting to the City's or Districts' facilities. Additionally, the City's General Plan includes policies to reduce potential impacts to wastewater services and facilities. Compliance with the General Plan Policies and programs, and review through the Districts' and City's development review process, would reduce potential cumulative impacts to wastewater facilities to a less than significant level. It is also noted, the Sewer Master Plan and SCAG's population forecasts for 2030 are approximately 228,531 persons and 197,167 persons, respectively. With implementation of the proposed project, the City's population would total approximately 189,786 persons. Because project implementation would cause neither the Sewer Master Plan nor SCAG population forecasts to be exceeded, it would not cause the forecast residential wastewater flows to be exceeded or aggravate the anticipated future deficiencies.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.14.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Potential wastewater impacts resulting from project implementation would be less than significant following compliance with the General Plan Policies, and the Districts' and City's development review process.

5.15 Solid Waste

5.15 SOLID WASTE

This section provides existing conditions and background information necessary to determine the project's potential impacts involving solid waste. Specifically, this section compares the project's estimated solid waste generation with the capacity of the existing landfills that accept solid waste from the City of Palmdale (City). Mitigation measures to avoid impacts or lessen their significance are provided, as necessary.

5.15.1 EXISTING SETTING

DISPOSAL SERVICES

The City currently maintains a franchise agreement with Waste Management of Antelope Valley (Waste Management) for collection and disposal of the City's residential solid waste. The City requires each occupied residence to maintain weekly trash and recycling services, which consist of one 96 gallon trash cart and two trash bags; one 64 gallon greenwaste cart; and one 64 gallon recycling cart.

DISPOSAL FACILITIES

There are two landfills that could be used for disposal of the Palmdale area's solid waste: the Antelope Valley Public Landfill and the Lancaster Landfill and Recycling Center.

Antelope Valley Public Landfill I and II

Antelope Valley Public Landfill I and II is a solid waste disposal site located at 1200 West City Ranch Road in Palmdale. This facility, which involves a total permitted area of 185 acres and a permitted disposal area of 125 acres, offers waste disposal and recycling services.[1, 2] The landfill's maximum permitted throughput is 3,564 tons per day (TPD). The landfill's design capacity of 20.4 million cubic yards (CY) represents its estimated remaining permitted site capacity, as of April 14, 2011. The anticipated closure date for the Antelope Valley Landfill is January 1, 2042.

The facility also includes the Antelope Valley Environmental Collection Center (AVECC). The AVECC is the area's first permanent Environmental Collection Center. This residential special material collection facility serves the needs of Antelope Valley residents free of charge, in order to discourage the improper disposal of household wastes. The AVECC receives Household Hazardous Waste (e.g., paint, oil and batteries) and old electronics (e.g., TVs, monitors, computers and printers).

[1] CalRecycle Website, http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-5624/Detail/, Accessed April 6, 2012.

[2] Solid Waste Facility Permit Number 19-AA-5624, Issued November 16, 2011.

Lancaster Landfill and Recycling Center

The Lancaster Landfill is located at 600 East Avenue F in the City of Lancaster. This Landfill encompasses a total permitted area of 276 acres and a permitted disposal area of 209 acres.[3, 4] This facility's maximum permitted throughput is 1,700 TPD. The facility's maximum permitted capacity is 26.7 million CY. As of February 28, 2006, the facility's remaining capacity is 19.1 million CY or approximately 72 percent. The anticipated closure date for the Lancaster Landfill is August 2, 2012.

5.15.2 REGULATORY SETTING

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY ACT OF 1972

The Solid Waste Management and Resource Recovery Act of 1972 is the legislation that addresses solid waste. The California Integrated Waste Management Board (CIWMB), which was created by this Act, was given broad authority related to solid waste handling, disposal, and reclamation. Under this Act, the CIWMB initially (1) created a State solid waste management and resource recovery policy; (2) developed minimum standards for solid waste handling and disposal; and (3) approved county Solid Waste Management Plans (SWMP). The CIWMB was responsible for enforcing the legal provisions dealing with solid waste management and disposal for protecting the environment and public health and safety.

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT

In 1989, the Legislature adopted the California Integrated Waste Management Act of 1989 (AB 939), in order to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment.

AB 939 established a waste management hierarchy as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal. The law also required that each county prepare a new Integrated Waste Management Plan and each city prepare a Source Reduction and Recycling Element (SRRE) by July 1, 1991. The SRRE is required to identify how each jurisdiction will meet the mandatory state waste diversion goal of 50 percent by the year 2000. The Act mandated that California's 450 jurisdictions (i.e., cities, counties, and regional waste management compacts), implement waste management programs aimed at a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. If the 50 percent goal was not met by the end of 2000, the jurisdiction was required to submit a petition for a goal extension to CalRecycle.

Senate Bill (SB) 2202 made a number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local governments shall continue to divert 50 percent of all solid waste on and after January 1, 2000.

[3] CalRecycle Website, http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-0050/Detail/, Accessed April 6, 2012.

[4] Solid Waste Facility Permit Number 19-AA-0050, Issued September 7, 2000.

CALRECYLE

The management of solid waste is governed by regulations established by CalRecycle, which is the home of California's recycling and waste reduction efforts. Officially known as the Department of Resources Recycling and Recovery, CalRecycle is a department within the California Natural Resources Agency and administers programs formerly managed by the California Integrated Waste Management Board (CIWMB) and Division of Recycling. CalRecycle delegates local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies. In 1997, some of the regulations adopted by the State Water Quality Control Board pertaining to landfills (Title 23, Chapter 15) were incorporated with CIWMB regulations (Title 14) to form Title 27 of the California Code of Regulations.

PER CAPITA DISPOSAL MEASUREMENT ACT OF 2008

SB 1016, Wiggins, Chapter 343, Statutes of 2008, passed in 2008. It introduced a per capita disposal measurement system that measures the 50 percent diversion requirement using a disposal measurement equivalent. The bill repealed the board's two-year process, requiring instead that the board make a finding whether each jurisdiction was in compliance with the act's diversion requirements for calendar year 2006 and to determine compliance for the 2007 calendar year, and after, based on the jurisdiction's change in its per capita disposal rate. The board is required to review a jurisdiction's compliance with those diversion requirements in accordance with a specified schedule, which is conditioned upon the board finding that the jurisdiction is in compliance with those requirements or has implemented its source reduction and recycling element and household hazardous waste element. The bill requires the board to issue an order of compliance if the board finds that the jurisdiction has failed to make a good faith effort to implement its source reduction and recycling element or its household hazardous waste element, pursuant to a specified procedure.

The per capita disposal rate is a jurisdiction-specific index, which is used as one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs. Meeting the disposal rate targets is not necessarily an indication of compliance. Palmdale's most current Disposal Rate Targets calculated by CalRecycle are 6.6 pounds per day (PPD) per Resident and 34.8 PPD per Employee.[5] For 2010, the most recent reporting year, Palmdale's Disposal Rates were 3.5 PPD Per Resident and 21.5 PPD Per Employee.[6] Therefore, based on preliminary data, the City is currently achieving these disposal rate targets. CalRecycle also reports that the City implemented a total of 39 Waste Diversion Programs in 2010, including the following, among others:

- *Composting*: Residential Self-haul Greenwaste; Commercial Self-Haul Greenwaste; Residential Curbside Greenwaste Collection; and Food Waste Composting.

- *Facility Recovery*: MRF; Landfill; Alternative Daily Cover; and Composting Facility.

[5] CalRecycle Website, http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx, Accessed April 6, 2012.

[6] Ibid.

- *HHW*: Permanent Facility; Mobile/Periodic Collection; Curbside Collection; Education Programs; and Other HHW;

- *Public Education*: Electronic (radio, TV, web, hotlines); Print (brochures, flyers, guides, news articles); Outreach (tech assistance, presentations, awards, fairs, field trips); and Schools (education and curriculum); and

- *Recycling*: Residential Curbside; Residential Drop-Off; Residential Buy-Back; Commercial On-Site Pickup; Government Recycling Programs; Special Collection Seasonal (regular); and Special Collection Events.

LOS ANGELES COUNTYWIDE SITING ELEMENT

In 1997, the County of Los Angeles prepared the Los Angeles Countywide Siting Element that estimates the amount of solid wastes generated in the County and proposes various diversion and alternate disposal options. The Siting Element identifies the Los Angeles County Department of Public Works (LACDPW) as the responsible agency to develop plans and strategies to manage and coordinate the solid waste generated in the County unincorporated areas and address the disposal needs of Los Angeles County as a whole. The Siting Element is based upon the traditional practice of collecting and disposing of solid waste at landfills in the local vicinity. Therefore, currently many jurisdictions (such as the County of Los Angeles) are stating that existing local landfill space may reach capacity in the very near future.

CITY OF PALMDALE SOURCE REDUCTION AND RECYCLING ELEMENT (SRRE)

In compliance with AB 939, which requires that all cities and counties within the State prepare integrated waste management plans to attain solid waste reduction of 50 percent by the end of year 2000, the City of Palmdale Solid Waste Management Plan (SWMP) was adopted in November 14, 1991 (by Resolution 91-236). The City's SWMP includes a Source Reduction and Recycling Element (SRRE), a Household Hazardous Waste Element (HHWE), and a siting section, which identifies criteria for the location of solid waste, landfills, transfer stations, recycling centers, and other waste facilities. The City implements the SWMP in all activities related to waste management.

5.15.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the CEQA Guidelines, as amended, and used by the City of Palmdale in its environmental review process, and is contained in Appendix A of this EIR. The Initial Study includes questions relating to solid waste. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or

- Comply with federal, state, and local statutes and regulations related to solid waste.

Based on these significance thresholds and criteria, the Project's effects have been categorized as either "effects found not to be significant" or "potentially significant impact." Feasible mitigation measures, which could avoid or minimize potentially significant impacts, are identified. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a "significant unavoidable impact."

5.15.4 IMPACTS AND MITIGATION MEASURES

LANDFILL CAPACITY

- **THE PROPOSED PROJECT COULD BE SERVED BY A LANDFILL WITH INSUFFICIENT PERMITTED CAPACITY TO ACCOMMODATE ITS SOLID WASTE DISPOSAL NEEDS.**

Impact Analysis: Implementation of the proposed project is anticipated to result in a net increase of approximately 13,001 dwelling units and removal of approximately 71,630 square feet of non-residential uses. This future residential development would generate additional solid waste, place increased demands on solid waste disposal services, and impact the capacities of landfills serving the Palmdale area. Table 5.15-1, *Project Solid Waste Flow*, provides an estimate of the solid waste flow associated with the proposed project.

Table 5.15-1
Project Solid Waste Flow

Land Use	Dwelling Unit / Square Feet	Solid Waste Flow Rate[1] (lb/day/du or lb/day/tsf)	Solid Waste Flow (lb/day)	Solid Waste Flow (tpy)[3]
Residential				
High Density Residential Development	16,039	15.00	240,585	43,907
High Density Residential Removed	-2,834		-42,510	-7,758
Low Density Residential Removed	-204	5.50	-1,122	-205
Subtotal Residential	*13,001*		*196,953*	*35,944*
Non-Residential				
Civic	-1,714	7.00	-12	-2
Public Facility	-30,000		-210	-38
Religious Assembly	-39,916		-279	-51
Subtotal Non-Residential	*-71,630*		-501	-92
Total			*196,452*	*35,852*

1. City of Palmdale, *Final Program EIR for the City of Palmdale General Plan Table 4-18*, February 1, 1993.
2. Lb/day/du = Pounds per Day per Dwelling Unit; and lb/day/tsf = Pounds per Day per 1,000 Square Feet.
3. Tpy = Tons per Year.

As indicated in Table 5.15-1, the additional solid waste resulting from project implementation would be approximately 35,852 tons per year (TPY). The increased solid waste resulting from project implementation could be accommodated within the existing landfill capacity. As previously noted, the Antelope Valley Public Landfill I and II and the Lancaster Landfill have remaining permitted site capacities of 20.4 million CY and 19.1 million CY, respectively.

Additionally, it is the City's goal (Goal PS6) to provide adequate facilities and programs to accommodate solid waste and hazardous waste collection, handling, and disposal. In compliance with Objective PS6.1, the City continues to implement the City of Palmdale Solid Waste Management Plan (SWMP), which includes a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE). Per the City's SWMP, all future development projects within the City would be required to comply with the SRRE and HHWE for diverting solid waste. Compliance with the General Plan Policies outlined below would further reduce the volume of solid waste ultimately disposed of at the landfills. Continued compliance with the SWMP (including the SRRE and HHWE) and General Plan Policies would ensure that the impacts to the capacities of the landfills serving the City are minimized, thus, a less than significant impact would occur in this regard.

Mitigation Programs:

General Plan Policies:

Policy PS6.1.1: Review proposed development with respect to the SWMP to ensure consistency.

Policy PS6.1.2: Base future decisions on franchise agreements on the SWMP.

Policy PS6.1.3: Continue to implement the City's adopted waste reduction and recycling programs in compliance with the SWMP.

Policy PS6.1.4: Update and maintain the SWMP as needed, with a complete review at least every five years, to ensure that the Plan accurately reflects changing waste stream conditions, government regulations, and City goals.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

COMPLIANCE WITH STATUTES AND REGULATIONS

- **THE PROPOSED PROJECT COULD CONFLICT WITH STATUTES AND REGULATIONS RELATED TO SOLID WASTE.**

Impact Analysis: As previously stated, based on preliminary 2010 data, the City is currently achieving CalRecycle's target disposal rates consistent with AB 939. The City remains committed to waste reduction and minimization efforts and continues to implement the 39 Waste Diversion Programs outlined above. Although the project would generate solid waste, it would be implemented in a manner consistent with the City's commitment to and in compliance with AB 939 through continued compliance with the SWMP (including the SRRE and HHWE) and General Plan Policies. Therefore, the project would not conflict with federal, state, or local statutes or regulations related to solid waste, and no impact would occur in this regard.

Mitigation Programs:

General Plan Policies: Refer to General Plan Policies PS6.1.1, PS6.1.3, and PS6.1.4, outlined above.

Project Mitigation Measures: No additional mitigation is required.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.15.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- **RESIDENTIAL DEVELOPMENT ASSOCIATED WITH PROJECT IMPLEMENTATION COMBINED WITH DEVELOPMENT ANTICIPATED BY THE GENERAL PLAN COULD RESULT IN CUMULATIVELY CONSIDERABLE IMPACTS TO THE PERMITTED CAPACITIES OF THE LANDFILLS SERVING THE CITY.**

Impact Analysis: Potential impacts involving solid waste as a result of full implementation of the Palmdale General Plan were evaluated in GPEIR Section 4.2.11 (Public Utilities) (pages 4-188 through 4-190). The GPEIR concluded solid waste generation from General Plan buildout is estimated to be 3,562 TPD (approximately 1.3 million TPY). The GPEIR also concluded that there should be adequate capacity to dispose of the City's generated waste and if the City's recycling programs are successful, only 1,781 TPD (650,065 TPY) would be disposed in landfills at buildout. As concluded above, continued compliance with the SWMP (including the SRRE and HHWE) and General Plan Policies would ensure that the project's impacts to the capacities of the landfills serving the City are minimized, thus, resulting in a less than significant impact.

When viewed in conjunction, the increased solid waste generation resulting from development allowed by the Land Use Plan and proposed project could impact the capacities of the landfills serving the City. However, implementation of source reduction measures would be required on a project-by-project basis and plans such as those for recycling would partially address landfill capacity issues by diverting additional solid waste at the source of generation. Continued compliance with the SWMP (including the SRRE and HHWE) and General Plan Policies would ensure that the cumulative impacts to the landfill capacities are minimized. Therefore, the project's contribution to these impacts would not be cumulatively considerable and cumulative impacts involving solid waste within the City would be less than significant.

Future development within the City would be required to comply with all applicable Federal, State, and local statutes and regulations related to solid waste. This includes compliance with AB 939, which requires a 50 percent diversion of all solid waste from disposal in local landfills. There is no cumulative impact related to compliance with applicable regulations.

Mitigation Programs: No additional mitigation is required beyond compliance with the General Plan Policies outlined above.

Level of Significance: Less Than Significant Impact With General Plan Policies Incorporated.

5.15.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts associated with solid waste would occur as a result of project implementation.

6.0 Alternatives

6.0 ALTERNATIVES

6.1 INTRODUCTION

CEQA Guidelines Section 15126.6 requires the identification and evaluation of reasonable alternatives designed to feasibly achieve the most basic objectives of the project, while avoiding or substantially lessening any of the significant environmental effects of the project. In addition, *CEQA* requires a comparative evaluation of the merits of the alternatives.

Pursuant to *CEQA Guidelines* Section 15126.6 (f)(1), factors that may be taken into account when addressing the feasibility of alternatives include, but are not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). Although these factors do not present a strict limit on the scope of reasonable alternatives to be considered, they help establish the context in which "the rule of reason" is measured against when determining an appropriate range of alternatives sufficient to establish and foster meaningful public participation and informed decision-making.

6.1.1 ALTERNATIVES TO BE ANALYZED

In consideration of updating the City's Housing Element, the following three potential scenarios were identified in order to accommodate the assigned very low and low income units identified by the 2006-2014 Regional Housing Needs Assessment (RHNA) cycle.

- Scenario 1 (Geographically Distributed Alternative) identifies both existing residential and commercial parcels that may be rezoned to a minimum residential density of 30 units per acre. This scenario provides the widest geographical distribution of units.

- Scenario 2 (proposed project) envisions a dense, downtown, transit-oriented development, centered on the Palmdale Transportation Center and the core area of Palmdale Boulevard and Sierra Highway, as described in Section 3.0, Project Description.

- Scenario 3 (Corridor Alternative) provides for a minimum of 30 units per acre and includes many areas along existing arterial roadways and transit routes, in close proximity to existing and future commercial development. This scenario minimizes the potential for rezoning commercial land for future residential uses.

Upon direction from the City Council, Scenario 2 is analyzed as the proposed project within this EIR. The following alternatives have been identified for detailed analysis in this section:

- Alternative 1: No Project (Existing Housing Element) Alternative;
- Alternative 2: Geographically Distributed Alternative; and
- Alternative 3: Corridor Alternative.

Throughout the following analysis, impacts of the alternatives are analyzed for each of the issue areas examined in Section 5.0 of this EIR. In this manner, each alternative can be compared to

the proposed project on an issue-by-issue basis. At the end of the analysis, Table 6-1, *Comparison of Alternatives*, provides an overview of the alternatives analyzed and a comparison of each alternative's impact in relation to the proposed project.

Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. The proposed project would result in significant and unavoidable impacts in the following environmental issue areas:

TRANSPORTATION AND CIRCULATION

- Existing Project Conditions
- Future Buildout with Project Conditions
- Cumulative Traffic Operations

AIR QUALITY

- Short-Term Construction Air Emissions
- Long-Term Operational Air Emissions
- Consistency with Regional Plans
- Cumulative
    - Short-Term Construction
    - Long-Term Operational

NOISE

- Cumulative Mobile Noise Sources

GREENHOUSE GAS EMISSIONS

- Project-Related Greenhouse Gas Emissions
- Cumulative Greenhouse Gas Emissions

WATER

- Water Supplies
- Cumulative Water Supplies

An EIR must identify an "environmentally superior" alternative and, where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, inferior, or neutral. However, only those impacts found to be significant and unavoidable for the proposed project are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project.

6.1.2 PROJECT OBJECTIVES

- Promote the construction of new housing affordable to all income groups;
- Preserve and improve the existing supply of affordable housing;
- Remove government constraints on housing;
- Promote equal housing for all persons;
- Adequately house households with special needs;
- Implement energy and water conservation measures;
- Enhance the vitality and safety of existing residential neighborhoods;
- Promote neighborhood versatility by encourage a mix of new housing alternatives to increase affordability and promote home ownership;
- Promote higher density residential uses in close proximity to existing transportation infrastructure, including the Palmdale Transportation Center;
- Provide for higher density residential uses close to support services for residents, such as commercial uses, schools, parks and open space; and
- Provide development standards and design guidelines that provide a safe environment for residents and will direct transit and pedestrian oriented development.

6.2 ALTERNATIVE 1: NO PROJECT (EXISTING HOUSING ELEMENT) ALTERNATIVE

6.2.1 DESCRIPTION OF THE ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(3)(A) provides that "when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the 'no project' alternative will be the continuation of the existing plan, policy or operation into the future." Under Alternative 1: No Project (Existing Housing Element) Alternative, the Housing Element Update and associated General Plan Land Use Element Update, Zoning, and Specific Plan amendments would not occur and the existing Housing Element (2001) and policies would remain in effect, with the exception of the Zoning Ordinance Amendment regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates. Various sections of the Zoning Ordinance would be amended to be consistent with State law, as described in Section 3.0, Project Description. Housing development within the City would continue as guided under the existing Housing Element (2001). Over the eight-year planning period, approximately 3,789 new residential units are anticipated to be built.

6.2.2 IMPACT COMPARISON TO THE PROPOSED PROJECT

LAND USE AND PLANNING

The No Project Alternative would not involve any General Plan Amendments (GPA), Zoning Ordinance Amendments (ZOA), Zone Changes (ZC), or Specific Plan Amendments (SPA) and would allow for housing development consistent with the Palmdale General Plan land use map and Zoning Map. Future development of housing would occur on vacant land currently designated and zoned for residential uses. Overall, this Alternative would allow for residential development at a lower density than the proposed project and would not involve a reduction in

non-residential acreage/development potential or an increase in residential acreage/ development potential. This Alternative anticipates approximately 3,789 new residential units within the City, which would be approximately 12,250 fewer new units than anticipated by the proposed project. Although the No Project Alternative would be consistent with the City's General Plan and Zoning, this Alternative would not meet the very low- and low-income housing need identified by the Regional Housing Needs Assessment (RHNA), as this Alternative would not provide adequate sites to accommodate the adjusted RHNA allocation of 6,722 very low- and low-income units at the minimum permitted density, which would occur with the proposed project. Therefore, this Alternative would result in a significant and unavoidable land use impact, as it would conflict with the RHNA. This Alternative would be considered environmentally inferior to the proposed project in this regard.

TRANSPORTATION AND CIRCULATION

As noted in Section 5.2, Transportation and Circulation, the proposed project is forecast to generate approximately 91,793 net daily trips. Comparatively, the average daily trips (ADT) projected to occur with the No Project Alternative (36,621 ADT) would be approximately 60 percent less than the proposed project. Future development under this Alternative would occur on vacant land distributed throughout the City. Thus, given the conceptual nature of this future development, the distribution of trips forecast to be generated by development of the residentially-zoned land would be addressed on a project-by-project basis and would be based on field reconnaissance, understanding of the surrounding circulation system, and City provided information. Although the proposed project also anticipates some development occurring on vacant land within the General Plan study area, the proposed project also anticipates higher density residential development within the central portion of the City, which would result in significant and unavoidable impacts to the City's circulation system. Although there is the potential for future residential development under the No Project Alternative to cause a significant traffic impact, given that this Alternative would allow for less residential development and fewer daily trips would be generated under this Alternative, the No Project Alternative is considered environmentally superior to the proposed project with regard to traffic.

AIR QUALITY

Short-term construction impacts would be reduced when compared to the proposed project, given that this Alternative would allow for fewer housing units over existing conditions. However, some of the future housing developments could individually exceed the AVAQMD thresholds depending upon the magnitude of development. Therefore, similar to the proposed project, short-term construction impacts would also be significant and unavoidable for this Alternative.

Operational emissions would be reduced under this Alternative relative to the proposed project; however, the impacts would remain significant and unavoidable. Unlike the proposed project, this Alternative would be consistent with the regional plans, as the potential residential development would be consistent with the uses and densities permitted by the existing General Plan and Zoning Ordinance. Therefore, this Alternative would be consistent with the growth forecasts utilized in the development of the applicable Air Quality Plan. The No Project Alternative would be considered environmentally superior to the proposed project in this regard.

GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

The No Project Alternative would allow development of new housing units beyond existing conditions. Similar to the proposed project, compliance with General Plan Policies would contribute to GHG emissions reductions. However, due to the conceptual nature of future residential development and since project details necessary to calculate emission reductions are not available at this time, GHG impacts under this Alternative would be significant and unavoidable, similar to the proposed project. Thus, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

NOISE

This Alternative would allow for fewer residential units at a lower intensity than compared to the proposed project. The short-term impacts associated with construction activities would be reduced under this Alternative, as it would result in fewer construction activities and associated equipment, and a reduced construction schedule. Similar to the proposed project, construction noise impacts, including vibration impacts, would be reduced to a less than significant level with the implementation of mitigation measures.

When compared to the proposed project, noise levels associated with vehicular traffic would be reduced, as this Alternative would generate less overall traffic. Further, this Alternative anticipates new residential development to be distributed throughout the City to a greater extent than the proposed project. Thus, it is likely that larger amounts of traffic would not be generated from a particular area, as would occur with the proposed project in the rezone project area. With adherence to General Plan Policies and additional acoustical analysis required for future residential development projects within the City, it is anticipated that off-site and on-site traffic noise impacts associated with this Alternative would be less than significant, similar to the proposed project. Stationary noise impacts would be similar to the proposed project and would be less than significant, while cumulative noise impacts would also be significant. However, since overall noise levels would be reduced, this Alternative is considered environmentally superior to the proposed project.

HAZARDS AND HAZARDOUS MATERIALS

This Alternative would allow for the development of housing units on existing vacant land; thus, this Alternative would not create a significant hazard to the public or the environment associated with the demolition of structures, which could occur with the proposed project. Similar to the proposed project, this Alternative could result in the accidental release of hazardous materials during construction as a result of existing contamination associated with historic site uses. However, the potential for contamination would be reduced under this Alternative, as fewer sites would be developed. Similar to the proposed project, potential impacts would be reduced with implementation of General Plan Policies and mitigation measures under this Alternative. Similar to the proposed project, this Alternative would be subject to the land use restrictions for each of the airport compatibility zones, which would reduce potential impacts associated with the airport. Emergency response and evacuation plan impacts would be comparable to those of the proposed project. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

HYDROLOGY AND WATER QUALITY

With this Alternative, the short-term impacts on water quality associated with grading, excavation, and construction activities would be reduced as fewer sites would be developed when compared to the proposed project. As with the proposed project, the existing quality and quantity of storm water and urban runoff would be impacted with this alternative, as existing vacant land would be developed. Similar to the proposed project, drainage improvements would be required with implementation of the No Project Alternative. As with the proposed project, this Alternative could place people or housing within a 100-year flood area and/or potentially expose people or housing to inundation associated with failure of a dam or aqueduct. Similar to the proposed project, impacts would be reduced through compliance with Federal and State standards, the City's Master Plan of Drainage, Palmdale Municipal Code regulations, and General Plan Policies. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

BIOLOGICAL RESOURCES

Similar to the proposed project, the No Project Alternative could result in impacts to biological resources, including special status plant and wildlife species and riparian habitat and sensitive natural communities associated with development of new housing units on vacant land. Due to the conceptual nature of future residential development under either the No Project Alternative or the proposed project, development could impact jurisdictional waters and wetlands or potentially interfere with wildlife movement. As with the proposed project, the No Project Alternative could conflict with the City's Joshua Tree and Native Desert Vegetation Preservation Ordinance. Potential biological resource impacts associated with either the No Project Alternative or the proposed project would be reduced to a less than significant level with the implementation of mitigation measures. Thus, the No Project Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

CULTURAL RESOURCES

Similar to the proposed project, the No Project Alternative could result in indirect impacts to potentially historic resources. Compliance with General Plan Policies would reduce potential impacts to a less than significant level. With this Alternative, the potential disturbance or destruction of currently undocumented archaeological and/or paleontological resources could occur, as future development would occur on vacant land. Similar to the proposed project, compliance with General Plan Policies and identified mitigation would reduce potential impacts associated with this Alternative. Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, potential impacts to human remains would be less than significant under this Alternative, similar to the proposed project. Thus, the No Project Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

POLICE PROTECTION

Although demand for police protection services would increase as a result of this Alternative, overall demand would be reduced when compared to the proposed project, as fewer new housing units would be developed. Impacts for police protection services were less than significant for the proposed project with compliance with General Plan Policies. As with the

proposed project, this Alternative would be required to comply with General Plan Policies; thus, the impacts would also be less than significant. Given that this Alternative would create lower demands for police protection services, it would be considered environmentally superior to the proposed project in this regard.

SCHOOL FACILITIES

As noted in Section 5.11, School Facilities, the proposed project is anticipated to result in a net increase of approximately 4,174 new students. Comparatively, the number of students anticipated with the No Project Alternative (1,243 students) would be approximately 70 percent less than the proposed project. As with the proposed project, compliance with General Plan Policies and payment of statutory fees would be required to reduce impacts to a less than significant level. Given that this Alternative would create lower demands for school services, it would be considered environmentally superior to the proposed project in this regard.

PARKS AND RECREATIONAL FACILITIES

The No Project Alternative would involve 3,789 residential units, which is 12,250 fewer than the proposed project. The City currently has a parkland deficiency of approximately 434 acres. Development of this Alternative or the proposed project would contribute to the existing deficiency. Based on the parkland to population ratio of 5.0 acres per 1,000 persons, this Alternative would generate the need for 68 additional acres of parkland compared to 232 acres needed by the proposed project. The City currently has 483.1 acres identified for future park development, including neighborhood, community, and special use parks, which would partially provide the necessary parkland to serve the City's existing demand combined with the future demand associated with the No Project Alternative. Payment of parkland dedication fees or dedication of land in lieu of the fee would help mitigate parks and recreation impacts, similar to the proposed project. However, given that this Alternative would create lower demand for parks and recreation facilities, it would be considered environmentally superior to the proposed project with regard to parks.

WATER

The No Project Alternative would involve 3,789 residential units, which is 12,250 fewer than the proposed project. Therefore, water demand associated with this Alternative would be reduced when compared to the proposed project. Due to the conceptual nature of the future residential development associated with the No Project Alternative, it cannot be determined with accuracy the number of potential residential units that would be served by each water district. Similar to the proposed project, future residential development would comply with General Plan Policies, which would require development projects to ensure adequate water supply is available to serve the development. However, similar to the proposed project, impacts to water supply associated with the future residential development anticipated by the No Project Alternative would be significant and unavoidable since the Basin is currently in overdraft and groundwater resources could potentially be depleted; water rights may be determined and limited as part of the adjudication process that is currently underway; and State Water Project (SWP) water allocations have been reduced and cannot be guaranteed. However, given that this Alternative would create lower demand for water supplies, it would be considered environmentally superior to the proposed project in this regard.

WASTEWATER

As noted in Section 5.14, Wastewater, the increased wastewater flow from the proposed project would be approximately 5.1 mgd. Comparatively, the wastewater flow anticipated with the No Project Alternative (1.5 mgd) would be approximately 71 percent less than the proposed project. Similar to the proposed project, the No Project Alternative would not exceed wastewater forecasts anticipated by the Sewer Master Plan. Additionally, this Alternative would not aggravate existing sewer system deficiencies or create new deficiencies, similar to the proposed project. Similar to the proposed project, development under this Alternative would be required to pay the applicable connection fees to the Districts in order to ensure the sewerage system can accommodate the future residential uses. Since the growth associated with this Alternative would be consistent with SCAG forecasts, adequate treatment capacity would be available to serve future development. Similar to the proposed project, impacts would be less than significant. However, given that this Alternative generates less wastewater, the No Project Alternative is considered environmentally superior to the proposed project in this regard.

SOLID WASTE

The No Project Alternative would result in fewer construction-related solid waste impacts, as demolition would not be required. With respect to solid waste generated during project buildout, this Alternative would generate 56,835 additional pounds per day over existing conditions, which would be approximately 71 percent less than the proposed project (196,452 additional pounds per day). Similar to the proposed project, this Alternative would also be required to comply with the Solid Waste Management Plan (SWMP), including the Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE) and General Plan Policies, ensuring solid waste impacts can be mitigated to less than significant levels. While no significant impacts were identified for the proposed project with respect to solid waste, the No Project Alternative is considered environmentally superior since it generates less solid waste, which in turn results in less waste going to local landfills.

6.2.3 ABILITY TO MEET THE PROJECT OBJECTIVES

The No Project Alternative would not meet all of the project objectives. Since the No Project Alternative would continue to be guided by the City's existing Housing Element, construction of new housing and the preservation and improvement of the existing supply of affordable housing would continue to be promoted. However, the No Project Alternative would have a shortfall of vacant and underutilized residential land to accommodate its very low- and low-income growth needs, as sites would not be rezoned to accommodate the 30 dwelling units per acre required by State housing law for the construction of housing units affordable to lower-income households. The No Project Alternative would continue to promote equal housing for all persons, adequately house households with special needs, enhance the vitality and safety of existing residential neighborhoods, and implement energy and water conservation measures. The No Project Alternative would not provide the opportunity for new housing alternatives. Although this Alternative would continue to support development of the Palmdale Transit Village Specific Plan, the No Project Alternative does not identify specific policies to promote higher density residential uses in close proximity to existing transportation infrastructure or in areas outside of the Palmdale Transit Village Specific Plan. The No Project Alternative would not amend the existing General Plan or Zoning Ordinance to allow for higher density residential uses in proximity to support services or provide development standards and design guidelines

for transit and pedestrian oriented development. Overall, this Alternative would not provide the residential densities necessary to meet RHNA requirements or to allow for higher density residential development near existing transportation infrastructure (with the exception of the Palmdale Transit Village Specific Plan) and support services.

6.3 ALTERNATIVE 2: GEOGRAPHICALLY DISTRIBUTED ALTERNATIVE

6.3.1 DESCRIPTION OF THE ALTERNATIVE

Alternative 2 assumes adoption of the Housing Element programs and objectives, as proposed. Under Alternative 2, the City's moderate- and above moderate-income RHNA allocation of 7,687 dwelling units would be met through land currently zoned for residential uses and within existing specific plans that are currently designated for residential uses. In order to provide sites for the remaining 6,722 very low- and low-income units, Alternative 2 would amend the City's General Plan, Zoning Ordinance, and Zoning Map, including changing the General Plan Land Use and Zoning designations for approximately 360 acres identified in Exhibits 6-1a, 6-1b, and 6-1c, *Alternative 2 – Geographically Distributed Alternative*, as described below.

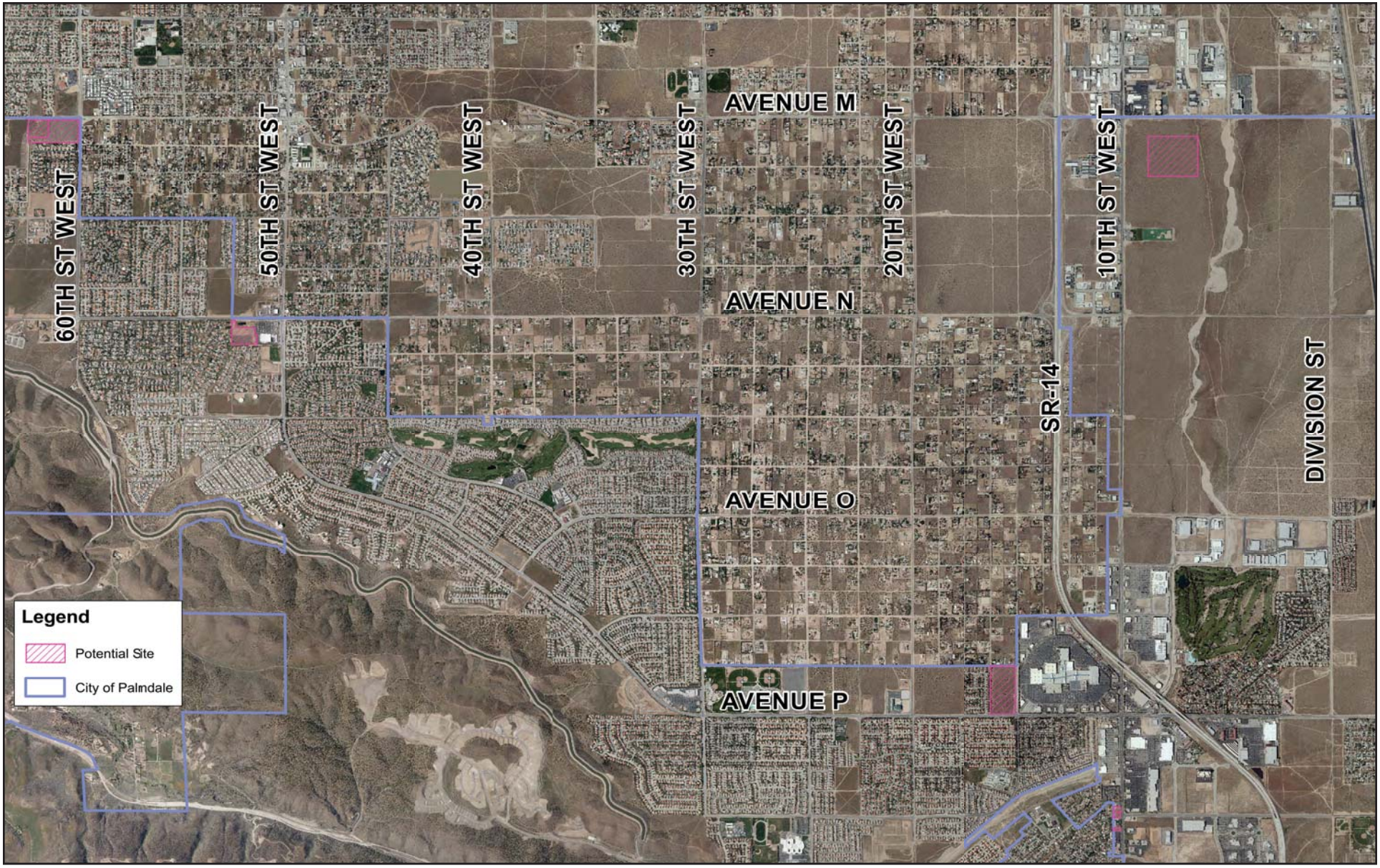
Alternative 2 considers all existing vacant R-3 (Multiple Residential) parcels, in addition to some vacant commercial parcels located along arterial streets. This Alternative provides the widest geographical distribution of units, as vacant parcels are largely dispersed within the City.

The proposed changes would allow for construction of up to 10,800 dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need of 6,722 units.

General Plan Amendment. A General Plan Amendment (GPA) would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with a new Medium-High Density Residential land use designation. The General Plan Land Use Map would be amended to identify the properties proposed for the new Medium-High Density Residential land uses.

Zone Change. A Zone Change (ZC) would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) zone. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres.

Zoning Ordinance Amendment. A Zoning Ordinance Amendment (ZOA) would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones.



CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

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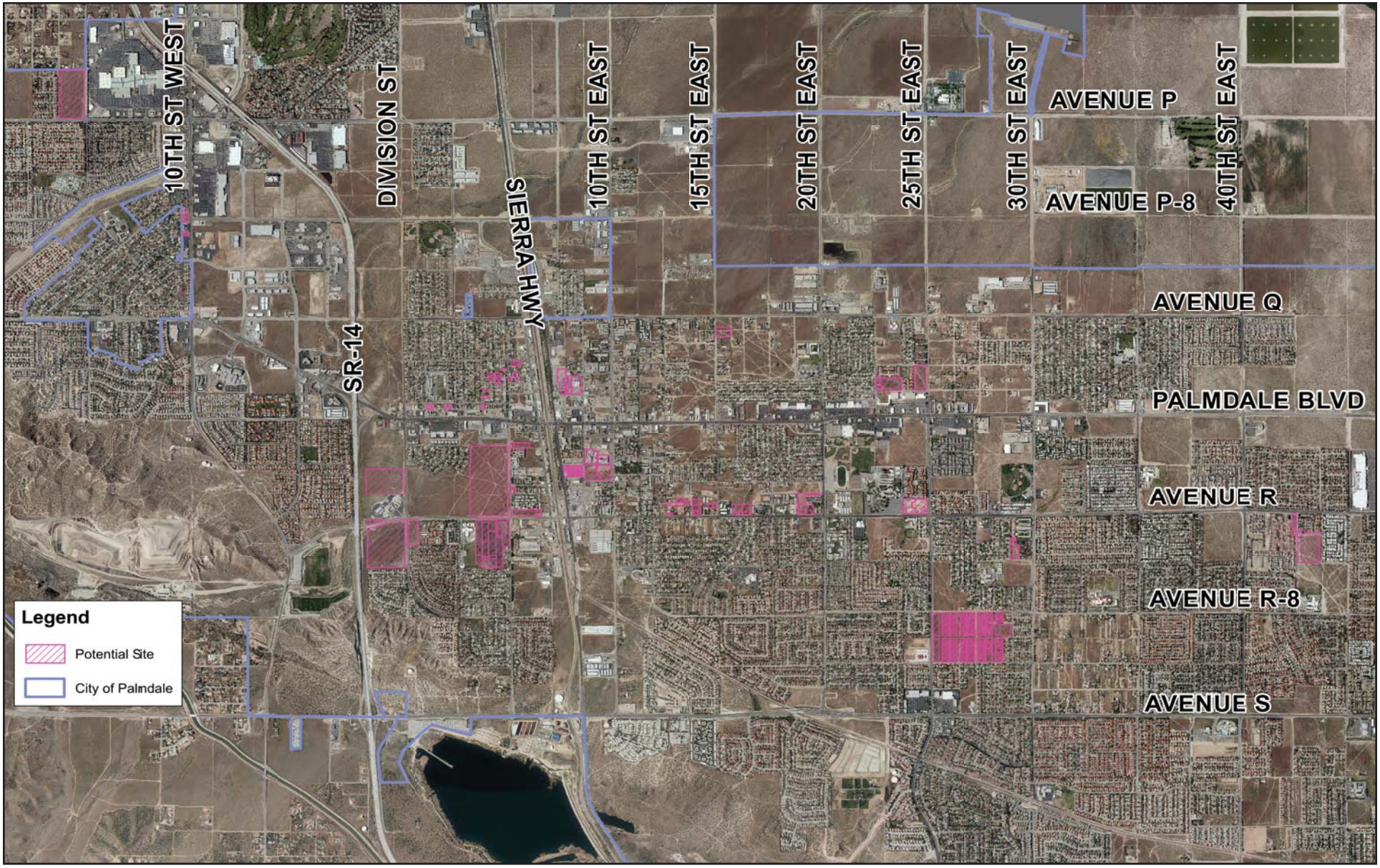
Alternative 2 – Geographically Distributed Alternative

Exhibit 6-1a



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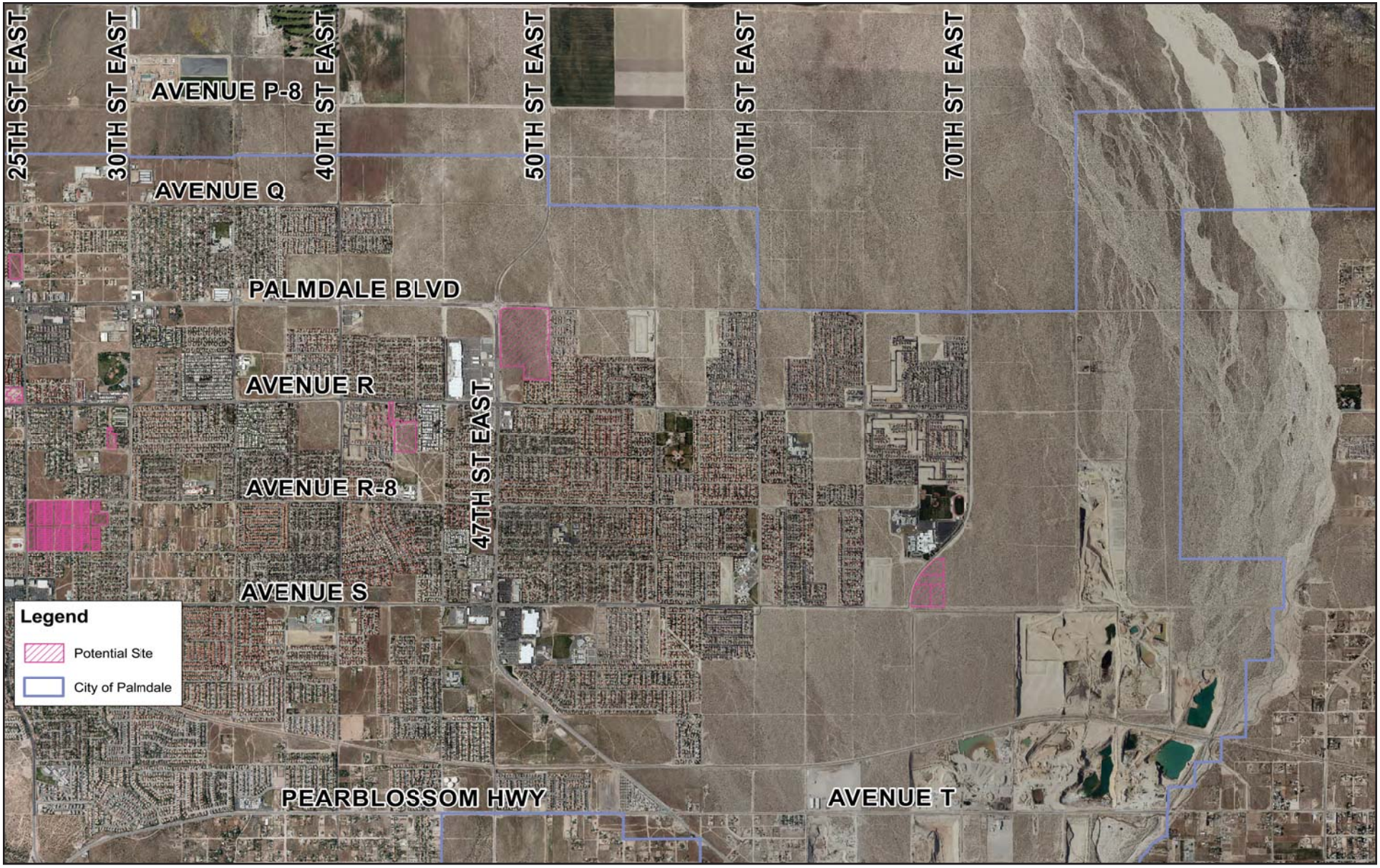
Alternative 2 – Geographically Distributed Alternative

Exhibit 6-1b



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Alternative 2 – Geographically Distributed Alternative

Exhibit 6-1c

Alternative 2 Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Therefore, for analysis purposes the remaining 2,786 dwelling units are considered for potential environmental impacts.

Also, as concluded above, 10,800 new dwelling units could be accommodated with implementation of the proposed GPA and ZC. Overall, implementation of Alternative 2 is anticipated to result in an increase of 13,586 dwelling units throughout the City.

6.3.2 IMPACT COMPARISON TO THE PROPOSED PROJECT

LAND USE AND PLANNING

This Alternative would involve a GPA 11-03, ZC 11-01, ZOA 11-05, and SPA 11-01 similar to the proposed project. Future development of housing would occur on vacant land under this Alternative. Similar to the proposed project, this Alternative would change the General Plan land use designations and zoning of specific parcels, resulting in a reduction in the non-residential acreage/development potential and an increase in residential acreage/development potential within the City when compared to existing conditions. This Alternative would be consistent with SCAG's Intergovernmental Review policies, as well as the Palmdale General Plan and Zoning Ordinance, and Palmdale Transit Village Specific Plan, as amended. This Alternative would be consistent with the RHNA by providing adequate sites to accommodate the City's adjusted RHNA allocation at all income levels. This Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

TRANSPORTATION AND CIRCULATION

As noted in Section 5.2, Transportation and Circulation, the proposed project is forecast to generate approximately 91,793 net daily trips. Comparatively, the ADT projected to occur with Alternative 2 (97,575 ADT) would be approximately 6.3 percent more than the proposed project. Future development under this Alternative would occur on vacant land distributed throughout the City. Although the distribution of residential development would be greater when compared to the proposed project, it is anticipated that the amount of trips that would be generated by this Alternative could result in significant and unavoidable impacts to the City's circulation system, similar to the proposed project. This Alternative would result in similar transit impacts to the proposed project, which would be reduced with implementation of mitigation measures. This Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

AIR QUALITY

Short-term construction impacts would be slightly greater when compared to the proposed project, given that this Alternative would allow for more housing units. Similar to the proposed project, the short-term construction impacts would also be significant and unavoidable for this Alternative.

Operational emissions would also be slightly greater under this Alternative relative to the proposed project and would remain significant and unavoidable. Similar to the proposed project, this Alternative would require a GPA (GPA 11-03) to amend the Land Use Element and Land Use Map, a Zone Change (ZC 11-01) to amend the City's Zoning Map, and a Zoning Ordinance Amendment (ZOA 11-05). These amendments would be required to allow for higher density residential development to accommodate the housing units required by the City's RHNA allocation. As the 13,586 new dwelling units associated with this Alternative would not be consistent with the growth forecasts utilized in the development of the applicable Air Quality Plan, a significant impact would occur. Similar to the proposed project, this impact would be significant and unavoidable. As such, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

Alternative 2 would allow development of new housing units beyond existing conditions. Similar to the proposed project, compliance with General Plan Policies would contribute to GHG emissions reductions. However, due to the conceptual nature of future residential development and since project details necessary to calculate emission reductions are not available at this time, GHG impacts under this Alternative would be significant and unavoidable, similar to the proposed project. Thus, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

NOISE

The short-term impacts associated with construction activities would be slightly greater than the proposed project, as this Alternative would result in additional construction activities and associated equipment. Similar to the proposed project, construction noise impacts, including vibration impacts, would be reduced to a less than significant level with the implementation of mitigation measures.

When compared to the proposed project, noise levels associated with vehicular traffic would be greater, as this Alternative would generate more overall traffic. However, this Alternative anticipates new residential development to be distributed throughout the City to a greater extent than the proposed project. Thus, larger amounts of traffic would not be generated from a particular area, as would occur with the proposed project within the rezone project area. With adherence to General Plan Policies and additional acoustical analysis required for future residential development projects within the City, it is anticipated that off-site and on-site traffic noise impacts associated with this Alternative would be less than significant, similar to the proposed project. Stationary noise impacts would be similar to the proposed project and would be less than significant. However, cumulative noise impacts would be significant and unavoidable, similar to the proposed project. Thus, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

HAZARDS AND HAZARDOUS MATERIALS

This Alternative would allow for the development of housing units on existing vacant land; thus, this Alternative would not create a significant hazard to the public or the environment associated with the demolition of structures, which could occur with the proposed project. Similar to the proposed project, this Alternative could result in the accidental release of hazardous materials during construction as a result of existing contamination associated with historic site uses.

Although more sites would be developed under this Alternative, the potential for contamination would be similar. Similar to the proposed project, potential impacts would be reduced with implementation of General Plan Policies and mitigation measures under this Alternative. Similar to the proposed project, this Alternative would be subject to the land use restrictions for each of the airport compatibility zones, which would reduce potential impacts associated with the airport. Emergency response and evacuation plan impacts would be comparable to those of the proposed project. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

HYDROLOGY AND WATER QUALITY

With this Alternative, the short-term impacts on water quality associated with grading, excavation, and construction activities would be similar to those of the proposed project. As with the proposed project, the existing quality and quantity of storm water and urban runoff would be impacted with this alternative, as existing vacant land would be developed. However, runoff would be slightly greater, as development would occur solely on vacant land under this Alternative. Similar to the proposed project, drainage improvements would be required with implementation of this Alternative, reducing potential impacts. As with the proposed project, this Alternative could place people or housing within a 100-year flood area and/or potentially expose people or housing to inundation associated with failure of a dam or aqueduct. Similar to the proposed project, impacts would be reduced through compliance with Federal and State standards, the City's Master Plan of Drainage, Palmdale Municipal Code regulations, and General Plan Policies. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

BIOLOGICAL RESOURCES

Similar to the proposed project, Alternative 2 could result in impacts to biological resources, including special status plant and wildlife species and riparian habitat and sensitive natural communities associated with development of housing units on vacant land. Due to the conceptual nature of future residential development under either Alternative 2 or the proposed project, development could impact jurisdictional waters and wetlands or potentially interfere with wildlife movement. As with the proposed project, Alternative 2 could conflict with the City's Joshua Tree and Native Desert Vegetation Preservation Ordinance. Potential biological resource impacts associated with either Alternative 2 or the proposed project would be reduced to a less than significant level with the implementation of mitigation measures. Thus, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

CULTURAL RESOURCES

Similar to the proposed project, Alternative 2 could result in indirect impacts to potentially historic resources. Compliance with General Plan Policies would reduce potential impacts to a less than significant level. With this Alternative, the potential disturbance or destruction of currently undocumented archaeological and/or paleontological resources could occur, as development would occur on vacant land. Similar to the proposed project, compliance with General Plan Policies and identified mitigation would reduce potential impacts associated with this Alternative. Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, potential impacts to human

remains would be less than significant under this Alternative, similar to the proposed project. Thus, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

POLICE PROTECTION

Similar to the proposed project demand for police protection services would be increased, as new housing units would be developed over existing conditions. Impacts for police protection services were less than significant for the proposed project with compliance with General Plan Policies. As with the proposed project, this Alternative would be required to comply with General Plan Policies; thus, the impacts would also be less than significant. Although this Alternative would involve slightly more residential development, demand for police protection services would be similar to the proposed project. Thus, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

SCHOOL FACILITIES

As noted in Section 5.11, School Facilities, the proposed project is anticipated to result in a net increase of approximately 4,174 new students. Comparatively, the number of students anticipated with Alternative 2 (4,458 students) would be approximately 6.8 percent more than the proposed project. As with the proposed project, compliance with General Plan Policies and payment of statutory fees would reduce impacts to a less than significant level. Although this Alternative would create similar demands for school services overall, the students generated by the residential development would be more widely distributed throughout the City and therefore would not be concentrated within a particular school district as would occur within the proposed project rezone project area. Therefore, it is likely that impacts to individual school districts would be reduced when compared to the proposed project. However, it is noted that the degree of impacts would be dependent upon the size and location of the residential development and the existing condition of the school facilities serving the area at the time development would occur. This Alternative would be considered environmentally superior to the proposed project in this regard.

PARKS AND RECREATIONAL FACILITIES

Alternative 2 would involve 13,586 new residential units, which is 585 more units than would occur at buildout of the proposed project. The City currently has a parkland deficiency of approximately 434 acres. Development of this Alternative or the proposed project would contribute to the existing deficiency. Based on the parkland to population ratio of 5.0 acres per 1,000 persons, this Alternative would generate the need for 242 additional acres of parkland compared to 232 acres needed by the proposed project. The City currently has 483.1 acres identified for future park development, including neighborhood, community, and special use parks, which would partially provide the necessary parkland to serve the City's existing demand combined with the future demand associated with Alternative 2. Payment of parkland dedication fees or dedication of land in lieu of the fee would help mitigate parks and recreation impacts, similar to the proposed project. Given that this Alternative would result in a similar parkland deficiency as the proposed project, it would be considered neither environmentally superior nor inferior to the proposed project in this regard.

WATER

Alternative 2 would involve 13,586 new residential units, which is 585 more units than would occur at buildout of the proposed project. Therefore, water demand associated with this Alternative would be slightly greater when compared to the proposed project. Due to the conceptual nature of the future residential development associated with this Alternative, it cannot be determined with accuracy the number of residential units that would be served by each water district. However, due to the distribution of residential development that would occur with this Alternative, future residential uses (and associated water demand) would not be primarily concentrated within the service area of Palmdale Water District, as would occur within the proposed project rezone project area. Therefore, it is likely that impacts to individual water districts and available supply would be reduced when compared to the proposed project since demand would be more evenly distributed amongst the water districts. However, it is noted that similar to the proposed project, impacts to water supply associated with the future residential development anticipated by Alternative 2 would be significant and unavoidable since the Basin is currently in overdraft and groundwater resources could potentially be depleted; water rights may be determined and limited as part of the adjudication process that is currently underway; and State Water Project (SWP) water allocations have been reduced and cannot be guaranteed. However, given the demand for water supplies would be distributed amongst the water districts, this Alternative would be considered environmentally superior to the proposed project in this regard.

WASTEWATER

As noted in Section 5.14, Wastewater, the increased wastewater flow from the proposed project would be approximately 5.1 mgd. Comparatively, the wastewater flow anticipated with Alternative 2 (5.3 mgd) would be approximately 4.1 percent more than the proposed project. Similar to the proposed project, Alternative 2 would not exceed wastewater forecasts anticipated by the Sewer Master Plan. Additionally, this Alternative would not aggravate existing sewer system deficiencies or create new deficiencies, similar to the proposed project. Similar to the proposed project, development under this Alternative would be required to pay the applicable connection fees to the Districts in order to ensure the sewerage system can accommodate the future residential uses. Since the growth associated with this Alternative would be consistent with SCAG forecasts, adequate treatment capacity would be available to serve future development. Similar to the proposed projects, impacts would be less than significant. Thus, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

SOLID WASTE

Alternative 2 would result in fewer construction-related solid waste impacts, as demolition would not be required. With respect to solid waste generated during project buildout, this Alternative would generate 203,790 additional pounds per day over existing conditions, which would be approximately 3.7 percent more than the proposed project (196,452 additional pounds per day). Similar to the proposed project, this Alternative would also be required to comply with the Solid Waste Management Plan (SWMP), including the Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE) and General Plan Policies, ensuring solid waste impacts can be mitigated to less than significant levels. Thus, Alternative 2 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

6.3.3 ABILITY TO MEET THE PROJECT OBJECTIVES

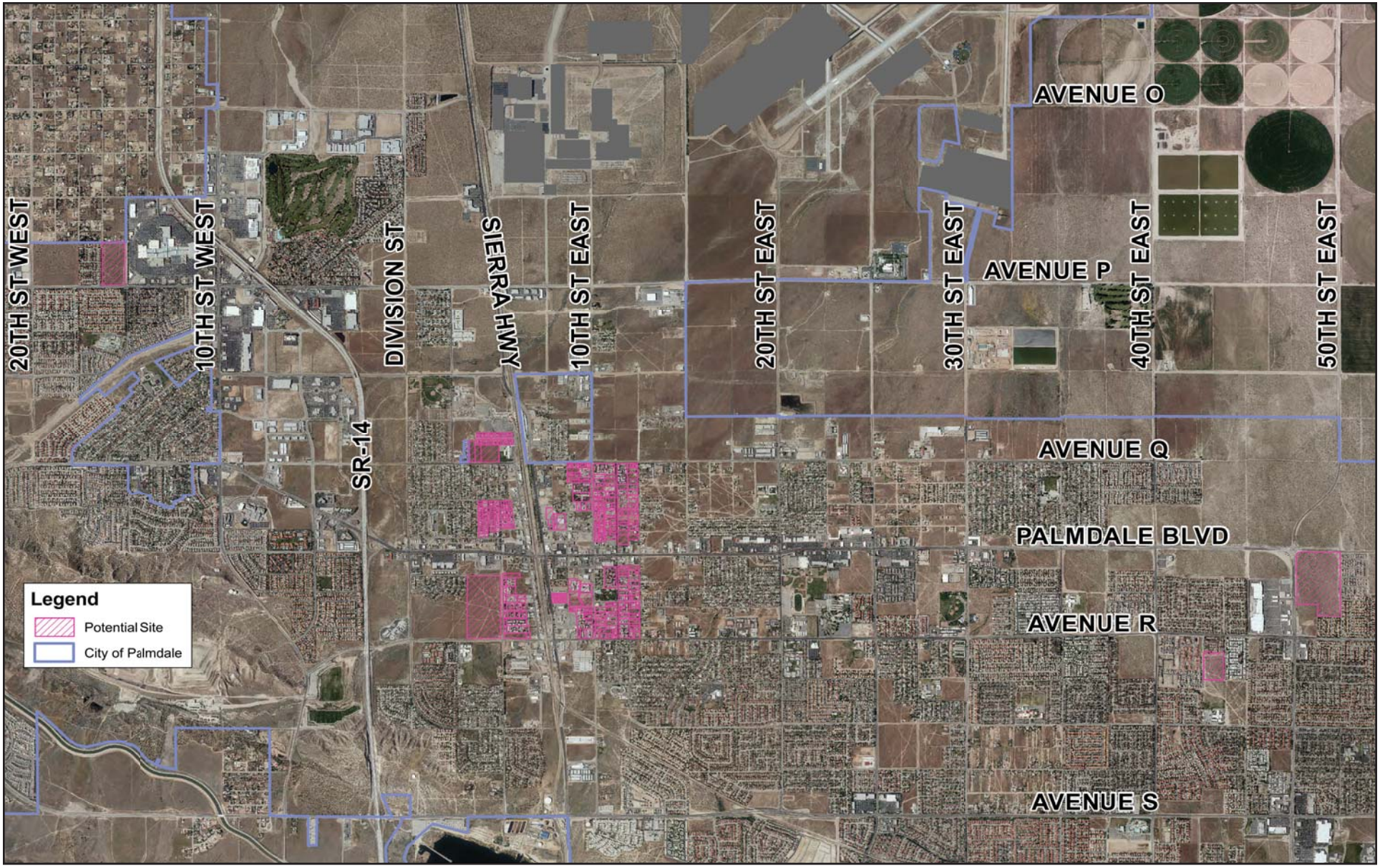
Alternative 2 would generally meet the project objectives, with the exception of promoting higher density residential uses in close proximity to existing transportation infrastructure, including Palmdale Transportation Center and providing for higher density residential uses close to support services. Alternative 2 would involve adoption of the 2006-2014 Housing Element, which provides policies and programs to promote construction of new housing affordable to all income groups; preserve and improve existing affordable housing supply; remove government constraints on housing; promote equal housing for all persons; adequately house households with special needs; implement energy and water conservation measures; and enhance the vitality and safety of existing residential neighborhoods. With the adoption of GPA 11-03, ZC 11-01, and ZOA 11-05, Alternative 2 would provide more housing options to increase affordability within the City. Although Alternative 2 would allow for development of higher density residential uses in proximity to the Palmdale Transportation Center, it would not do so to the extent of the proposed project. Future residential development would be more widely distributed throughout the City and would not necessarily be located in proximity to existing transportation infrastructure that would provide a variety of transportation options, such as would occur with the proposed project. Additionally, Alternative 2 would allow for development in areas of the City that do not currently have support services or have limited support services. Although Alternative 2 would provide development standards and design guidelines, transit oriented and pedestrian development would be limited under Alternative 2 due to the location of the potential development sites and distance from transit options and services.

6.4 ALTERNATIVE 3: CORRIDOR ALTERNATIVE

6.4.1 DESCRIPTION OF THE ALTERNATIVE

Alternative 3 assumes adoption of the Housing Element programs and objectives, as proposed. Under Alternative 3, the City's moderate- and above moderate-income RHNA allocation of 7,687 dwelling units would be met through land currently zoned for residential uses and within existing specific plans that are currently designated for residential uses. In order to provide sites for the remaining 6,722 very low- and low-income units, Alternative 3 would amend the City's General Plan, Zoning Ordinance, and Zoning Map, including changing the General Plan Land Use and Zoning designations for approximately 273 acres identified in Exhibit 6-2, *Alternative 3 – Corridor Alternative*, as described below.

The parcels identified for rezone are located along existing arterial roadways and transit routes, and in close proximity to existing and future commercial development. Alternative 3 considers existing vacant parcels zoned R-3 that are of sufficient size to realistically permit development at the required density; R-3 zoned parcels that contain existing development, but were considered underutilized; R-3 zoned parcels that include existing development consistent with zoning of 30 du/ac; and existing commercial properties that would need to be rezoned. This scenario minimizes the potential for rezoning commercial land for future residential uses.



CITY OF PALMDALE
HOUSING ELEMENT UPDATE
ENVIRONMENTAL IMPACT REPORT

RBF CONSULTING A Baker Company

06/12 • JN 10-108426

Alternative 3 – Corridor Alternative

Exhibit 6-2

The proposed changes would allow for construction of up to 7,800 new dwelling units suitable for very low- and low-income units, as the minimum density is at least 30 dwelling units per acre. Therefore, Palmdale would be able to accommodate its very low- and low-income need of 6,722 units. Potential construction of up to 7,800 new dwelling units could involve the removal of 2,625 dwelling units and 71,630 square feet of civic, public facility, and religious assembly uses.

General Plan Amendment. A General Plan Amendment (GPA) would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The amendment establishes programs and goals for the 2006-2014 planning period that address housing needs of City residents, which could affect properties Citywide. The GPA also involves new policies within the Land Use Element associated with a new Medium-High Density Residential land use designation. The General Plan Land Use Map would be amended to identify the properties proposed for the new Medium-High Density Residential land uses.

Zone Change. A Zone Change (ZC) would amend the City of Palmdale Zoning Map in order to identify the properties proposed for the new R-4 (30) (Medium High Density Residential, minimum of 30 dwelling unit per acre) zone. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acres.

Zoning Ordinance Amendment. A Zoning Ordinance Amendment (ZOA) would amend various sections of the Zoning Ordinance, including a new Article 44 creating the R-4 zone, and would set forth uses permitted subject to various types of approvals and standards of development. Various sections of the Zoning Ordinance regarding transitional and supportive housing, emergency housing, temporary dependent housing, and large residential care facilitates would also be amended. The ZOA would remove such identified uses from many of the commercial, industrial, and public facility zones and permit such uses within residential zones.

Alternative 3 Summary

As concluded above, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have received entitlement and undergone environmental review. Therefore, for analysis purposes the remaining 2,786 dwelling units are considered for potential environmental impacts.

Also, as concluded above, 7,800 dwelling units could be accommodated with implementation of the proposed GPA and ZC and 2,625 dwelling units and 71,630 square feet of non-residential uses could potentially be removed.

Overall, implementation of Alternative 2 is anticipated to result in a net increase of 7,961 dwelling units throughout the City and the potential construction of 10,586 new units.

6.4.2 IMPACT COMPARISON TO THE PROPOSED PROJECT

LAND USE AND PLANNING

This Alternative would involve a GPA 11-03, ZC 11-01, ZOA 11-05, and SPA 11-01 similar to the proposed project. Future development of housing would occur on vacant and underutilized land under this Alternative. Similar to the proposed project, this Alternative would change the

General Plan land use designations and zoning designations of specific parcels, resulting in a reduction in non-residential acreage/development potential and an increase in residential acreage/development potential when compared to existing conditions. Similar to the proposed project, this Alternative would be consistent with SCAG's Intergovernmental Review policies, as well as the Palmdale General Plan and Zoning Ordinance, and Palmdale Transit Village Specific Plan, as amended. This Alternative would be consistent with RHNA providing adequate sites to accommodate the City's adjusted RHNA allocation at all income levels. This Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

TRANSPORTATION AND CIRCULATION

As noted in Section 5.2, Transportation and Circulation, the proposed project is forecast to generate approximately 91,793 net daily trips. Comparatively, the ADT projected to occur with Alternative 3 (58,966 ADT) would be approximately 36 percent less than the proposed project. Future development under this Alternative would occur on vacant and underutilized land distributed throughout the City. Given the conceptual nature of this future development, the distribution of trips forecast to be generated by development of the residentially-zoned land would be addressed on a project-by-project basis and would be based on field reconnaissance, understanding of the surrounding circulation system, and City provided information. This Alternative could result in significant and unavoidable impacts to the City's circulation system, similar to the proposed project. This Alternative would result in similar transit impacts to the proposed project, which would be reduced with implementation of mitigation measures. Although there is the potential for future residential development under Alternative 3 to cause a significant traffic impact, given that this Alternative would allow for less residential development and fewer daily trips would be generated under this Alternative, Alternative 3 is considered environmentally superior to the proposed project with regard to traffic.

AIR QUALITY

Short-term construction impacts would be reduced when compared to the proposed project, given that this Alternative would allow for fewer housing units. Similar to the proposed project, the short-term construction impacts would also be significant and unavoidable for this Alternative.

Operational emissions would also be less under this Alternative relative to the proposed project and would remain significant and unavoidable. Similar to the proposed project, this Alternative would require a GPA (GPA 11-03) to amend the Land Use Element and Land Use Map, a Zone Change (ZC 11-01) to amend the City's Zoning Map, and a Zoning Ordinance Amendment (ZOA 11-05). These amendments would be required to allow for higher density residential development to accommodate the housing units required by the City's RHNA allocation. However, as the 10,586 new dwelling units associated with this Alternative would not be consistent with the growth forecasts utilized in the development of the applicable Air Quality Plan, a significant impact would occur. Similar to the proposed project, this impact would be significant and unavoidable. As such, Alternative 3 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

Alternative 3 would allow development of new housing units beyond existing conditions. Similar to the proposed project, compliance with General Plan Policies would contribute to GHG emissions reductions. However, due to the conceptual nature of future residential development and since project details necessary to calculate emission reductions are not available at this time, GHG impacts under this Alternative would be significant and unavoidable, similar to the proposed project. Thus, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

NOISE

The short-term impacts associated with construction activities would be less than the proposed project, as this Alternative would result in fewer construction activities and associated equipment. Similar to the proposed project, construction noise impacts, including vibration impacts, would be reduced to a less than significant level with the implementation of mitigation measures.

When compared to the proposed project, noise levels associated with vehicular traffic would be reduced, as this Alternative would generate less overall traffic. With adherence to General Plan Policies and additional acoustical analysis required for future residential development projects within the City, it is anticipated that off-site and on-site traffic noise impacts associated with this Alternative would be less than significant, similar to the proposed project. Stationary noise impacts would be similar to the proposed project and would be less than significant. However, cumulative noise impacts would be significant and unavoidable, similar to the proposed project. However, since overall noise levels would be reduced, this Alternative is considered environmentally superior to the proposed project.

HAZARDS AND HAZARDOUS MATERIALS

This Alternative would allow for the development of housing units on vacant and underutilized land; thus, this Alternative could create a significant hazard to the public or the environment associated with the demolition of structures, similar to the proposed project. Similar to the proposed project, this Alternative could result in the accidental release of hazardous materials during construction as a result of existing contamination associated with historic site uses. Although fewer sites would be developed under this Alternative, the potential for contamination would be similar, as both this Alternative and the proposed project would involve development of four sites that have reported the presence of hazardous materials. Similar to the proposed project, potential impacts would be reduced with implementation of General Plan Policies and mitigation measures under this Alternative. Similar to the proposed project, this Alternative would be subject to the land use restrictions for each of the airport compatibility zones, which would reduce potential impacts associated with the airport. Emergency response and evacuation plan impacts would be comparable to those of the proposed project. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

HYDROLOGY AND WATER QUALITY

With this Alternative, the short-term impacts on water quality associated with grading, excavation, and construction activities would be less than those of the proposed project, as fewer sites would be developed. As with the proposed project, the existing quality and quantity of storm water and urban runoff would be impacted with this alternative, as existing vacant land would be developed. However, runoff would be reduced, as development of fewer parcels would occur under this Alternative. Similar to the proposed project, drainage improvements would be required with implementation of this Alternative, reducing potential impacts. As with the proposed project, this Alternative could place people or housing within a 100-year flood area and/or potentially expose people or housing to inundation associated with failure of a dam or aqueduct. Similar to the proposed project, impacts would be reduced through compliance with Federal and State standards, the City's Master Plan of Drainage, Palmdale Municipal Code regulations, and General Plan Policies. As such, this Alternative would be considered neither environmentally superior nor inferior to the proposed project in this regard.

BIOLOGICAL RESOURCES

Similar to the proposed project, Alternative 3 could result in impacts to biological resources, including special status plant and wildlife species and riparian habitat and sensitive natural communities associated with development of housing units on vacant land. Due to the conceptual nature of future residential development under either Alternative 3 or the proposed project, development could impact jurisdictional waters and wetlands or potentially interfere with wildlife movement. As with the proposed project, Alternative 3 could conflict with the City's Joshua Tree and Native Desert Vegetation Preservation Ordinance. Potential biological resource impacts associated with either Alternative 3 or the proposed project would be reduced to a less than significant level with the implementation of mitigation measures. Thus, Alternative 3 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

CULTURAL RESOURCES

Similar to the proposed project, Alternative 3 could result in indirect impacts to potentially historic resources. Compliance with General Plan Policies would reduce potential impacts to a less than significant level. With this Alternative, the potential disturbance or destruction of currently undocumented archaeological and/or paleontological resources could occur, as development would occur on vacant land. Similar to the proposed project, compliance with General Plan Policies and identified mitigation would reduce potential impacts associated with this Alternative. Following compliance with State regulations, which detail the appropriate actions necessary in the event human remains are encountered, potential impacts to human remains would be less than significant under this Alternative, similar to the proposed project. Thus, Alternative 3 would be considered neither environmentally superior nor inferior to the proposed project in this regard.

POLICE PROTECTION

Similar to the proposed project demand for police protection services would be increased, as new housing units would be developed over existing conditions. Impacts for police protection services were less than significant for the proposed project with compliance with General Plan

Policies. As with the proposed project, this Alternative would be required to comply with General Plan Policies; thus, the impacts would also be less than significant. Given that this Alternative would create lower demands for police protection services, it would be considered environmentally superior to the proposed project in this regard.

SCHOOL FACILITIES

As noted in Section 5.11, School Facilities, the proposed project is anticipated to result in a net increase of approximately 4,174 new students. Comparatively, the number of students anticipated with Alternative 3 (2,612 students) would be approximately 37.4 percent less than the proposed project. As with the proposed project, compliance with General Plan Policies and payment of statutory fees would reduce impacts to a less than significant level. Given that this Alternative would create lower demands for school services, it would be considered environmentally superior to the proposed project in this regard.

PARKS AND RECREATIONAL FACILITIES

Alternative 3 would involve a net increase of 7,961 new residential units, which is 5,040 fewer units than would occur with the proposed project. The City currently has a parkland deficiency of approximately 434 acres. Development of this Alternative or the proposed project would contribute to the existing deficiency. Based on the parkland to population ratio of 5.0 acres per 1,000 persons, this Alternative would generate the need for 142 additional acres of parkland compared to 232 acres needed by the proposed project. The City currently has 483.1 acres identified for future park development, including neighborhood, community, and special use parks, which would partially provide the necessary parkland to serve the City's existing demand combined with the future demand associated with Alternative 3. Payment of parkland dedication fees or dedication of land in lieu of the fee would help mitigate parks and recreation impacts, similar to the proposed project. However, given that this Alternative would create lower demand for parks and recreation facilities, it would be considered environmentally superior to the proposed project with regard to parks.

WATER

Alternative 3 would involve a net increase of 7,961 new residential units, which is 5,040 fewer units than would occur with the proposed project. Therefore, water demand associated with this Alternative would be reduced when compared to the proposed project. However, similar to the proposed project, future residential development would primarily occur within the area served by the PWD under this Alternative. Similar to the proposed project, impacts to water supply associated with the future residential development anticipated by Alternative 3 would be significant and unavoidable since the Basin is currently in overdraft and groundwater resources could potentially be depleted; water rights may be determined and limited as part of the adjudication process that is currently underway; and State Water Project (SWP) water allocations have been reduced and cannot be guaranteed. However, given that this Alternative would create lower demand for water supplies, it would be considered environmentally superior to the proposed project in this regard.

WASTEWATER

As noted in Section 5.14, Wastewater, the increased wastewater flow from the proposed project would be approximately 5.1 mgd. Comparatively, the wastewater flow anticipated with Alternative 3 (3.1 mgd) would be approximately 39 percent less than the proposed project. Similar to the proposed project, Alternative 3 would not exceed wastewater forecasts anticipated by the Sewer Master Plan. Additionally, this Alternative would not aggravate existing sewer system deficiencies or create new deficiencies, similar to the proposed project. Similar to the proposed project, development under this Alternative would be required to pay the applicable connection fees to the Districts in order to ensure the sewerage system can accommodate the future residential uses. Since the growth associated with this Alternative would be consistent with SCAG forecasts, adequate treatment capacity would be available to serve future development. Similar to the proposed projects, impacts would be less than significant. However, given that this Alternative generates less wastewater, Alternative 3 is considered environmentally superior to the proposed project in this regard.

SOLID WASTE

Alternative 3 would result in similar construction-related solid waste impacts, as demolition may occur, similar to the proposed project. With respect to solid waste generated during project buildout, this Alternative would generate 120,102 additional pounds per day over existing conditions, which would be approximately 39 percent less than the proposed project (196,452 additional pounds per day). Similar to the proposed project, this Alternative would also be required to comply with the Solid Waste Management Plan (SWMP), including the Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE) and General Plan Policies, ensuring solid waste impacts can be mitigated to less than significant levels. While no significant impacts were identified for the proposed project with respect to solid waste, Alternative 3 is considered environmentally superior since it generates less solid waste, which in turn results in less waste going to local landfills.

6.4.3 ABILITY TO MEET THE PROJECT OBJECTIVES

Alternative 3 would meet all of the project objectives. Alternative 3 would involve adoption of the 2006-2014 Housing Element, which provides policies and programs to promote construction of new housing affordable to all income groups; preserve and improve existing affordable housing supply; remove government constraints on housing; promote equal housing for all persons; adequately house households with special needs; implement energy and water conservation measures; and enhance the vitality and safety of existing residential neighborhoods. With the adoption of GPA 11-03, ZC 11-01, and ZOA 11-05, Alternative 3 would provide more housing options to increase affordability within the City. Alternative 3 would allow for development of higher density residential uses in proximity to the Palmdale Transportation Center, although not to the extent of the proposed project. Alternative 3 would allow for more distributed high-density development within areas extending behind the central portion of the City. However, future residential development would be located in proximity to existing transportation infrastructure and support services. Alternative 3 would provide development standards and design guidelines, which would encourage transit oriented and pedestrian development due to the location of the potential development sites and proximity to transit options and services.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR must identify an "environmentally superior" alternative and, where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify an environmentally superior alternative from among the others evaluated.

The determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the project objectives and how the alternative either reduces significant, unavoidable impacts or substantially reduces the impacts to the surrounding environment.

In consideration of the factors noted above, Alternative 3 – Corridor Alternative is selected as the Environmentally Superior Alternative to the proposed project.

Although Alternative 3 would not eliminate the significant unavoidable transportation and circulation, air quality, greenhouse gas emissions, noise, and water impacts, the impacts would be incrementally reduced based upon the reduction in residential development. Further, Alternative 3 would meet the objectives established for the proposed project. Under this Alternative, the 2008-2013 Housing Element and the GPA 11-03, ZC 11-01, ZOA 11-05, and SPA 11-01 would allow for future residential development at densities necessary to meet the adjusted RHNA allocation for the City at all income levels. Specific parcels would be designated and zoned to allow for higher-density residential development in proximity to existing transportation infrastructure and support services. This Alternative would meet the proposed project's objectives which include, but are not limited to promoting the construction of new housing affordable to all income groups; preserving and improving existing housing; removing government constraints on housing, providing housing for households with special needs; encourage a mix of new housing alternatives, promoting higher density residential uses in proximity to existing transportation infrastructure, providing higher density residential uses close to support services; and providing development standards and design guidelines to encourage transit and pedestrian oriented development. When compared to the proposed project, Alternative 3 would be environmentally superior and would fulfill the majority of the project objectives.

Table 6-1
Comparison of Alternatives

Issue	Proposed Project	No Project (Existing Housing Element) Alternative	Alternative 2 – Geographically Distributed Alternative	Alternative 3 – Corridor Alternative
Land Use and Planning		⮝	=	=
Transportation and Circulation		⮟	=	⮟
Eliminates Significant Unavoidable Traffic Impacts		No	No	No
Air Quality		⮟	=	=
Eliminates Significant Unavoidable Air Quality Impacts		No	No	No
Greenhouse Gas Emissions/Climate Change		=	=	=
Eliminates Significant Unavoidable GHG/Climate Change Impacts		No	No	No
Noise		⮟	=	⮟
Eliminates Significant Unavoidable Noise Impacts		No	No	No
Hazards and Hazardous Materials		=	=	=
Hydrology and Water Quality		=	=	=
Biological Resources		=	=	=
Cultural Resources		=	=	=
Police Protection		⮟	=	⮟
School Facilities		⮟	⮟	⮟
Parks and Recreation Facilities		⮟	=	⮟
Water		⮟	⮟	⮟
Eliminates Significant Unavoidable Water Impacts		No	No	No
Wastewater		⮟	=	⮟
Solid Waste		⮟	=	⮟

Key:
= Indicates an impact that is equal to the proposed project (neither environmentally superior nor inferior).
⮝ Indicates an impact that is greater than the proposed project (environmentally inferior).
⮟ Indicates an impact that is less than the proposed project (environmentally superior).

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7.0 Other CEQA Considerations

7.0 OTHER CEQA CONSIDERATIONS

7.1 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

If residential development associated with implementation of the proposed project is approved and constructed, a variety of short-term and long-term impacts would occur on a local level. During project grading and construction, portions of surrounding uses may be temporarily impacted by dust and noise. Short-term soil erosion may also occur during grading. There may also be an increase in vehicle pollutant emissions caused by grading and construction activities. However, these disruptions would be temporary and may be avoided or lessened to a large degree through mitigation cited in this EIR and compliance with the Palmdale General Plan Policies and Municipal Code; refer to Section 5.0, Environmental Analysis.

Ultimate development of the project area would create long-term environmental consequences associated with a transition in land use. Development associated with implementation of the Housing Element Update and the subsequent long-term effects may impact the physical and human environments. Long-term physical consequences of residential development include increased traffic volumes, increased noise from project-related mobile (traffic) and stationary (mechanical and landscaping) sources, incremental increased demands for public services and utilities, and increased energy and natural resource consumption. Incremental degradation of local and regional air quality would also occur as a result of mobile source emissions generated from project-related traffic and stationary source emissions generated from the consumption of propane and electricity.

7.2 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED WITH THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Section 15126.2(c) of the *CEQA Guidelines* requires a discussion of any significant irreversible environmental changes that would be caused by a proposed project. Specifically, Section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

The project would consume limited, slowly renewable, and non-renewable resources. This consumption would occur during construction of individual projects and would continue throughout their operational lifetime. Project development would require a commitment of resources that would include: (1) building materials, (2) fuel and operational materials/ resources, and (3) the transportation of goods and people to and from the project area.

Residential construction would require the consumption of resources that are not replenishable or that may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: lumber and other forest products; aggregate materials used in concrete and asphalt; metals; and water. Fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment.

The resources that would be committed during project operation would be similar to those currently consumed within the City of Palmdale. These would include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of future residential developments, and the existing, finite supplies of these natural resources would be incrementally reduced. Project operation would occur in accordance with Title 24, Part 6 of the California Code of Regulations, which sets forth conservation practices that would limit the amount of energy consumed by individual projects. However, the energy requirements potentially associated with the proposed project would, nonetheless, represent a long-term commitment of essentially non-renewable resources.

Limited use of potentially hazardous materials typical of residential uses, including household and vehicle maintenance materials would potentially be used and stored on individual sites. The use of these materials would be in small quantities and used, handled, stored, and disposed of in accordance with the manufacturer's instructions and applicable government regulations and standards. Compliance with these regulations and standards would serve to protect against significant and irreversible environmental change resulting from the accidental release of hazardous materials. In addition, potential demolition activities would comply with regulatory requirements to ensure that asbestos and lead-based paints are not released into the environment. Compliance with such regulations would serve to protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In summary, potential project construction and operation associated with implementation of the proposed Housing Element Update would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these particular resource quantities for future generations or for other uses during the life of the project. However, continued use of such resources would be consistent with local and regional growth forecasts for the area. As such, although irreversible environmental changes would result from the project, such changes would not be considered significant.

7.3 GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the *CEQA Guidelines* requires that an EIR analyze growth-inducing impacts of a project. Section 15126.2(d) requires that an EIR:

> *"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth [a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas], Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the*

environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The following discussion is structured to address the criteria provided in the *CEQA Guidelines*.

IMPACT ANALYSIS

A project could induce population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Implementation of the Housing Element would not induce direct population growth in the City, because the Housing Element does not infer direct development rights. However, the Housing Element policies and implementation programs are intended to accommodate and encourage housing development, in order to meet an existing and projected housing need as established through the RHNA process. The State of California Department of Finance is responsible for developing the total State-wide new housing demand projection. With the State Department of Housing and Community Development, this demand is apportioned to each of the State's regions. SCAG is responsible for allocating the region's projected new housing demand in each of its member jurisdictions through the RHNA process. The allocation takes into account factors such as market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, and others. The Housing Element contains policies and implementation programs that will provide for housing development to accommodate the City's share of the regional housing need as identified in the RHNA prepared by SCAG.

As discussed in detail in Section 3.4, the existing residentially-zoned vacant land would allow for construction of 7,687 dwelling units. Of these, 4,901 dwelling units have undergone environmental review. Regarding the remaining 2,786 dwelling units, although there is no immediate physical development proposed, these are analyzed below for potential growth inducing impacts. Additionally, 13,253 dwelling units could be accommodated and 3,038 dwellings and 71,630 square feet of non-residential could be removed, through implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01. It is anticipated that these low-density residential uses and existing non-residential uses would transition to the proposed high-density residential uses, consistent with GPA 11-03, ZC 11-01, and SPA 11-01's designations for the properties. These transitions would occur over time, given that the project does not propose to acquire these existing residential and non-residential properties through eminent domain. Regarding the remaining net development of 10,215 dwellings, although there is no immediate physical development proposed, these are also analyzed below for potential growth inducing impacts.

Removal of an Impediment to Growth

The vast majority of the anticipated residential development (approximately 79 percent [approximately 10,215 dwelling units] through proposed GPA 11-03, ZC 11-01, and SPA 11-01) would occur as infill development and redevelopment within an urbanized area located east of SR-14. The remaining residential development would occur primarily as infill development. The City is already served by essential public services, including fire protection, police protection, parks and recreational facilities, schools, and solid waste; an extensive network of utility/service systems, including water, wastewater, electricity, and natural gas; and other infrastructure

necessary to accommodate or allow the existing conditions and planned growth. The existing public services and utility/service systems can be readily upgraded and/or extended onto the future residential development sites. The increased demands for utility and service systems would not reduce or impair any existing or future levels of utility services, either locally or regionally, as costs for increases in utility and service systems would be provided through cooperative agreements between future developments and servicing agencies. Further, future development would be reviewed a project-by-project basis, at the time of proposed construction, in order to determine the public services and utility/service systems necessary to serve the proposed residential land uses. Given that the majority of the anticipated residential development would occur as infill development within an urbanized area, and since transportation and infrastructure exists to support the anticipated residential development, the proposed project would not establish an essential public service or provide new access to an area. Future development associated with implementation of the Housing Element Update would not be considered growth inducing with respect to removing an impediment to growth.

Economic Growth

As discussed in detail in Section 3.4, implementation of proposed GPA 11-03, ZC 11-01, and SPA 11-01 could result in removal of 3,038 dwelling units and 71,630 square feet of non-residential uses, with a resultant loss of approximately 48 jobs; refer to Table 7-1, *Employment Forecast*. The decrease in employment base would be nominal, thus, is not anticipated to result in changes in the City's revenue base.

Table 7-1
Employment Forecast

Land Use	Square Feet	Employment Factor (Square Feet per Employee)	Employment Removed
Civic	-1174	1,442[2]	-1
Public Facility	-30,000	1,442[2]	-21
Religious Assembly	-39,916	1,518[3]	-26
Total	*-71,090*		*-48*

1. The Natelson Company, Inc., *Employment Density Study Summary Report Table II-B, Derivation of Square Feet Per Employee Based on Average Employees Per Acre and Average FAR*, October 31, 2001, available at SCAG Website, http://www.scag.ca.gov/forecast/downloads/employ_den.pdf, Accessed April 13, 2012.
2. Land Use Category: Los Angeles County, Government Offices.
3. Land Use Category: Los Angeles County, Warehouse.

The proposed Housing Element Update is also forecast to increase the City's existing housing stock by approximately 22 percent, with a resultant population growth of approximately 23 percent. The projected population growth is anticipated to increase sales, with resultant increases in the City's revenue base. Future development associated with implementation of the Housing Element Update would be considered growth inducing with respect to economic growth.

Population Growth

EXISTING PLUS PROJECT CONDITIONS

Table 7-2, *Project Growth Forecast*, provides an estimate of the project's housing and population growth over existing conditions. As indicated in Table 7-2, project implementation is anticipated to result in a net increase of approximately 13,001 dwelling units, or approximately 22 percent over the City's existing housing stock of 46,589 dwelling units. Project implementation would also increase the City's population by approximately 46,368 persons, or approximately 23 percent over the City's existing population of 153,334 persons. Implementation of the proposed project would result in approximately 59,590 dwelling units by 2040, with a resultant population of approximately 199,702 persons. Therefore, future development associated with implementation of the Housing Element Update would be considered growth inducing with respect to direct population growth over existing conditions.

Table 7-2
Project Growth Forecast

Description	Dwelling Units	Population[1]
Housing Element		
Residential Development Anticipated	16,039	57,203
Residential Removed	-3,038	-10,835
Housing Element Implemented Total	*13,001*	*46,368*
Existing Conditions		
Existing 2011[2]	46,589	153,334
Existing/HE Implemented Total	*59,590*	*199,702*
Existing/HE % Change	*+22%*	*+23%*

1. Assumes 3.5665 persons per dwelling unit (State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the* State, 2001-2011, with 2010 Benchmark. Sacramento, California, May 2011).
2. State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2001-2011, with 2010 Benchmark*. Sacramento, California, May 2011.

STATE OF THE CITY REPORT BUILDOUT PLUS PROJECT CONDITIONS

Potential growth inducing impacts are also assessed based on a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint. The State of the City (SOC) Report was prepared to evaluate the changes that occurred in the City between 1993 (when the General Plan/General Plan EIR were prepared) and 2009 when the SOC Report was prepared. Thus, the SOC Report is the most current forecast of the City's housing stock and population at buildout.

Table 5.1-15, *Comparison of Existing and Proposed General Plan Development Potential*, compares the City's existing residential development potential with the development potential that would result from implementation of proposed GPA 11-03. Implementation of the proposed GPA would increase the City's residential development potential by approximately 10,873 dwelling units, with a resultant population of approximately 38,779 persons.

As detailed in Table 7-3, *Project Compared to State of the City Report Buildout*, the SOC Report forecasts the City's housing stock would total approximately 136,934 dwelling units at buildout, representing approximately 194 percent growth over existing conditions. Similarly, the City's population would total approximately 487,485 persons, or approximately 218 percent over existing conditions.

Table 7-3
Project Compared to State of the City Report Buildout

Description	Dwelling Units	Population[1]
Housing Element – General Plan Amendment (GPA)		
Residential Development through GPA	13,252	47,263
Residential Land Redesignated through GPA	-2,379	-8,485
GPA Implemented Net Total	*10,873*	*38,779*
Existing Conditions		
Existing 2011	46,589	153,334
Existing / GPA Implemented Total	*57,462*	*192,113*
Existing : GPA % Change	*+19%*	*+20%*
State of the City Report (SOC) Buildout		
SOC Report Buildout[1]	136,934	487,485
SOC Buildout : Existing Difference	*+90,345*	*+334,151*
SOC Buildout : Existing % Difference	*+194%*	*+218%*
SOC Buildout / GPA Implemented Total	*147,807*	*526,264*
SOC Buildout : GPA Implemented % Difference	*+8%*	*+8%*

1. Impact Sciences, Inc., *State of the City Report Table 2.02, General Plan Buildout Statistics*, June 2009.

With approval of the proposed GPA, the City's residential development potential would total 147,807 dwelling units, with a resultant population of approximately 526,264 persons, or approximately eight percent increase over the SOC Report forecasts. Therefore, future development associated with implementation of the Housing Element Update would be considered growth inducing with respect to direct population growth over SOC Report buildout forecasts.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

The Southern California Association of Governments (SCAG) is the responsible agency for developing and adopting regional household, population, and employment growth forecasts for local Los Angeles County governments, among other counties. SCAG's Adopted 2012 RTP Growth Forecasts are used to assess a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint. Adopted 2012 RTP Growth Forecasts[1] provide population, household, and employment data for 2008, 2020, and 2035. Given that buildout of the proposed project is anticipated in 2040, population and household (i.e., vacant dwelling unit) estimates were extrapolated for 2040, based on constant

[1] Southern California Association of Governments Website, Forecasting Section, http://www.scag.ca.gov/forecast/downloads/excel/2012AdoptedGrowthForecast.xls, Accessed May 11, 2012.

growth rates between 2020, 2035, and 2040. Additionally, the dwelling unit estimates were extrapolated based on a 7.72 percent vacancy rate.[2]

As detailed in Table 7-4, *Project Compared to SCAG Forecasts*, SCAG forecasts the City's housing stock would total approximately 66,428 dwelling units in 2040, with a resultant population of approximately 215,033 persons.

Table 7-4
Project Compared to SCAG Forecasts

Description	Dwelling Units	Population[1]
Housing Element – General Plan Amendment (GPA)		
Residential Development through GPA	13,252	47,263
Residential Units Removed through GPA	-2,379	-8,485
GPA Implemented Net Total	*10,873*	*38,779*
Existing Conditions		
Existing 2011	46,589	153,334
Existing / GPA Implemented Total	*57,462*	*192,113*
Existing : GPA % Change	*+19%*	*+20%*
State of the City Report (SOC) Buildout		
SOC Report Buildout[1]	136,934	487,485
SOC Buildout / GPA Implemented Total	*147,807*	*526,264*
SCAG 2040 City[2]		
Extrapolated 2040	66,428	215,033
SCAG : Existing Difference	+19,839	+61,699
SCAG : Existing % Difference	+43%	+40%
SCAG : Existing/GPA Implemented Difference	+8966	+22921
SCAG : Existing /GPA Implemented % Difference	+13%	+11%
SCAG : SOC Difference	-70,506	-272,452
SCAG : SOC % Difference	-51%	-56%
SCAG : SOC/GPA Implemented Difference	-81,379	-31,1230
SCAG : SOC /GPA Implemented % Difference	-55%	-59%

1. Impact Sciences, Inc., *State of the City Report Table 2.02, General Plan Buildout Statistics*, June 2009.
2. Southern California Association of Governments, *Adopted 2012 Regional Transportation Plan Growth Forecasts*, March 12, 2012.

Comparatively, SCAG's 2040 housing and population forecasts are approximately 51 and 56 percent less, respectively, than the SOC Report's forecasts. Consequently, it can be deduced that SCAG's 2040 forecasts will also be less than the SOC Report forecasts' including implementation of the proposed project. This significant difference is attributed to updated 2010 Census population estimates and demographic trends that indicate significantly slower growth than anticipated by the SOC Report.[3] Overall, future development associated with implementation of the Housing Element Update would be considered growth inducing with

[2] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2001-2011, with 2010 Benchmark*. Sacramento, California, May 2011.

[3] State of California, Department of Finance, *May 2012 Interim Population Projections for California and its Counties 2010-2050*, http://www.dof.ca.gov/research/demographic/reports/projections/interim/documents/Final_2012_Interim_Proj_Web.xls, Accessed May 21, 2012.

respect to direct population growth over SCAG forecasts. However, Table 7-4 also compares project implementation (existing conditions combined with the proposed GPA) with SCAG's 2040 housing and population forecasts. As indicated in Table 7-4, implementation of the proposed project would not cause SCAG's 2040 forecasts to be exceeded. Comparatively, SCAG's 2040 housing and population forecasts are approximately 13 and 11 percent greater, respectively, than existing conditions combined with the proposed GPA. Additionally, the proposed GPA is necessary, in order for the City to meet an existing and projected housing need as established through the RHNA process. It is further noted that the forecast population growth would occur over an approximately 28-year period, allowing for development of necessary services and infrastructure commensurate with the anticipated residential growth.

Precedent-Setting Action

The Housing Element's major components include General Plan Amendment (GPA) 11-03, which would amend the Land Use and Housing Elements of the City's General Plan to accommodate units assigned to the City under the 2006-2014 RHNA. The GPA involves the creation of new medium-high and high density residential land use designations and supporting policies. The Housing Element also proposes Zone Change (ZC) 11-01, which involves the creation of new R-4 (30) (Medium High Density Residential) and R-4 (50) (High Density Residential) zones. The new R-4 (30) zone would allow for medium-high density residential development at a density between 30 and 50 dwelling units per acre, and while the new R-4 (50) zone would allow high-density residential development at a density of between 50 and 60 dwelling units per acre. Approval of the proposed GPA and ZC would result in updates to the development projections to the year 2040, as discussed above. Although, all future residential land uses within the City would be developed pursuant to the Land Use Map, any residential development could propose a GPA/ZC to re-designate land to the newly created land use designations/zoning districts. Notwithstanding, new residential development projects would undergo environmental review pursuant to CEQA Guidelines on a project-by-project basis, in order to establish consistency with the new land use designations and zoning districts. The proposed Housing Element would result in the establishment of a precedent-setting action and therefore, would be considered growth inducing in this regard.

Development or Encroachment of Open Space

As described in Section 3.0, future housing development would occur as both new development on vacant properties and redevelopment/reuse of previously developed/disturbed properties. The vast majority of the anticipated residential development (approximately 79 percent [approximately 13,253 dwelling units] through proposed GPA 11-03, ZC 11-01, and SPA 11-01) would occur as infill development and redevelopment within an urbanized area located east of SR-14. None of the properties involving the proposed GPA/ZC are designated Open Space. Additionally, although the remaining residential development that would occur west of SR-14 could be located adjacent to an open space area, the proposed Housing Element does not infer direct development rights and there is no immediate physical development proposed. New residential development projects would undergo environmental review pursuant to CEQA Guidelines on a project-by-project basis, in order to determine the secondary impacts to open space. Therefore, the proposed project would not be growth-inducing with respect to development or encroachment into an isolated or adjacent area of open space.

Summary

Overall, project implementation would not be considered growth inducing, inasmuch as it would not remove an impediment to growth, develop or encroach on an isolated or adjacent area of open space, or foster economic expansion. The project would be considered growth inducing with respect to fostering population growth through construction of additional housing and establishing a precedent-setting action.

7.4 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and *CEQA Guidelines* Appendix F requires a description (where relevant) of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill 1575 (AB 1575) in response to the oil crisis of the 1970s.

PROJECT ENERGY CONSUMPTION

Short-Term Construction

In 1994, the U.S. Environmental Protection Agency (EPA) adopted the first set of emission standards (Tier 1) for all new off-road diesel engines greater than 37 kilowatts (kW). The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing NO_X emissions from these engines by 30 percent. The EPA Tier 2 and Tier 3 standards for off-road diesel engines are projected to further reduce emissions by 60 percent for NO_X and 40 percent for particulate matter from Tier 1 emission levels. In 2004, the EPA issued the Clean Air Nonroad Diesel Rule which will cut emissions from off-road diesel engines by more than 90 percent.

The proposed Housing Element would not directly result in the construction of any new development projects. However, its implementation would facilitate development of residential uses throughout the City. There are no unusual characteristics of the Housing Element that would necessitate the use of construction equipment that is less energy-efficient than at comparable construction sites in the region or State. Therefore, it is expected that construction-related fuel consumption associated with future development associated with the proposed Housing Element would not be any more inefficient, wasteful, or unnecessary than other redevelopment projects.

Long-Term Operations

TRANSPORTATION

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 26.5 miles per gallon (mpg). The fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg since 1996. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with Federal fuel economy standards is not

determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States.

The proposed Housing Element is subject to the General Plan's Goals and Policies, which encourage land uses and transportation-related improvements, in order to reduce daily vehicle trips and vehicle miles traveled (VMT). The proposed Housing Element is not anticipated to result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Additionally, the General Plan provides strategies to improve transit service and overall mobility within the City that would result in a decrease in auto dependency. The Palmdale Transportation Center (PTC), located at 39000 Clock Tower Plaza Drive, opened in April 2005. The PTC is a regional multi-modal hub including connections between Antelope Valley Transit Authority (AVTA) buses, Metrolink commuter rail service, Santa Clarita Transit service, Greyhound bus service, and Amtrak Throughway bus service. Thus, transit is readily available to residents throughout the City. As discussed in Section 5.2, Transportation and Circulation, based on the CMP guidelines, and the proximity of land uses in relation to available transit within the City, the additional 2,786 dwelling units proposed within the residentially-zoned properties are forecast to generate approximately 102 a.m. peak hour transit trips, approximately 138 p.m. peak hour transit trips, and approximately 1,306 daily transit trips. The proposed development within the rezone project area is forecast to generate approximately 245 a.m. peak hour transit trips, approximately 296 p.m. peak hour transit trips, and approximately 3,191 daily transit trips. The availability of public transit for area residents would ensure that the Housing Element would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy.

Overall, fuel consumption associated with vehicle trips generated by future development within the City would not be considered inefficient, wasteful, or unnecessary in comparison to other projects in the region.

ENERGY DEMAND

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. Title 24 was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations, such as those within Section V (Site Lighting) including Subpart E (Windows), F (Roofs), and S (Mechanical Equipment). These savings are cumulative, increasing as years go by.

The proposed Housing Element would not result in any unusual characteristics that would result in excessive long-term operational building energy demand. Future development associated with implementation of the proposed Housing Element would be subject to compliance with the City's General Plan, which includes Policies ER5.5.1 and ER5.5.3 as well as Implementation Program ER-X. Additionally, the City has adopted an *Energy Action Plan*, which was developed to achieve energy independence, energy efficiency and conservation, and land uses that reduce transportation time and costs, to encourage jobs creation, and to identify strategies to increase investment in the local economy. The measures within the *Energy Action Plan* implement the General Plan policies.

8.0 Effects Found Not To Be Significant

8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

The City of Palmdale distributed an Initial Study on January 9, 2012 to determine significant effects of the proposed project. In the course of this evaluation, certain project impacts were found to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. In accordance with CEQA Guidelines Section 15128, the following section identifies those impacts determined to be less than significant in the Initial Study and were not analyzed further in Section 5.0 of the EIR. A copy of the Initial Study is included in Appendix A, Initial Study/Notice of Preparation. This section also summarizes which impacts were found to be less than significant in the EIR, both with and without the imposition of mitigation measures.

8.1 INITIAL STUDY CONCLUSIONS

AESTHETICS

Have a substantial adverse effect on a scenic vista.

Exhibit ER-1 (Antelope Valley Scenic Highway) of the Environmental Resources Element of the City's General Plan identifies the following Scenic Routes: Barrel Springs Road, Tierra Subida Avenue, Sierra Highway south of Avenue S, Elizabeth Lake Road, Pearblossom Highway, Bouquet Canyon Road, Godde Hill Road, and the Antelope Valley Freeway south of Rayburn Road. The project does not involve site-specific development; however, future residential development could occur citywide, including in proximity to identified scenic routes/vistas. The City would review future development proposals on a project-by-project basis to assess whether the proposed development could potentially impact a scenic vista or highway and may require special design standards such as height limits to preserve view corridors and limits on grading activities along highways in order to protect their scenic qualities. Thus, impacts would be reduced to a less than significant level.

Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

No state scenic highways occur within the City of Palmdale. Thus, the proposed project would not damage scenic resources within a state scenic highway. However, Los Angeles County has designated the Antelope Valley Freeway as a scenic highway in the Scenic Highways Element of its General Plan. Future development of residential uses associated with implementation of the Housing Element could alter existing views and resources from existing conditions. The City would review future development proposals on a project-by-project basis to assess whether the proposed development could significantly damage scenic resources and may require special design standards such as height limits to preserve view corridors and limits on grading activities along highways in order to protect their scenic qualities. Thus, impacts would be reduced to a less than significant level.

Substantially degrade the existing visual character or quality of the site and its surroundings.

The General Plan study area is comprised of large areas of vacant land anticipated for future residential development. Development of these areas would alter the existing visual character or quality of the specific site and its surroundings. However, development of these areas has been anticipated by the General Plan.

The rezone project area contains vacant properties interspersed between existing single-family residential, multi-family residential, commercial, institutional and public facilities. The existing visual character of the project area lacks design consistency and has been shaped by significant single-family residential development occurring in the 1950s, significant multi-family residential development occurring in the 1980s, commercial development between the 1950s and the 1980s, and development of new and upgrades to existing public facilities in the 2000s. Thus, potential development of the area with higher density residential uses would alter the existing visual character or quality of the specific site and its surroundings.

Future residential development within the City would have an incremental impact on the loss of vacant or open space; however, development has been anticipated under the General Plan. Future development would be evaluated on a project-by project basis and reviewed to ensure compliance with the development standards of the Zoning Ordinance, including building and landscape setbacks, building heights, lighting, screening and walls to ensure visual impacts from existing developed areas are minimized. Further, all new structures would be reviewed for compliance with the Community Design Element of the General Plan to ensure a high level of architectural design utilizing high quality, durable materials. Therefore, future development would not result in the degradation of the existing visual character or quality of the site or its surroundings and no further analysis on this topic is required.

AGRICULTURAL AND FORESTRY RESOURCES

Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

None of the parcels within the General Plan study area or rezone area that have been identified for future development of residential uses are identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Further, there are no existing farm uses occurring within these sites. Therefore, no further analysis on this topic is required.

Conflict with existing zoning for agricultural use, or a Williamson Act contract.

None of the parcels within the General Plan study area or rezone area that have been identified for future development of residential uses include any existing or proposed agricultural zoning and none of the land is subject to a Williamson Act contract. Therefore, there will be no impact and no further analysis on this topic is required.

Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

The City of Palmdale does not include any existing forest or timberland and implementation of the proposed Housing Element would not cause rezoning of forest land, timberland or timberland zoned Timberland Production. Therefore, there will be no impact and no further analysis on this topic is required.

Result in the loss of forest land or conversion of forest land to non-forest use.

There is no forest land within the City of Palmdale. Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use and therefore, no analysis on this topic is required.

Involve other changes in the existing environment which, 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.

The parcels identified for future residential development are not located within close proximity to any land either zoned for or utilized for farmland or forest land. Implementation of the proposed Housing Element would not result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest uses. Therefore, no analysis on this topic is required in the EIR.

AIR QUALITY

Create objectionable odors affecting a substantial number of people.

Construction activity associated with future site-specific development may generate detectable odors from the exhaust associated with heavy equipment. However, this impact would be short-term in nature and cease upon project completion. In addition, residential land uses are not anticipated to create objectionable odors affecting a substantial number of people. Therefore a less than significant impact would occur in this regard.

BIOLOGICAL RESOURCES

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The City of Palmdale is not located within the boundaries of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan. The City of Palmdale will be subject to the West Mojave Habitat Conservation Plan once adopted; however, a draft of this document has not yet been released.

GEOLOGY AND SOILS

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

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.

General Plan Exhibit S-3 (Earthquake Fault Zones) identifies the relative location of earthquake faults, Alquist-Priolo Fault Zones, and Seismic Shaking Zones that affect the City. Alquist-Priolo Fault Zones are associated with the San Andreas Fault and the Cemetery Fault (a major fault trace of the San Andreas system), which traverse the City in a northwest to southeast direction. Future residential development within the City could occur within proximity to an Alquist-Priolo Fault Zone, resulting in potential impacts associated with fault rupture.

The Alquist-Priolo Earthquake Fault Zoning Act (*California Public Resources Code*, Chapter 7.5, Section 2621-2699.6) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. Local agencies must regulate most development projects within Earthquake Fault Zones, as identified by the State Geologist. Before a residential project would be permitted within an Earthquake Fault Zone, a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults would be required. An evaluation and written report of a specific area must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet set backs are required).

Palmdale General Plan Policy L1.4.2 establishes standards in and adjacent to Alquist-Priolo Earthquake Fault zones and other active fault zones as determined based on geotechnical analysis, in order to protect residents, property, and infrastructure systems from damage by seismic activity. Specifically, development of habitable structures would be restricted in these zones in accordance with requirements of State law and a maximum permitted density for all residentially-designated land between the outer boundaries of the Alquist-Priolo Earthquake Fault Zone of three dwelling units per acre (gross) within a project site would be established, except where the Land Use Map indicates lower densities in these areas. Compliance with the Alquist-Priolo Earthquake Fault Zoning Act and the Palmdale General Plan would reduce potential impacts to a less than significant level.

Strong seismic ground shaking.

The City of Palmdale is located within a seismically active region of southern California. General Plan Exhibit S-3 (Earthquake Fault Zones) illustrates the siemic shaking zones for the City. Future residential development associated with implementation of the Housing Element would primarily occur within Seismic Shaking Zone 1. Zone 1 represents an area that would be exposed to the most intense seismic ground shaking. Future residential development would be subject to intense ground shaking during a major earthquake along the San Andreas Fault. The intensity of the ground shaking would depend upon the magnitude of the earthquake, distance to the epicenter and the geology of the area between the epicenter and the specific site. In

accordance with the 2010 California Building Code, seismic structure design requirements would be based on the Seismic Design Category (SDC) for the proposed structures which is based on the Occupancy Category for the structure and on the level of expected soil modified seismic ground motion. The majority of structures in Palmdale would have a Seismic Design Category (SDC) of D (High seismic vulnerability) or E (Very high seismic vulnerability and near a major fault) based on the proximity of the City to the San Andreas Fault and soil types in the City. The final determination of the Seismic Design Category (SDC) would be made at the time of building plan submittal and review of a site specific soils report. Compliance with these seismic design requirements would reduce the potential impacts from seismic ground shaking and ground failure on building occupants and structures to a less than significant level.

Seismic-related ground failure, including liquefaction.

The State of California Seismic Hazard Zones maps for the Palmdale Quadrangle (October 17, 2003) and Ritter Ridge Quadrangle (August 14, 2003), identifies areas of the City susceptible to liquefaction. The liquefaction areas are primarily associated with water features such as creeks and Lake Palmdale. Future residential development within the City could occur within an area identified as being susceptible to liquefaction. Municipal Code Section 16.80.020, Geotechnical, Geologic, and Soils Reports, requires a preliminary soils report for every subdivision for which a final or parcel map is required, prior to approval of the tentative or parcel map. In the event the preliminary soils report indicates the presence of collapsible or expansive soils, liquefaction or other soil problems, which if not corrected could result in structural defects, a geotechnical investigation of each lot or parcel in the subdivision shall be undertaken. Compliance with Code requirements would reduce potential impacts associated with liquefaction to a less than significant level.

Landslides.

The State of California Seismic Hazard Zones maps for the Palmdale Quadrangle (October 17, 2003) and Ritter Ridge Quadrangle (August 14, 2003), identifies areas of the City susceptible to landslides. The potential landslide areas are primarily located within the western portion of the City in areas of varied topography. Future residential development within the City could occur within an area identified as being susceptible to landslides. The design, construction, and engineering of structures associated with future development would be subject to compliance with all City rules and regulations. Pursuant to Municipal Code Section 8.04.202, Section 110.2.2, Permits, work requiring a building or grading permit by the PBC is not permitted in an area determined by the Building Official or City Engineer to be subject to hazard from landslide, settlement, or slippage. Municipal Code Section 16.80.020, Geotechnical, Geologic, and Soils Reports, requires a preliminary soils report for every subdivision for which a final or parcel map is required, prior to approval of the tentative or parcel map. In the event the preliminary soils report indicates the potential for landslides or other soil problems, which if not corrected could result in structural defects, a geotechnical investigation of each lot or parcel in the subdivision shall be undertaken. Compliance with Code requirements would reduce potential impacts associated with liquefaction to a less than significant level.

Result in substantial soil erosion or the loss of topsoil.

Construction associated with future development of residential uses within the City would occur in accordance with all rules and regulations of the City of Palmdale. This would include the regulations contained within Palmdale Municipal Code (Municipal Code) Section 8.04.265

(Excavation and Grading), which establish regulation for the control of excavation, grading and earthwork construction, including fills and embankments, and for the control of grading site runoff, including erosion, sediments and construction related pollutants. In addition, construction associated with future residential development would be required to comply with the requirements of the Municipal National Pollutant Discharge Elimination System (NPDES) Construction Permit and would implement City grading permit regulations that include compliance with erosion control measures, including grading and dust control measures. Specifically, construction associated with future development projects would be required to have erosion control plans approved by the City of Palmdale Engineering and Transportation Services Division, as well as Storm Water Pollution Prevention Plans (SWPPP). As part of these requirements, Best Management Practices (BMP's) would be implemented during construction activities to reduce soil erosion to the maximum extent possible. All construction activities would be required to comply with Antelope Valley Air Quality Management District (AVAQMD) Rule 403 regarding the control of fugitive dust. Compliance with the City's applicable building regulations regarding erosion control and AVAQMD Rule 403 would ensure that impacts related to soil erosion would be less than significant during construction. Further, future developments would be improved with hardscape and landscaping, which would reduce the potential for on-site erosion. Given the future developments would be subject to City Code and NPDES requirements for erosion control grading and soil remediation, future development anticipated within the project area would not result in substantial soil erosion or the loss of top soil. Impacts would be less than significant and no further analysis of this topic is required in the EIR.

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.

Lateral spreading results from liquefaction or plastic deformation of soil occurring on gently sloping ground during an earthquake. The conditions occur when blocks of mostly intact surficial soil are displaced down slope along a sheer zone that has formed within liquefied sediment. Most of the City is relatively flat and lacks significant slopes. However, future residential development could occur in areas having the potential for lateral spreading. General Plan Exhibit S-14 (Subsidence) identifies subsidence potential within the City. Most of the City where residential development would occur is identified as having no data for subsidence potential or is considered low to moderate for subsidence potential. Although the General Plan does not map areas of collapsible soils in the City, generally desert soils are considered collapsible in the first few feet. The design, construction and engineering of structures associated with future development would be subject to compliance with all City rules and regulations. Pursuant to Municipal Code Section 8.04.202, Section 110.2.2, Permits, work requiring a building or grading permit by the PBC is not permitted in an area determined by the Building Official or City Engineer to be subject to hazard from landslide, settlement, or slippage. Municipal Code Section 16.80.020, Geotechnical, Geologic, and Soils Reports, requires a preliminary soils report for every subdivision for which a final or parcel map is required, prior to approval of the tentative or parcel map. In the event the preliminary soils report indicates the presence of collapsible or expansive soils, liquefaction or other soil problems, which if not corrected could result in structural defects, a geotechnical investigation of each lot or parcel in the subdivision shall be undertaken. Compliance with Code requirements would reduce potential impacts to a less than significant level.

Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

General Plan Exhibit S-10 (Soil Expansion Potential) identifies the soil expansion potential within the City ranging from low to high. A majority of the City is identified as having low soil expansion potential. However, future residential development within the City could occur within areas identified as having moderate soil expansion potential. Development on expansive soils can cause land slippage and structural damage to foundations. Regulating or restricting construction in areas with soil stability problems can reduce potential impacts associated with geologic hazards. Impacts can also be reduced by grading and engineering methods which provide a stable foundation for building construction. Potential impacts would be reduced to a less than significant level with the implementation of City programs as noted above.

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.

In accordance with Policy PS2.2.4 of the Public Services Element of the General Plan, all new residential uses on less than one acre of land within the City must be connected to the public sewer system and private sewer disposal systems are not permitted. Therefore, there will be no impact from soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

HAZARDS AND HAZARDOUS MATERIALS

For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.

There are no private airstrips within the project area. No impact would occur in this regard.

Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

General Plan Exhibit S-1 (Evacuation Routes) identifies existing emergency routes within the City. Future residential development within the City could involve street and traffic control improvements, as well as street closures or modifications during construction activities. Traffic and circulation plans are subject to review and approval by the City. Furthermore, plans would be provided to the Los Angeles County Sheriff's Department and Los Angeles County Fire Department for review and comment. Review by these public agencies would ensure implementation of the proposed project would not interfere with an emergency response plan or emergency evacuation plan. Additionally, emergency vehicles would continue to have access to project related and surrounding roadways upon completion of site-specific development. Therefore, impacts would be less than significant.

Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

General Plan Exhibit S-16 (Wildfire Hazard Zones) identifies wildfire hazards areas within the City. These areas primarily occur within the southern and western portions of the City. Future

residential development could occur within wildfire hazards areas. In order to minimize hazards associated with both wildfire and urban fires, the City and/or the Los Angeles County Fire Department require fire protection plans, greenbelts, special access roads, fuel modification zones and non-combustible construction techniques as necessary on a project-by-project basis. Compliance with City and/or Los Angeles County Fire Department requirements would reduce potential impacts to a less than significant level.

HYDROLOGY AND WATER QUALITY

Inundation by seiche, tsunami, or mudflow.

A seiche is a surface wave created when a large body of water is shaken, often by an earthquake. A seismic event could cause a seiche to occur at Lake Palmdale, which could potentially overtop the dam. According to the General Plan, the design report for the dam considers a reflection of the wave on return unlikely. Also, wave volume above the dam would not be substantial (approximately 1 acre-foot), and would not result in damaging floods. Palmdale is not located near the coast; therefore, exposure to inundation from a tsunami does not exist. The City contains mostly flat terrain. Although future residential development could occur in areas having slopes, potential mudflows are not anticipated. Also, refer to the discussion regarding landslides, above. Impacts would be less than significant.

LAND USE AND PLANNING

Physically divide an established community.

The project does not propose site-specific development. Future residential development within the General Plan study area would occur on vacant land that is currently designated for residential uses. Thus, future development would not physically divide an established community. The proposed General Plan Amendment and Zone Change would allow for higher density residential development within the rezone area when compared to existing conditions. However, the Zoning Ordinance Amendment would establish development standards to ensure that proposed residential developments are integrated into and compatible with community. Compliance with the General Plan and Municipal Code would ensure that future residential development would not divide an established community. Impacts would be less than significant.

Conflict with any applicable habitat conservation plan or natural community conservation plan.

The City is not located within the boundaries of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan. The City of Palmdale will be subject to the West Mojave Habitat Conservation Plan once adopted; however, a draft of this document has not yet been released.

MINERAL RESOURCES

Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

The General Plan identifies lands for mineral resource extraction through the Mineral Resource Extraction (MRE) designation. This designation is appropriate in areas designated by the State Division of Mines and Geology as Mineral Resource Zone 2 areas, or where significant mineral resources occur the extraction of which is determined to be beneficial. Further, the General Plan identifies Mineral Resource Zones within the City as generally located east and west of 70th Street West and south of Avenue N, which do not include the areas identified for future residential development. Additional areas zoned for Mineral extraction include the QR (Quarry and Reclamation) zone, generally located east and north of Pearblossom Highway in the southeastern portion of the City. Again, this area is not identified for future residential development. Impacts would be less than significant.

Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Refer to the response above.

NOISE

For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

General Plan Exhibit S-17 (USAF Plant 42 Air Installation Compatible Use Zone (AICUZ)) illustrates the noise contours for Plant 42. The sites identified for future residential development are located outside of the 65 CNEL contour. Thus, aircraft noise is not expected to result in a significant impact to future residential uses.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

There are no private airstrips within the project area. No impact would occur in this regard.

PUBLIC SERVICES

Would the project 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:

Fire protection.

Future residential development would increase demand for fire protection services. Increased demands may require improvements to existing facilities or increases in staffing and equipment.

Palmdale Municipal Code Chapter 3.42, Fire Facilities Impact Fee Requirements, establishes fire facilities impact fees for residential and non-residential development for the purpose of constructing, expanding, or rehabilitating fire protection facilities and equipment. Future residential development projects would be required to pay the fees in effect at the time required, as identified in Chapter 3.42. Payment of the applicable fees would reduce potential impacts to fire protection services to a less than significant level.

Other public facilities.

Future residential development may facilitate new development within the City, including improvements to deteriorated public facilities and infrastructure, such as roads and drainage facilities. Future improvements would be planned and implemented to serve existing and future growth within the area. Although new and upgraded facilities are anticipated, increased development within the area would increase the need for maintenance of the new and existing facilities. Palmdale Municipal Code Chapter 3.45, Public Facility Development Impact Fee Requirements, requires developers to pay a public facility development impact fee to meet the demand for public facilities created by development. The fees collected are used for constructing, expanding, or rehabilitating public facilities identified in the Public Facilities Impact Fee Final Report. Future residential development projects would be required to pay the fees in effect at the time required, as identified in Chapter 3.45. Payment of the applicable fees would reduce potential impacts to public facilities to a less than significant level.

TRANSPORTATION/TRAFFIC

Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Project implementation is not anticipated to result in a significant alteration to rail or air traffic. Future residential development within the City may result in an increase in demand for commuter rail service. Metrolink regularly reviews demand for rail service and makes adjustments as needed to accommodate such demand. Adequate provision of these services is expected to continue to occur.

Substantially increase hazards due to a design feature, such as a sharp curve or dangerous intersection, or incompatible uses (e.g., farm equipment).

Specific development and/or improvements are not currently proposed as part of the project. However, the primary roadway layout within the City has been previously established and the majority of the right-of-way is existing. The existing roadway layout is based upon a grid pattern and intersections are primarily controlled by either an existing traffic signal or other traffic control signage. Future residential development may involve the construction of new roadways and intersections. The design of the roadways and intersections would be required to meet City standards in order to ensure that hazardous design features are avoided and incompatible uses do not occur. Impacts would be less than significant

Result in inadequate emergency access.

Specific development and/or improvements are not currently proposed. It is not anticipated that future residential development within the City would prevent the safe and orderly flow of people and vehicles within and through the area. Individual development projects would be reviewed

on a case-by-case basis to ensure that safe and adequate flow and emergency access is provided. Impacts would be less than significant in this regard.

8.2 EIR CONCLUSIONS

The impact statements from Section 5.0 are restated verbatim in the following two sections. Refer to Section 5.0 for the complete impact analysis.

8.2.1 LESS THAN SIGNIFICANT IMPACTS

The following impacts were identified as less than significant or less than significant with mitigation incorporated.

LAND USE AND PLANNING

The proposed project would not conflict with SCAG's Regional Planning Efforts.

The proposed project would not conflict with Palmdale General Plan Goals.

The proposed project would not conflict with Palmdale Zoning Ordinance.

The proposed project would not conflict with Palmdale Transit Village Specific Plan, as Amended.

The proposed project would not conflict with the Regional Housing Needs Assessment.

The proposed project would not conflict with the Air Installation Compatible Use Zone (AICUZ) Study.

Development associated with Implementation of the proposed project and other related development would not result in cumulatively considerable land use impacts.

TRANSPORTATION AND CIRCULATION

Project implementation would not cause a significant increase in traffic at a CMP facility under existing with project conditions, when compared to the traffic capacity of the CMP facility.

Project implementation would not cause a significant increase in traffic at a CMP facility under future with project conditions, when compared to the traffic capacity of the CMP facility.

Project implementation would not result in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities as a result of a conflict with adopted policies, plans, or programs.

GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

Implementation of the proposed project would not conflict with an applicable Greenhouse Gas Reduction Plan, policy, or regulation.

NOISE

Grading and construction within the area could result in significant temporary noise impacts to nearby noise sensitive receivers.

Project implementation could result in significant vibration impacts to nearby sensitive receptors.

Traffic generated by the proposed project could significantly contribute to existing traffic noise in the area or exceed the City's established standards.

The proposed project would not expose people to severe noise levels associated with railroad noise.

The proposed project would not result in a significant increase in long-term stationary ambient noise levels.

HAZARDS AND HAZARDOUS MATERIALS

Short-term construction activities associated with the anticipated residential development could create a significant hazard to the public or environment through accident conditions involving the release of hazardous materials into the environment.

Long-term operations of the anticipated residential development could create a significant hazard to the public or environment through accident conditions involving the release of hazardous materials.

Future residential development within the City could be located on a site currently on the Cortese list, creating a significant hazard to the public or the environment.

Project implementation could result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school.

Project implementation would not result in a safety hazard associated with Plant 42 for people residing within the project area.

Development associated with implementation of the proposed project and other related development could result in cumulative impacts associated with hazards and hazardous materials.

HYDROLOGY AND WATER QUALITY

Grading, excavation, and construction activities associated with the proposed project could impact water quality.

Implementation of the proposed project could potentially result in increased run-off amounts and degraded water quality.

Implementation of the proposed project could alter drainage patterns and runoff volumes, in a manner that could exceed the drainage systems capacities or result in localized flooding.

Implementation of the proposed project could place people and housing within a 100-year flood hazard area.

Implementation of the proposed project could expose people and housing to flooding associated with failure of a levee or a dam.

Development associated with implementation of the proposed project and other related development could cumulatively impact hydrology and water quality.

BIOLOGICAL RESOURCES

Project implementation could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status.

Project implementation could have a substantial adverse effect on riparian habitat or other sensitive natural community.

Project implementation could have a substantial adverse effect on federally protected wetlands.

Implementation of the proposed project could interfere with the movement of a native resident or migratory species.

Implementation of the proposed project would not conflict with the Joshua Tree and Native Desert Vegetation Preservation Ordinance.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to biological resources.

CULTURAL RESOURCES

Project implementation would not cause a substantial adverse change in the significance of a historical resource.

Project implementation could cause a substantial adverse change in the significance of an archaeological resource.

Project implementation could directly or indirectly destroy a unique paleontological resource.

Project implementation could disturb human remains, including those interred outside of formal cemeteries.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to cultural resources.

POLICE PROTECTION

Project implementation would not result in substantial adverse physical impacts associated with the provision of police protection services.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to police protection services.

SCHOOL FACILITIES

Project implementation would not result in substantial adverse physical impacts associated with the provision of school facilities and services.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to school facilities and services.

PARKS AND RECREATION

Project implementation could result in substantial adverse physical impacts associated with the provision of new parkland.

Project implementation could increase the use of existing recreational facilities, causing their physical deterioration.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to parks and recreational facilities.

WASTEWATER

Project implementation could require or result in the construction of new wastewater conveyance/treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Development associated with implementation of the proposed project and other related development could result in cumulatively considerable impacts involving wastewater.

SOLID WASTE

The proposed project could be served by a landfill with insufficient permitted capacity to accommodate its solid waste disposal needs.

The proposed project could conflict with statutes and regulations related to solid waste.

Residential development associated with project implementation combined with development anticipated by the General Plan could result in cumulatively considerable impacts to the permitted capacities of the landfills serving the City.

9.0 Significant Environmental Effects Which Cannot Be Avoided If The Proposed Action Is Implemented

9.0 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED ACTION IS IMPLEMENTED

CEQA Guidelines Section 15126(b) requires an EIR to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons why the project is being proposed, notwithstanding their effect, should be described."

Section 5.0 of this EIR provides a description of the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts to a less than significant level, where possible. After implementation of the recommended mitigation measures, most of the potentially significant impacts associated with the proposed project would be reduced to a less than significant level. However, the impacts listed below could not be feasibly mitigated and would result in significant unavoidable impacts associated with approval of the proposed Housing Element Update.

TRANSPORTATION AND CIRCULATION

- Existing Project Conditions
- Future Buildout with Project Conditions
- Cumulative Traffic Operations

AIR QUALITY

- Short-Term Construction Air Emissions
- Long-Term Operational Air Emissions
- Consistency with Regional Plans
- Cumulative
    - Short-Term Construction
    - Long-Term Operational

NOISE

- Cumulative Mobile Noise Sources

GREENHOUSE GAS EMISSIONS

- Project-Related Greenhouse Gas Emissions
- Cumulative Greenhouse Gas Emissions

WATER

- Water Supplies
- Cumulative Water Supplies

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10.0 References

10.0 REFERENCES

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