

5. Environmental Analysis

5.8 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the proposed Project on human health and the environment due to exposure to hazardous materials or hazardous conditions associated with the Project site, Project construction, and Project operations. Potential Project impacts and appropriate mitigation measures or standard conditions are included as necessary. The analysis in this section is based, in part, upon the following source(s):

- *County of San Bernardino Safety Background Report*, PlaceWorks and Dudek, April 5, 2017.

A complete copy of this study is included in the Technical Appendices to this Draft PEIR (Appendix G).

5.8.1 Hazardous Materials

5.8.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC. § 6901 et seq.) is the principal federal law that regulates the generation, management, and transportation of waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. The RCRA gave the US Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle to grave,” that is, from generation to transportation, treatment, storage, and disposal, at active and future facilities. It does not address abandoned or historical sites. The RCRA also set forth a framework for managing nonhazardous wastes. Later amendments required phasing out land disposal of hazardous waste and added underground tanks storing petroleum and other hazardous substances.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.), commonly known as the Superfund, protects water, air, and land resources from the risks created by past chemical disposal practices such as abandoned and historical hazardous waste sites. It gave the EPA power to seek out the parties responsible for a release and ensure their cooperation in the cleanup. CERCLA also enabled the revision of the National Contingency Plan, which established the National Priority List (NPL) of sites, known as Superfund sites. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986 to continue cleanup activities.

Emergency Planning and Community Right-to-Know Act

Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA)(42 USC § 11001 et seq.) to inform communities and citizens of chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored onsite to state and local agencies; releases to the environment of more than 600 designated toxic chemicals; offsite transfers of waste; and pollution prevention measures and activities and to participate in chemical recycling. The EPA maintains and publishes an online,

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

publicly available, national database of toxic chemical releases and other waste management activities by certain industry groups and federal facilities—the Toxics Release Inventory.

To implement EPCRA, each state appointed a state emergency response commission to coordinate planning and implementation activities associated with hazardous materials. The commissions divided their states into emergency planning districts and named a local emergency planning committee for each district. The federal EPCRA program is implemented and administered in California Governor's Office of Emergency Services (Cal OES), a state commission, 6 local committees, and 81 Certified Unified Program agencies. Cal OES coordinates and provides staff support for the commission and local committees.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 (15 USC § 2601 et seq.) gave the EPA the ability to track the 75,000 industrial chemicals produced or imported into the United States. The EPA repeatedly screens these chemicals; can require reporting or testing of any that may pose an environmental or human health hazard; and can ban the manufacture and import of chemicals that pose an unreasonable risk. The EPA tracks the thousands of new chemicals each year with unknown or dangerous characteristics. The act supplements other federal statutes, including the Clean Air Act and the Toxics Release Inventory under EPCRA.

Occupational Safety and Health Act

The federal Occupational Safety and Health Act (OSHA) of 1970 (29 USC § 651 et seq.) authorizes each state (including California) to establish their own safety and health programs with the US Department of Labor, Occupational Safety and Health Administration (OSHA) approval. The California Department of Industrial Relations regulates implementation of worker health and safety in California. California OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations (CCR) and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes as might be encountered during excavation of contaminated soil) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations.

OSHA Regulation 29 Code of Federal Regulations Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition following all applicable regulations.

State

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) was created in 1991, unifying California's environmental authority in a single cabinet-level agency and bringing the California Air Resources Board (Air Resources Board), State Water Resources Control Board, RWQCBs, California Department of Resources

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Recycling and Recovery (known as CalRecycle and formerly the Integrated Waste Management Board), Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within the Cal/EPA “umbrella” for the protection of human health and the environment and to ensure the coordinated deployment of state resources. Its mission is to restore, protect, and enhance the environment, to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substance Control

The DTSC is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having underground storage tank (UST) leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Regional Water Quality Control Board

The RWQCB is a department of Cal/EPA that oversees investigation and cleanup of sites including underground storage tanks where wastes have been discharged in order to protect the water quality of the state. The RWQCB regulates wastewater discharges to surface waters and to groundwater. They also regulate storm water discharges from construction, industrial, and municipal activities. The RWQCB is the lead regulatory agency for the Project site.

California Health and Safety Code

Cal/EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirement of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs owners or operators storing, handling, or using regulated substances exceeding threshold planning quantities to develop and implement a Risk Management Plan. The Risk Management Plans are submitted to the administering agency and possibly USEPA, depending upon the chemical and the amount, for review.

Hazardous Materials Release Response Plans and Inventory Law

The Hazardous Materials Release Response Plans and Inventory Law (Health and Safety Code § 25500 et seq.), aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

where the materials are stored onsite, to prepare an emergency response plan, and to train employees to use the materials safely. Any business that handles hazardous materials in quantities equal to or greater than 55 gallons, 500 pounds, or 200 cubic feet of gas must submit a business plan.

Hazardous Materials Transportation

Section 31303 of the California Vehicle Code and US Department of Transportation regulate hazardous materials transport. The California Highway Patrol and California Department of Transportation are the enforcement agencies. Cal OES provides emergency response services involving hazardous materials incidents.

Worker and Workplace Hazardous Materials Safety

The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates 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.

Hazardous Materials in Structures: Asbestos-Containing Materials and Lead-Based Paint

Several regulations and guidelines pertain to abatement of and protection from exposure to asbestos-containing materials (ACM) and lead-based paint (LBP), including Construction Safety Orders 1529 (pertaining to ACM) and Section 1532.1 (pertaining to LBP) from Title 8 of the California Code of Regulations, and Part 61, Subpart M, of the Code of Federal Regulations (pertaining to ACM). In California, ACM and LBP abatement must be performed and monitored by contractors with appropriate certification from the California Department of Health Services. Asbestos is also regulated as a hazardous air pollutant under the Clean Air Act and a potential worker safety hazard under the authority of Cal/OSHA.

Requirements for limiting asbestos emissions from building demolition and renovation are specified in SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). California Government Code Sections 1529 and 1532.1 provide for exposure limits, exposure monitoring, respiratory protection and good working practice by workers exposed to lead and ACMs.

Requirements for Phase I Environmental Site Assessments

Phase I Environmental Site Assessments are required for land purchasers to qualify for the Innocent Landowner Defense under CERCLA, to minimize environmental liability under other laws such as RCRA, and as a lender prerequisite to extend a loan for purchase of land.

Siting of Schools on or near Sources of Hazardous Materials

The California Education Code (Sections 17210 et seq.) requires that, when acquiring property for a new school site, an environmental site investigation be completed to determine the health and safety risks (if any) associated with the site. The Education Code identifies DTSC's role in the assessment, investigation, and cleanup of proposed school sites. All proposed school sites that receive state funding for acquisition and/or construction must go through a comprehensive investigation and cleanup process under DTSC oversight.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Certified Unified Program Agency

A Certified Unified Program Agency (CUPA) is an agency of a county or city that administers several state programs regulating hazardous materials and hazardous wastes. County Fire is the CUPA for all unincorporated areas and incorporated cities and towns. County Fire administers the following programs:

- Hazardous Materials Release Response Plans and Inventory Program
- California Accidental Release Prevention Program, a combination of federal and state programs for the prevention of accidental release of regulated toxic and flammable substances
- Underground Storage Tanks Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs Program
- Hazardous Materials Management Plan (HMMP) and Hazardous Material Inventory Statement (HMIS) in California Fire Code Program.

Local

San Bernardino County Hazardous Materials Release Response Plans and Inventory Program

In San Bernardino County, the Business Emergency/Contingency Plan (Business Plan) is also used to satisfy the contingency plan requirement for hazardous waste generators. Any business subject to any of the CUPA permits is required in San Bernardino County to file a Business Emergency/Contingency Plan using the California Environmental Reporting System. This submission is used as the basis for the permit application. A new business going through the process of obtaining County planning or building approval is required to comply with the Business Emergency/Contingency Plan requirement prior to obtaining final certificate of occupancy and prior to bringing hazardous materials onto the property.

The quantities that trigger disclosure are based on the maximum quantity on site at any time excluding materials under active shipping papers or for direct retail sale to the public. The basic quantities are: hazardous materials at or exceeding 55 gallons, 500 pounds, or 200 cubic feet at any time in the course of a year; specified amounts of radioactives, and extremely hazardous substances above the threshold planning quantity (SBCFD 2018).

Existing Conditions

California Government Code Section 65962.5 requires the DTSC to compile, maintain, and update lists of specified hazardous material release sites, called the “Cortese List.” The California Environmental Quality Act (Public Resources Code Section 21092.6) requires the lead agency for a project to consult these lists to determine whether the project site and any alternatives are identified on the Cortese list. Today, the Cortese list refers to many databases that record hazardous materials, including the Toxics Release Inventory (TRI), EnviroStor, and GeoTracker.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-1 displays the number and region of facilities in San Bernardino County known to generate, store, transport, or dispose of hazardous wastes. Given the nature of the databases, there may be some overlap between categories (one site may be listed on more than one database).

Table 5.8-1 Known Hazardous Material Activities in San Bernardino County

Type of Facility	Total Facilities	Region		
		Valley	Desert	Mountains
Facilities that reported toxic releases	102	78	24	0
Large quantity hazardous waste generators	398	289	99	10
Small quantity hazardous waste generators	2,011	1,621	352	38
Potential hazardous waste Superfund sites	73	48	24	1
Superfund sites on the Final National Priorities List	5	2	3	0
Hazardous Waste Transporters (vehicle)	73	63	9	1
Leaking Underground Storage Tanks	60	26	25	9
Formerly Used Defense Sites	55	6	49	0

Sources: EnviroStor, GeoTracker, and Toxic Release Inventory databases, 2016.

Superfund National Priority List

The EPA's Superfund program is responsible for cleaning up the nation's most contaminated land and hazardous waste sites. In San Bernardino County, 73 hazardous waste sites are listed as Superfund sites, and 5 have been assigned to the final National Priorities List (NPL), which lists the most contaminated sites requiring federal and state response. Table 5.8-2 summarizes the five NPL sites undergoing cleanup. More than \$750 million will have been spent by federal, state, and local authorities by the time cleanup is complete.

Table 5.8-2 Superfund National Priorities List Sites in San Bernardino County

Site Name	Description	Contamination
Valley Region		
Newmark Contamination San Bernardino, CA	The Newmark groundwater contamination site underlies eight square miles of land in the northwestern and west-central portions of San Bernardino, around Shandon Hills and Muscoy. The contaminated area has been developed for light industry and residential uses. About 7.2 billion gallons of water per year is treated	Detection of the water contamination included chlorinated solvents, tetrachloroethylene (PCE), and TCE, resulting in the closure of 20 water supply wells in the Bunker Hills subbasin. ----- The EPA and the City/County of San Bernardino entered into an \$80 million settlement for cleanup
NPL Listing Date: 03/31/1989		
Norton Air Force Base San Bernardino, CA	Norton Air Force Base covers 2,165 acres and served as an overhaul center for aircraft. Past practices included burial of drums; disposal of waste oils, solvents, and paint residues into landfills, unlined pits, ponds, and drying beds; leaking underground tanks; spills of gas, oils, solvents, polychlorinated biphenyls, and acids.	Past TCE usage as a common degreasing solvent impacted the soil and upper water-bearing zone of a drinking water aquifer. Soil was also contaminated with dioxin, PCBs, and heavy metals including chromium, arsenic, and copper. + Cleanup costs to date (2013): \$127 million + Addtl cost to complete (2024): \$17 million
NPL Listing Date: 07/22/1987		

5. Environmental Analysis
 HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-2 Superfund National Priorities List Sites in San Bernardino County

Site Name	Description	Contamination
BF Goodrich Rialto, CA NPL Listing Date: 09/23/2009	This 160-acre site was developed in the 1940s and used by multiple businesses. Activities included a military facility for rail cars transporting ordnance, defense contractors, fireworks manufacturers, and production of solid-fuel rocket propellant with ammonium perchlorate.	The soil and water are contaminated with VOCs, perchlorate, and other toxic substances. These contaminants have migrated more than 800 feet into the Colton-Rialto groundwater basin. ----- + Estimated cost of cleanup exceeds \$100 million.
North Desert Region		
Marine Corps Base Barstow, CA NPL Listing Date: 11/21/1989	The 5,687-acre base site consists of three areas: Nebo, Yermo, and the Rifle Range. The base provides equipment maintenance, repair, overhaul, and rebuilding, and receives, stores, maintains, issues and ships materials. 38 areas of contamination have been found.	Groundwater contains volatile organic compounds (VOCs) and solvents such as trichloroethylene (TCE) and perchloroethylene. Soil is contaminated with VOCs, pesticides, polynuclear aromatic hydrocarbons, heavy metals, and polychlorinated biphenyls (PCBs). + Cleanup costs to date (2013): \$118 million + Add'l cost to complete (2039): \$43 million
George Air Force Base Victorville CA NPL Listing Date: 02/21/1990	George Air Force Base occupies 5,347 acres near Victorville and Adelanto. The base supported tactical fighter operations and training involving the use and disposal of a range of hazardous and nonhazardous materials. Site cleanup is ongoing.	Groundwater is contaminated with jet fuel, TCE, pesticides, and nitrates. Soil is contaminated with total petroleum hydrocarbons, dioxins, construction debris, medical wastes, pesticides, semivolatile organic compounds, and inorganic compounds. + Cleanup costs to date (2013): \$177 million + Add'l cost to complete (2014): \$60 million

Source: Appendix G of PEIR.

Toxic Chemical Releases

The TRI is maintained by the EPA. In general, chemicals covered by the TRI Program are those that cause: 1) cancer or other chronic human health effects; 2) significant adverse acute human health effects; and 3) significant adverse environmental effects. In 2014, the amount of toxic chemicals production-related waste in San Bernardino County totaled 22 million pounds. Approximately 10 companies (primarily in the mining, cement, and steel manufacturing industries) make up 70 percent of the total tonnage of the county's toxic chemical waste.

For toxic chemical production waste, the preferred management method is source reduction—i.e., waste is minimized before it is even produced. If toxic waste is produced, the preferred disposition is recycling or reuse, followed by energy recovery, treatment, and, as a last resort, releasing the waste to the land, air, and/or water. Since 2010, the percentage of toxic chemicals disposed of or released to the environment has declined, although the amount of waste treated for disposal has increased 25 percent. Table 5.8-3 details trends in toxic chemical waste disposition in San Bernardino County.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-3 Toxic Chemical Waste Disposition in San Bernardino County, 2010–2014

Criteria	Year of Record				
	2014	2013	2012	2011	2010
Number of TRI Facilities	102	100	98	108	112
Production-Related Waste (lbs.)	21.1 million	19.2 million	11.7 million	9.6 million	9.7 million
+ Waste Recycled	33%	31%	52%	51%	56%
+ Energy Recovery	2%	4%	5%	6%	7%
+ Treatment	56%	56%	27%	27%	24%
+ Disposed or Other Release	8%	10%	16%	16%	13%

Source: TRI Explorer, April 2016.

Former Defense Sites

San Bernardino County has a long history as military training grounds, testing grounds, storage/disposal facilities, manufacturing, and landing strips. Many historical sites have contamination. As underdeveloped lands are considered for development or open space and recreational uses, people and the environment could be exposed to unexploded ordnance, chemical releases, or other hazards.

San Bernardino County has 54 formerly used defense (FUD) sites, transferred from the Department of Defense prior to 1986. Many require cleanup for one or more conditions: 1) hazardous, toxic, and radioactive waste; 2) building demolition and/or debris; 3) military munitions and munitions constituents; and 4) containerized hazardous, toxic, and/or radioactive waste. The majority of FUD sites are in the Desert Region, but several are in the Valley Region. They cover a total of 258,000 acres, or just over 400 square miles. According to the General Accounting Office, remediation costs range from \$320 to \$420 million. Many FUD sites have only received preliminary evaluations, although cleanup has commenced on a few.

In 1996, Congress established the Army's Defense Environmental Restoration Program, a two-part program to provide for the cleanup of Department of Defense sites. The Installation Restoration Program identifies, investigates, and cleans up hazardous substances, pollutants, and contaminants at active Army installations. The Military Munitions Response Program addresses nonoperational rangelands with unexploded ordnance, discarded military munitions, or munitions constituents. The FUD Site Program was enacted to clean up environmental contamination at properties no longer under military use.

Underground Storage Tanks

Underground storage tanks (UST) include the tanks and pipes connecting them that are used to store hazardous substances. USTs are a key cause of groundwater contamination from gasoline compounds and solvents. Statewide, the regional water boards have been identifying cleanup requirements and abandoned leaking tanks and establishing regulations to protect groundwater and public health.

The County of San Bernardino has nearly 1,000 permitted tanks, as shown in Table 5.8-4. The total number of USTs that have been located, remediated, and closed may be as many as 1,000. The Valley and Desert regions

5. Environmental Analysis
HAZARDS AND HAZARDOUS MATERIALS

have the vast majority of permitted tanks and cleanup cases. Since 2012, the State Water Board has implemented a statewide program to identify and address improperly closed or abandoned underground storage tanks.

Table 5.8-4 Underground Storage Tanks in San Bernardino County

Region	Regulatory Status			
	Permitted Tanks: Total in Operation	Leaking Tanks: Closed/Eligible for Closure	Leaking Tanks: Open Cases	Abandoned Tanks (all status)
Valley	671	657	26	N/A
Desert	284	277	25	N/A
Mountains	37	84	9	N/A
Total	992	1,018	60	N/A

Source: State Water Resources Control Board, GeoTracker database, 2016.

* The total number of UST sites cannot be determined by adding the respective totals for permitted USTs and leaking USTs. Due to database design, there is some overlap in the categories. There number of abandoned USTs is currently under investigation.

Brownfields Sites

A brownfield is a property whose expansion, redevelopment, or reuse may be complicated by a hazardous substance, pollutant, or contaminant. There are 54 brownfield sites in San Bernardino County listed on the EPA's Facility Registry Service (FRS) database. Omitting repeated listings of sites with the same name and address yields 24 sites, all in the Valley Region and listed in Table 5.8-5.

Table 5.8-5 Brownfield Sites in San Bernardino County

Site Name	Address	City/Community
Valley Region		
Boardwell (2 sites with same name and address)	1600 Block Boardwell	Bloomington
Yorba School Site - Chino Valley Unified School Di-Yorba-1019-441-03	13404-13512 Yorba Ave	Chino
Congress	300 Block Congress Street	Colton
Cooley Ranch Landfill (15 Sites with Same Name and Address)	600 Block off Congress St	Colton
D Street And RR	316 W. D Street	Colton
Fairway Dr.	300 Block Fairway Drive	Colton
Flores Street	900 Block Flores Street	Colton
Hanna and RR (2 sites with same name and address)	300 Block Hanna Street	Colton
M Street	790 E. M Street	Colton
Mt. Vernon 1	1033 Mt. Vernon Avenue	Colton
Mt. Vernon 2	800 Block Colton Avenue	Colton
Mt. Vernon 3	800 Block Colton Avenue	Colton
Mt. Vernon 4	1000 Block Mt. Vernon Avenue	Colton
Mt. Vernon 5	1000 Block Mt. Vernon Avenue	Colton
N. Mt. Vernon 1	1653 N. Mt. Vernon Avenue	Colton
N. Mt. Vernon 2	1500 Block N. Mt. Vernon Avenue	Colton
N. Mt. Vernon 3	1601 N. Mt. Vernon Avenue	Colton

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-5 Brownfield Sites in San Bernardino County

Site Name	Address	City/Community
Olive and RR	293 W. Olive Street	Colton
Santa Fe Depot	455 N. 6th Street	Colton
Valley Blvd.	300 Block E. Valley Boulevard	Colton
City Warehouse	261,265 S. Willow Avenue	Rialto
Rails to Trails Parcel (5 sites with same name; no known address)	No Known Address	Rialto
Silva Parcels (8 sites with same name and address)	241 S.Palm Ave. And 239/249 S. Orange Ave.	Rialto
Transit Village Core	177 South F Street	San Bernardino
No sites listed in Mountain, North Desert, or East Desert regions		
Source: USEPA 2018		

Radioactive Waste

Radioactive waste is generated from the nuclear weapons program, commercial nuclear power, medical applications, mining, and corporate- and university-based research programs. Radioactive waste is generally categorized as high-level radioactive waste—typically spent fuel from nuclear reactors—and low-level radioactive waste (LLRW). LLRW includes irradiated tools, lab clothing, and trash, which have shorter half-lives—from multiple days to several hundred years. LLRW is classified into one of three classes based on its concentration, half-life, and types of radionuclides. Class A has the shortest half-life and lowest concentrations; its radioactivity returns to background levels in 100 years. About 3.5 cubic meters of LLRW was generated in 2012 in San Bernardino County. No Class B or Class C or greater LLRW was generated in 2012.

Some LLRW generators will store waste to allow its radioactivity to diminish to levels that permit disposal as nonradioactive waste. As of 2012, San Bernardino County had 12.7 cubic meters of Class A low-level radioactive waste in the county. No Class B, Class C, or greater than Class C radioactive waste is stored in the county.

Solid Waste Disposal and Transfer Facilities

Sources of municipal solid waste include residential, commercial, institutional, and industrial activities. CalRecycle and the County Public Works Department regulate the operation of solid waste facilities by enforcing compliance with regulations through permitting, inspection, and enforcement.

San Bernardino County has 180 solid waste facilities that accept, process, transfer, and dispose of municipal waste, tires, construction debris, green waste, biosolids, contaminated soil, metals, and other wastes. Figure 5.8-1, *Waste Disposal Facilities*, maps the larger waste disposal and landfill sites in San Bernardino County.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Hazardous Materials Transport

Highway Transportation

San Bernardino County's highways, railroads, and pipelines are frequently used to transport hazardous materials including gasoline, chemicals, and crude oil. Highway transportation is the leading cause of hazardous material incidents in San Bernardino County. According to the US Department of Transportation (USDOT), 3,240 incidents in hazardous waste transportation were reported from 2000 to 2015, which is approximately 200 highway incidents annually. These incidents caused an estimated \$25.7 million in property, cleanup, and personal injury damage. About 50 percent of the incidents occurred during the transportation phase, with the remainder during unloading/loading or storage of materials. There are 73 businesses in San Bernardino County licensed to transport hazardous waste.

Hazardous Waste Routes

Hazardous waste routes in the County include Interstate highways 10, 15, 40, and 215 and state routes 18, 58, 71, 127, 138, and 247. The Safety Background Report (Appendix G to this PEIR) has more information on routes and materials permitted on each route.

Railroad Transportation

According to the USDOT, 796 hazardous materials incidents were reported on railroads from 2000 to 2015, or 50 annually. They caused a total of \$1.7 million in property damage. The vast majority of incidents was in Barstow, Bloomington, Colton, San Bernardino, and Fontana. Approximately 95 percent occurred during the transportation phase rather than during loading/unloading or another process.

Pipeline Transportation

San Bernardino County is traversed by transmission and gathering pipelines for natural gas and hazardous liquid. Most pipelines are in rural and unpopulated areas. As of 2015, 10 major companies own and operate pipelines. Since 2010, 12 pipeline incidents have occurred, resulting in \$5.2 million in damage. However, like other transportation incidents, many accidents and discharges to the environment may also be unreported. Regardless, as San Bernardino County develops, subdivisions will eventually be built closer to existing and planned routes for pipelines.

Asbestos-Containing Materials and Lead-Based Paint

Many structures in unincorporated areas of the County are older than about 1978, and thus could contain asbestos-containing materials and/or lead-based paint. There are numerous structures predating 1978 in each of the four county regions.

5.8.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- H-2 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.
- H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.
- H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

5.8.1.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR HAZ-1 **Transportation of Hazardous Waste.** Hazardous materials and hazardous wastes will be transported to and/or from the projects developed under the Countywide Plan in compliance with any applicable state and federal requirements, including the U.S. Department of Transportation regulations listed in the Code of Federal Regulations (Title 49, Hazardous Materials Transportation Act); California Department of Transportation standards; and the California Occupational Safety and Health Administration standards.
- RR HAZ-2 **Resource Conservation and Recovery Act.** Hazardous waste generation, transportation, treatment, storage, and disposal will be conducted in compliance with the Subtitle C of the Resource Conservation and Recovery Act (RCRA) (Code of Federal Regulations, Title 40, Part 263), including the management of nonhazardous solid wastes and underground tanks storing petroleum and other hazardous substances. The San Bernardino County Fire Protection District serves as the designated Certified Unified Program Agency (CUPA) and which implements state and federal regulations for the following programs: (1) Hazardous Materials Release Response Plans and Inventory Program, (2) California Accidental Release Prevention (CalARP) Program, (3) Aboveground Petroleum Storage Act Program, and (4) Underground Storage Tank (UST) Program (5) Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs (6) Hazardous Materials Management Plan and Hazardous Material Inventory Statement Program.
- RR HAZ-3 **California UST Regulations.** Underground storage tank (UST) repairs and/or removals will be conducted in accordance with the California UST Regulations (Title 23, Chapter 16 of the California Code of Regulations). Any unauthorized release of hazardous materials will require release reporting, initial abatement, and corrective actions that will be completed with oversight from the Regional Water Quality Control Board, Department of Toxic Substances Control, San Bernardino County Fire Protection District, South Coast Air Quality Management District, and/or other regulatory agencies, as necessary. Use of existing USTs

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

will also have to be conducted (i.e., used, maintained and monitored) in accordance with the California UST Regulations (Title 23, Chapter 16 of the California Code of Regulations).

RR HAZ-4 **ACMs and LBPs.** Demolition activities that have the potential to expose construction workers and/or the public to asbestos-containing materials (ACMs) or lead-based paint (LBP) will be conducted in accordance with applicable regulations, including, but not limited to:

- South Coast Air Quality Management District's Rule 1403
- California Health and Safety Code (Section 39650 et seq.)
- California Code of Regulations (Title 8, Section 1529)
- California Occupational Safety and Health Administration regulations (California Code of Regulations, Title 8, Section 1529 [Asbestos] and Section 1532.1 [Lead])
- Code of Federal Regulations (Title 40, Part 61 [asbestos], Title 40, Part 763 [asbestos], and Title 29, Part 1926 [asbestos and lead])

RR HAZ-5 **Removal of Hazardous Materials.** The removal of hazardous materials, such as polychlorinated biphenyls (PCBs), mercury-containing light ballast, and mold, will be completed in accordance with applicable regulations pursuant to 40 CFR 761 (PCBs), 40 CFR 273 (mercury-containing light ballast), and 29 CFR 1926 (molds) by workers with the hazardous waste operations and emergency response (HAZWOPER) training, as outlined in 29 CFR 1910.120 and 8 CCR 5192.

RR HAZ-6 **California Code of Regulations (Title 8, Section 1541).** New construction, excavations, and/or new utility lines within 10 feet or crossing existing high-pressure pipelines, natural gas/petroleum pipelines, or electrical lines greater than 60,000 volts will be designed and constructed in accordance with the California Code of Regulations (Title 8, Section 1541).

Policy Plan

The Hazards Element of the proposed San Bernardino Countywide Plan sets forth the following policies intended to minimize risks to people and the environment from hazardous materials:

Goal HZ-2 Human-generated hazards. People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

Policy HZ-2.1 Hazardous waste facilities. We regulate and buffer hazardous waste facilities to protect public health and avoid impacts on the natural environment.

Policy HZ-2.2 Database of hazardous materials. We maintain up-to-date databases of the storage, use, and production of hazardous materials, based on federally- and state-required disclosure and notification, to appropriately respond to potential emergencies.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- Policy HZ-2.3** Safer alternatives. We minimize the use of hazardous materials by choosing and by encouraging others to use non-toxic alternatives that do not pose a threat to the environment.
- Policy HZ-2.4** Truck routes for hazardous materials. We designate truck routes for the transportation of hazardous materials through unincorporated areas and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.
- Policy HZ-2.5** Community education. We engage with residents and businesses to promote safe practices related to the use, storage, transportation, and disposal of hazardous materials.
- Policy HZ-2.6** Coordination with transportation authorities. We collaborate with airport owners, FAA, Caltrans, SBCTA, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.
- Policy HZ-2.7** Truck delivery areas. We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.

5.8.1.4 ENVIRONMENTAL IMPACTS

The applicable thresholds are identified in brackets after each impact statement.

Most population growth due to Countywide Plan buildout would be in two areas: the Bloomington CPA in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion). Thus, impacts are analyzed in some detail for the four areas where most growth would occur, and much more generally for the rest of the unincorporated areas of the county.

Impact 5.8-1: Construction and operations of projects built under the Countywide Plan would involve the transport, use, storage, and disposal of hazardous materials. [Thresholds H-1, H-2, and H-3]

Construction and operations of projects built under the Countywide Plan would involve the transport, use, storage, and disposal of hazardous materials. Countywide Plan buildout would involve development of about 15,356 residential units and nearly 19.4 million square feet of nonresidential building area. Approximately 92 percent of those residential units would be in either the Valley Region (7,001 units) or the North Desert Region (6,281 units). About 92 percent of the nonresidential development (approximately 18.38 million square feet) would be in the Valley Region.

Construction

Construction of projects would involve the use of substances such as paints, sealants, solvents, greases, adhesives, cleaners, lubricants, and fuels. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard to the public or the environment. These activities would

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

also be short term or one time in nature. Project construction workers would be trained in safe handling and hazardous materials use. Project construction contractors would maintain equipment and supplies on construction sites for containing and cleaning up spills that could be safely contained and cleaned by construction workers. If a hazardous materials release could not be safely contained and cleaned up by on-site personnel, the affected project applicant would notify County Fire immediately.

Additionally, to prevent hazardous conditions, existing local, state, and federal laws and regulations—such as those listed under Section 5.8.2.1, *Regulatory Setting*—are required to be enforced at construction sites. The use, storage, transport, and disposal of construction-related hazardous materials and waste would be required to conform to existing laws and regulations. Compliance with existing laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts to occur. Compliance with these laws and regulations would be ensured through the County’s development review and building plan check process.

Demolition

Future development projects under the Countywide Plan may involve demolition of existing buildings and structures associated with a specific development site—some building materials used in the mid and late 1900s are considered hazardous to the environment and harmful to people. Asbestos, for example, was out of building materials by 1980, but was occasionally used until the late 1980s. Lead-based paint was banned for residential use in 1978 and phased out for commercial structures in 1993.

Due to the age of the buildings and structures in unincorporated county areas (many over 50 years old), it is likely that they contain ACMs and LBP as well as other building materials containing lead (e.g., ceramic tile, insulation). Demolition could cause encapsulated ACM (if present) to become friable and, once airborne, they are considered a carcinogen.^{1,2} Demolition could also cause the release of lead into the air. The EPA has classified lead and inorganic lead compounds as “probable human carcinogens” (EPA 2013), and such releases could pose significant risks to persons living and working in and around a proposed development site.

Abatement of all ACM and LBP encountered during any future building demolition activities would be required in accordance with all applicable laws and regulations, including those of the EPA (which regulates disposal), US Occupational Safety and Health Administration, US Department of Housing and Urban Development, Cal/OSHA (which regulates employee exposure), and SCAQMD.

To further prevent impacts from the potential release of ACM or LBP, an ACM and LBP survey of existing buildings and structures constructed prior to 1995 would be required prior to any demolition activities, as outlined in RR HAZ-4. With compliance of existing laws and regulations, hazardous impacts related to the

¹ When dry, an ACM is considered friable if it can be crumbled, pulverized, or reduced to powder by hand pressure. If it cannot, it is considered non-friable ACM. It is possible for non-friable ACM to become friable when subjected to unusual conditions, such as demolishing a building or removing an ACM that has been glued into place.

² A carcinogen is a substance that causes cancer or helps cancer grow.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

release of ACMs and LBP are not anticipated to occur. Compliance with these laws, regulations, and mitigation measure would be ensured through the County’s development review and building plan check process.

Operation

Industrial uses and some commercial uses utilize greater amounts of hazardous materials than do other uses such as residential uses and schools.

Three proposed CWP land use categories would permit industrial development: Limited Industrial, General Industrial, and Special Development.

The **Limited Industrial** land use category would permit light or limited industrial activities where operations are totally enclosed in a structure; and suitable locations for employee-intensive uses, such as research and development, technology centers, corporate offices, clean industry, and supporting retail uses.

The **General Industrial** category would permit general or heavy industrial activities where all or part of operations take place outside of enclosed structures, exterior storage is not fully screened from public view, or involve large equipment; and operations generate substantial odors, noise, vibration, or truck traffic.

The **Special Development** category would allow for a combination of residential, commercial, and/or manufacturing activities.

All of the projected net increase in industrial land uses under the Countywide Plan—about 14.7 million square feet—would be in the Valley region. The net growth in industrial uses would be about 80 percent of the net increase in nonresidential uses in the Valley Region, and 76 percent of the increase in nonresidential uses countywide (see Table 5.8-6).

Table 5.8-6 Net Increases in Nonresidential Land Uses due to Countywide Plan Buildout

Region	Land Uses	Net Growth, Nonresidential Building Square Feet
Valley	Industrial Uses	14,704,254
	Commercial and Other Nonresidential Uses	3,683,194
	Total Nonresidential Uses	18,387,448
Mountain	Total Nonresidential Uses	162,356
North Desert	Total Nonresidential Uses	783,047
East Desert	Total Nonresidential Uses	65,050
Total	Total Nonresidential Uses	19,397,900

Uses of hazardous materials in operations of land uses permitted under the Countywide Plan would be subject to regulations enforced by the same agencies as for uses of hazardous materials in construction.

Businesses would be required to provide workers with training on safe use, handling, and storage of hazardous materials. Businesses would maintain equipment and supplies for containing and cleaning up spills of hazardous materials that could be safely contained and cleaned by onsite workers; and would immediately notify emergency

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

response agencies in the event of a hazardous materials release that could not be safely contained and cleaned up by onsite personnel.

Level of Significance before Mitigation: With the implementation of RR HAZ-1 through RR HAZ-6, Impact 5.8-1 would be less than significant.

Impact 5.8-2: Projected projects associated with the Countywide Plan buildout are in areas that are on a list of hazardous materials sites. [Threshold H-4]

There are numerous hazardous materials and hazardous waste sites listed in unincorporated regions of the County. Numbers of some categories of hazardous materials and hazardous waste sites are summarized above in Tables 5.8-1, 5.8-3, and 5.8-4; specific sites in some categories are listed above in Tables 5.8-2 and 5.8-5.

Potential Growth Areas

For each of the four potential growth areas under the Countywide Plan (Bloomfield CPA, City of Fontana SOI [west], East Valley Area Plan area, and Town of Apple Valley SOI), the following databases of hazardous materials sites were searched for the following categories of hazardous materials and hazardous waste sites:

- GeoTracker (State Water Resources Control Board):
 - Leaking Underground Storage Tank (LUST) sites for which SWRCB has open cases
 - Cleanup Program Sites (open cases)
 - Military Cleanup Sites (open cases)
- Land Disposal Sites with status Active
- EnviroStor (Department of Toxic Substances Control)
 - Cleanup Sites (open cases)
- Hazardous Waste sites (Status Operating Permit or Undergoing Closure)
- Cleanups in My Community (US Environmental Protection Agency)
- Brownfields sites: properties the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

The types of sites identified above were chosen because they may present greater hazard than listings for some other types of sites which document facilities and/or permits but not known or suspect hazardous materials releases. Case status was limited to open or active to exclude sites which have been remediated to relevant action levels, and for which regulatory agencies have therefore closed cases. A Phase I Environmental Site Assessment for a development or redevelopment project would be expected to identify far more hazardous materials sites than are identified here.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Valley Region

Bloomington

No sites of the types and statuses listed above were identified.

Fontana SOI (west)

- JSS Market at 14518 Valley Boulevard is listed on the GeoTracker database as a Leaking Underground Storage Tank (LUST) site; the case is open (SWRCB 2018).

The following sites are listed on the EnviroStor database with open cases:

- Advanced Environmental Inc. at 13579 Whitman Avenue is listed as a Corrective Action site with status Active.
- Advanced Steel Recovery at 14451 Whittram Avenue is listed as a Voluntary Cleanup Site with status Active.
- Kaiser Steel at 9400 Cherry Avenue is listed as a Voluntary Cleanup Site with status Active.
- California Steel Industries Inc. at 14000 San Bernardino Avenue is listed as a State Response site with status Active.
- Chemwest Industries Inc. at 13425 San Bernardino Avenue is listed as a Hazardous Waste Facility with status Undergoing Closure (DTSC 2018).

East Valley Area Plan area

The California Street Landfill, an active landfill, is in the City of Redlands at 2151 Nevada Street about 750 feet north of the East Valley Area Plan site (SWRCB 2018). No other sites of the types and statuses specified above are mapped in the East Valley Area Plan area.

North Desert Region

No sites of any of the types and statuses specified above are mapped in the Potential Annexation Area of the Town of Apple Valley SOI. No such sites are mapped in the Hacienda Fairview Valley Specific Plan (HFVSP) area. However, one site is listed on the EnviroStor database just south of the HFVSP area:

- Victorville Practice Bombing Range No. 2: near Keator Road: formerly used as a practice bombing target. Status inactive/action required (this site is shown on the EnviroStor map with 2 symbols representing separate sites; they appear to be the same site based on the site summaries on the EnviroStor database).

Compliance with the existing laws, regulations, and mitigation measures would be ensured through the County's development review and building plan check process.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Level of Significance before Mitigation: With the implementation of RR HAZ-1 through RR HAZ-6, Impact 5.8-2 would be less than significant.

5.8.1.5 CUMULATIVE IMPACTS

Impacts arising from hazardous materials and hazardous materials releases are site-specific and generally do not combine to cause cumulative impacts.

5.8.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of RR HAZ-1 through RR HAZ-2, Impact 5.8-1 and 5.8-2 would be less than significant.

5.8.1.7 MITIGATION MEASURES

No mitigation is necessary.

5.8.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts are less than significant.

5.8.2 Airport-Related Hazards

5.8.2.1 ENVIRONMENTAL SETTING

Regulatory Background

Airport authorities and other agencies regulate aircraft activity. The State Aeronautics Act of the California Public Utilities Code establishes statewide requirements for the airport land use compatibility planning and requires nearly every county to create an Airport Land Use Commission or other alternative. The main goal of the Airport Land Use Commission (ALUC) is to protect the public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to extensive noise and safety hazards within areas around airports. Requirements for the creation of ALUCs are established under the California State Aeronautics Act (Public Utility Code Section 21670). ALUC reviews land use compatibility issues for development surrounding airports including safety, noise, overflight and airspace protection. These compatibility issues are identified and analyzed in the Airport Land Use Compatibility Plans for each airport, and implementation of these Plans promotes compatible development around the airports.

In 1993, Senate Bill 443 modified the law making the establishment of an ALUC permissive rather than mandatory. As a result, San Bernardino County, after consultation with all cities affected by airports, disbanded the ALUC per Resolution 93-295, effective as of November 18, 1993. In 1994, Assembly Bill 2831 was enacted which reinstated the requirement to address the potential for land use conflicts requiring each County in which there is an airport operated for the benefit of the general public establish either an ALUC or an alternative process with a designated responsible agency or agencies. San Bernardino County jurisdictions opted to establish an alternative process where each local agency affected by the airport will serve as the responsible agency for the projects within its jurisdiction. To review airport land use compatibility in unincorporated areas

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

of the County, the County Planning Commission is augmented by two County Airport Commissioners whenever airport safety or airport land use compatibility review is required.

Existing Conditions

Public-Use Airports and Military Airfields

Public-use airports and military airfields in San Bernardino County are listed in Table 5.8-7. Of the 16 public-use airports, 15 are general aviation airports (that is, they don't receive scheduled airline service). Ontario International Airport is the only airport in the county with scheduled airline service. Furthermore, China Lake Navy Airfield and Edwards Air Force Base, which are both not located in San Bernardino County, have flight operations over County lands.

Table 5.8-7 Public-Use Airports and Military Airfields in San Bernardino County

Facility	City/Community	Type	Airport Land Use Planning Agency
Public-Use Airports			
Valley Region			
Cable Airport	Upland	General Aviation	City of Upland
Chino Airport	Chino	General Aviation	City of Chino
Ontario International Airport	Ontario	Commercial	City of Ontario
Redlands Municipal Airport	Redlands	General Aviation	City of Redlands
San Bernardino International Airport	San Bernardino	General Aviation	San Bernardino International Airport Authority
Mountain Region			
Big Bear City Airport	Big Bear City	General Aviation	San Bernardino County
North Desert Region			
Apple Valley Airport	Apple Valley	General Aviation	Town of Apple Valley
Baker Airport	Baker	General Aviation	San Bernardino County
Barstow-Daggett Airport	Daggett	General Aviation	San Bernardino County
Chemehuevi Valley Airport	Havasu Lake	General Aviation	Chemehuevi Indian Tribe
Hesperia Airport	Hesperia	General Aviation	City of Hesperia
Needles Airport	Needles	General Aviation	City of Needles
Southern California Logistics Airport	Victorville	General Aviation	City of Victorville, City of Adelanto, and San Bernardino County
East Desert Region			
Roy Williams Airport	Joshua Tree	General Aviation	San Bernardino County
Twentynine Palms Airport	Twentynine Palms	General Aviation	San Bernardino County
Yucca Valley Airport	Yucca Valley	General Aviation	San Bernardino County
Military Airfields			
North Desert Region			
Twentynine Palms Marine Corps Air Ground Combat Center Expeditionary Airfield	Twentynine Palms	Military	US Defense Department
Bicycle Lake [Fort Irwin] Army Airfield	Fort Irwin	Military	US Defense Department

Source: Caltrans 2016.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Airport Safety Compatibility Zones

Six airport safety zones are described in the Caltrans California Airport Land Use Planning Handbook. Five of the zones (Zones 1-5) are along or near the alignment of the runway; Zone 6 extends in an oval shape several thousand feet from the runway in all directions (see Figure 5.8-2, *Airport Safety Zones*).

No structures are permitted in Zone 1 (Runway Protection Zone). Permitted land uses and land use intensities increase incrementally between Zone 2 and Zone 6. In Zone 6, Traffic Pattern Zone, land uses accommodating very large assemblies of people—such as stadiums—should be avoided; and schools, hospitals, and nursing homes are limited (Caltrans 2011).

Airport land use compatibility plans for some airports—for example, smaller airports in rural areas—may establish fewer than six safety zones.

5.8.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard for people residing or working in the project area.
- H-6 For a project in the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

5.8.2.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

RR HAZ-7 **Federal Aviation Regulations.** Development will be designed and constructed in accordance with Part 77 of the Federal Aviation Regulations (FAR), which requires the County of San Bernardino to notify the Federal Aviation Administration of proposed construction or alteration within 5,000 feet of a heliport where the structure would extend into a slope of a 25:1 from the nearest landing and take-off area of the heliport (FAR §§ 77.9).

Any helistop(s) will be designed in accordance with FAR §§ 77.23 that provides imaginary surface criteria for heliports for safe operation of helicopters. The approach imaginary surface for a heliport will extend at a 8:1 slope upward from the heliport's primary surface (i.e., the designated take-off and landing area) for a distance of 4,000 feet, and the heliport's transitional surface will extend from the lateral boundary of both the primary surface and approach surface at a 2:1 slope for a distance of 250 feet.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Policy Plan

The Hazards Element of the proposed San Bernardino Countywide Plan sets forth the following policy intended to minimize risks to people and the environment:

- Policy HZ-2.6 Coordination with transportation authorities.** We collaborate with airport owners, FAA, Caltrans, SBCTA, SCAG, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.
- Policy TM-6.4 Airport land use and noise compatibility.** We require proposed development in unincorporated areas to be consistent with applicable airport master plans, airport safety review areas, and military air installation compatible use zones. We may support proposed development in the influence area of County airports only when they are consistent with applicable airport master plans.
- Policy HZ-2.10 Agricultural operations.** We require new development adjacent to existing conforming agricultural operations to provide adequate buffers to reduce the exposure of new development to operational noise, odor, and the storage or application of pesticides or other hazardous materials.

5.8.2.4 ENVIRONMENTAL IMPACTS

The applicable thresholds are identified in brackets after each impact statement.

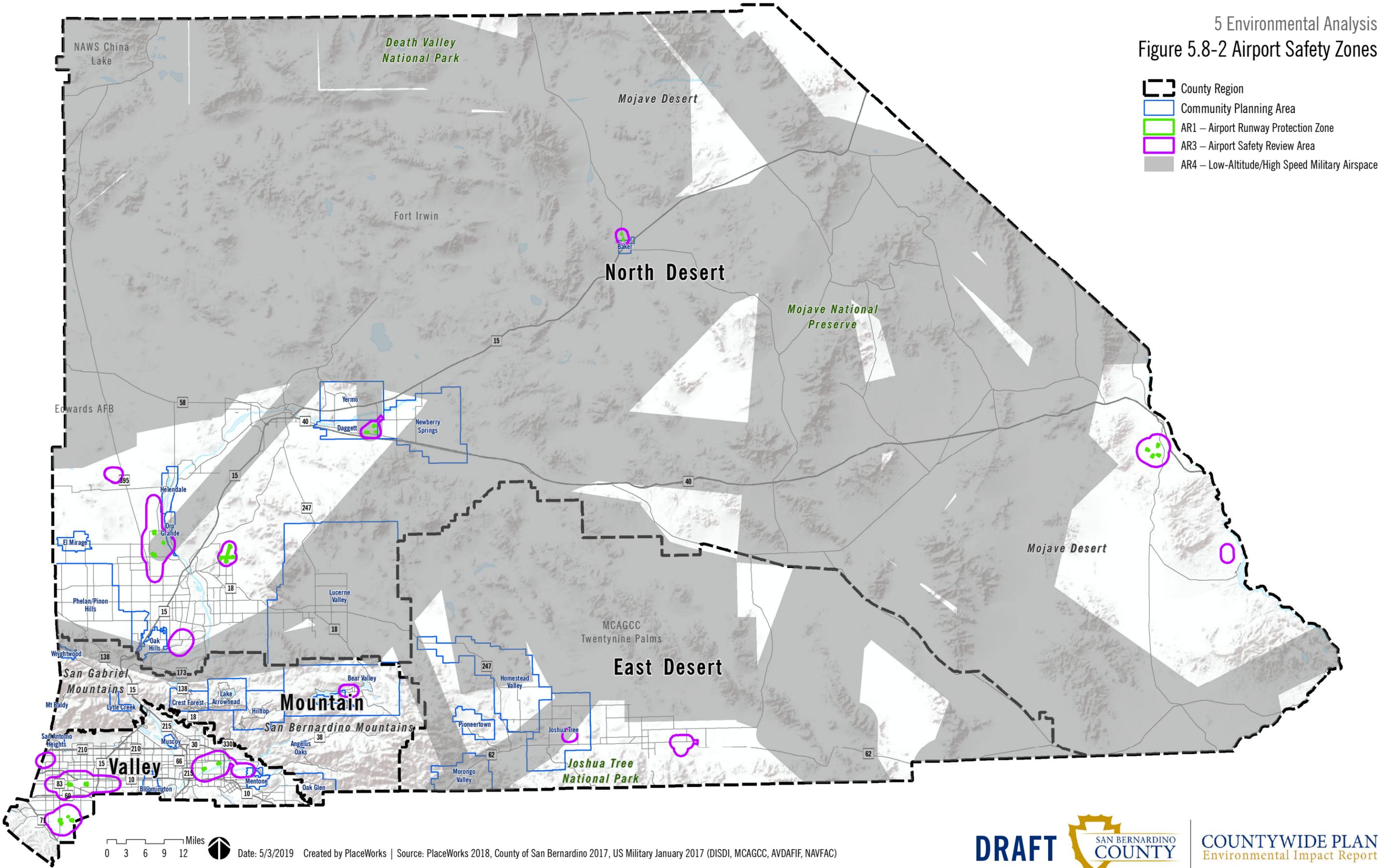
Most population growth due to Countywide Plan buildout would be in two areas: the Bloomington CPA in the Valley Region, and future master planned communities in the Town of Apple Valley SOI in the Desert Region. Employment growth would be focused in the unincorporated portions of the Valley region, particularly in the Fontana SOI, East Valley Area Plan, and Bloomington CPA (see Section 5.0 for further discussion). Thus, impacts are analyzed in some detail for the four areas where most growth would occur, and much more generally for the rest of the unincorporated areas of the county.

Impact 5.8-3: The Project site is located in the vicinity of an airport or within the jurisdiction of an airport land use plan. [Thresholds H-5 and H-6]

Countywide Plan buildout could involve development of some projects within airport safety zones for public-use airports. The 16 public-use airports and two military airfields in San Bernardino County are listed in Table 5.8-7 above and shown in Figure 5.8-2. Most development under the Countywide Plan would occur in areas outside of safety compatibility zones for public-use airports, as described below.

County review of projects within safety compatibility zones for airports where the County has airport land use compatibility planning authority would include consideration of consistency with the relevant Airport Land Use Compatibility Plan.

5 Environmental Analysis
 Figure 5.8-2 Airport Safety Zones



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Potential Growth Areas

For each of the four areas where most development would occur under the Countywide Plan, the nearest public-use airports—and whether the affected area is within safety compatibility zones for that airport—are identified.

Valley Region

Bloomington CPA

The nearest public-use airport to the Bloomington CPA is Flabob Airport in the City of Rubidoux in Riverside County, about 2.9 miles to the south (Caltrans 2016). The Bloomington CPA is outside of safety compatibility zones for Flabob Airport, which are within the cities of Rubidoux and Riverside in Riverside County (RCALUC 2004).

City of Fontana SOI (west)

The nearest public-use airport to the City of Fontana SOI (west) is Ontario International Airport (ONT) about 2.5 miles to the west. The SOI is outside of safety compatibility zones for ONT, which are in the City of Ontario (City of Ontario 2011).

East Valley Area Plan Area

The closest public-use airport to the East Valley Area Plan (EVAP) area is San Bernardino International Airport (SBD) approximately 0.6 mile to the north. The EVAP area is not in safety compatibility zones for SBD mapped in the Airport Layout Plan for SBD (SBIAA 2010).

North Desert Region

Town of Apple Valley SOI

The nearest public-use airport to the Potential Annexation Area is the Town of Apple Valley Airport about 1.3 miles to the southeast. Safety compatibility zones for the Town of Apple Valley are designated as two Airport Overlay zoning districts by the Town of Apple Valley; the Potential Annexation Area is outside of the Airport Overlay Districts (Town of Apple Valley 1995; Town of Apple Valley 2015).

The Town of Apple Valley Airport is also the nearest public-use airport to the Hacienda Fairview Valley Specific Plan (HFVSP) area about 3.4 miles southeast of the Airport; the HFVSP area is outside of the Airport Overlay Districts (Town of Apple Valley 1995; Town of Apple Valley 2015).

Military Airfields

Countywide Plan buildout would not subject people or structures to airport-related hazards arising from military airfields, as those airfields are within military installations where the US Department of Defense has authority for land use regulation and not the County.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Level of Significance before Mitigation: With implementation of RR HAZ-7, Impact 5.8-3 would be less than significant.

5.8.2.5 CUMULATIVE IMPACTS

The areas considered for cumulative airport-related hazards impacts are the airport influence areas of the 16 public-use airports in the County. Twelve of the 16 public-use airports in the County are within incorporated cities and towns (see Table 5.8-7 above). Some projects in incorporated cities and towns in the County may be proposed within safety compatibility zones for those airports, and thus could cause some hazard to people on the ground from aircraft crashes. Airport land use planning agencies for those airports (see Table 5.8-7) regulate development within such zones. Projects proposed within such zones would be required to comply with land use regulations for the respective zones set forth by the affected agencies. Cumulative impacts would be less than significant after compliance with such regulations, and impacts of Countywide Plan buildout would be less than significant.

5.8.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of RR HAZ-7, Impact 5.8-3 would be less than significant.

5.8.2.7 MITIGATION MEASURES

No mitigation is necessary.

5.8.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts are less than significant.

5.8.3 Emergency Plans and Wildfire Hazards

5.8.3.1 ENVIRONMENTAL SETTING

Regulatory Background

California Building Code and Fire Code

Chapter 7A of the California Building Code (CBC), Materials and Methods for Exterior Wildfire Exposure, prescribes building materials and construction methods for new buildings in a fire hazard severity zone. Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures.

Chapter 49 of the California Fire Code (CFC), Requirements for Wildland-Urban Interface Fire Areas, prescribes construction materials and methods in fire hazard severity zones; requirements generally parallel CBC Chapter 7A.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

California Public Resources Code

Defensible Space Regulations

Public Resources Code (PRC) Sections 4291 et seq. require that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. This requirement does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary within the 100-foot perimeter of the structure, the most intense being within the first 30 feet around the structure.

SRA Fire Safe Regulations

State Responsibility Area (SRA) Fire Safe Regulations outline basic wildland fire protection standards. SRA Fire Safe Regulations can decrease the risk of wildfire events in the wildland interface. SRA Fire Safe Regulations do not supersede local regulations that equal or exceed minimum state regulations. The state statute for wildfire protection is PRC, Section 4290. Requirements in the code include information on:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads, and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts

San Bernardino County Fire Hazard Abatement Program

To reduce the threat of wildfires, the San Bernardino County Fire Hazard Abatement (FHA) Program enforces the fire hazard requirements in San Bernardino County Code Sections 23.0301 to 23.0319. The FHA Program establishes defensible space and reduction/removal of flammable materials on properties. The program conducts surveys to identify fire hazards throughout the year, and notices to abate the hazard(s) are mailed to property owners. Property owners have 30 days to abate the violations. Failure to abate may result in citations, penalties, and/or fees. The FHA Program responds to complaints year-round in the unincorporated areas and contracting cities and fire districts.

California Code of Regulations Title 14 Section 1250 et seq.: Fire Prevention Standards for Electric Utilities

California Code of Regulations Title 14 Section 1250 et seq. set forth fire prevention standards for electric utilities. Sections 1254 and 1256 set forth requirements for vegetation clearance from poles, towers, and wires.³

Section 1254

The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead end or corner pole unless such pole or tower is exempt from minimum clearance requirements by provisions of 14 CCR Section 1255 or PRC Section 4296. The radius of the cylinder is 3.1

³ Wires are referred to as “conductors” in Section 1256.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

m (10 feet) measured horizontally from the outer circumference of the specified pole or tower with height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid with the ground to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

- (a) At ground level -remove flammable materials, including but not limited to, ground litter, duff and dead or desiccated vegetation that will allow fire to spread, and;
- (b) From 0-2.4 m (0-8 feet) above ground level -remove flammable trash, debris or other materials, grass, herbaceous and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 m (8 feet).
- (c) From 2.4 m (8 feet) to horizontal plane of highest point of conductor attachment -remove dead, diseased or dying limbs and foliage from living sound trees and any dead, diseased or dying trees in their entirety.

Section 1256

Minimum clearance required by PRC Section 4293 shall be maintained with the specified distances measured at a right angle to the conductor axis at any location outward throughout an arc of 360 degrees

Minimum clearance shall include:

- (1) any position through which the conductor may move, considering, among other things, the size and material of the conductor and its span length;
- (2) any position through which the vegetation may sway, considering, among other things, the climatic conditions, including such things as foreseeable wind velocities and temperature, and location, height and species of the vegetation.

California Public Utilities Commission: Fire Safety Regulations in High-Fire Threat District

In January 2018 the California Public Utilities Commission (CPUC) adopted a new High Fire-Threat District consisting of three areas:

- Tier 1 High Hazard Zones on the U.S. Forest Service-California Department of Forestry and Fire Protection (CAL FIRE) joint map of Tree Mortality High Hazard Zones
- Tier 2 of the CPUC Fire-Threat Map where there is an elevated risk for utility-associated wildfires
- Tier 3 of the CPUC Fire-Threat Map where there is an extreme risk for utility associated wildfires

The Fire-Threat Map is available on CPUC's website at ftp://ftp.cpuc.ca.gov/safety/fire-threat_map/2018/PrintablePDFs/36X48inch_PDF/CPUC_Fire-Threat_Map36.pdf.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

In December 2017 the CPUC adopted new fire safety regulations—new Rules and/or amendments to certain existing Rules in CPUC General Orders 95, 165, and 166—including the following requirements:

- Prioritize correction of safety hazards based, in part, on whether the safety hazard is located in the High Fire-Threat District.
- Correct non-immediate fire risks in Tier 2 of the High Fire-Threat District within 12 months, and in Tier 3 within 6 months.
- Maintain increased clearances between vegetation and power lines throughout the High Fire-Threat District.
- Maintain more stringent wire-to-wire clearances for new and reconstructed facilities in Tier 3.
- Conduct annual patrol inspections of their overhead distribution facilities in rural areas of Tier 2 and Tier 3.
- Prepare a fire-prevention plan annually if they have overhead facilities in the High Fire-Threat District.

Existing Conditions

San Bernardino County is at great risk from wildfires due to weather, topography, vegetation, seasonal Santa Ana winds, and prolonged drought. From 2000 to 2014, 77 wildfire events caused 142 injuries and fatalities and an estimated \$1.5 billion in damage to property, crops, public facilities, and infrastructure (HVRI 2015). For incorporated cities, however, urban fires are a greater threat. Though estimates of damages are not available, local fire departments respond to thousands of calls for medical service, accidents, hazardous material incidents, disaster assistance, and other fire-related events.

Major fires in San Bernardino County since 1980 are listed in Table 5.8-8.

Table 5.8-8 Major Wildfires and Urban Fires in San Bernardino County

Fire Location and Date	Magnitude and Cause	Description
Wildfire Response		
Panorama Fire Mountain Region Date: 11/24/1980	23,600 acres Cause: Arson	4 fatalities and 77 serious injuries; destroyed 350 structures
Willow Fire Mountain Region Date: 08/28/1999	63,000 acres Cause: N/A	No injuries or fatalities reported; destroyed 60 structures
Grand Prix Fire Valley/Mountains Date: 10/21/2003	70,000 acres Cause: Human	No fatalities; destroyed 250 structures
Old Fire Mountain Region	91,300 acres Cause: Under Investigation	Six lives were lost; destroyed 1,000 structures

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-8 Major Wildfires and Urban Fires in San Bernardino County

Fire Location and Date	Magnitude and Cause	Description
Date: 10/25/2003		
Sawtooth Fire Mountain Region Date: 07/09/2006	61,700 acres Cause: Lightning	1 fatality and 17 minor injuries; destroyed more than 100 structures
Grass Slide Fire Mountain Region Date 10/22/2007	12,700 acres Cause: under investigation	9 firefighters injured; destroyed more than 300 residences
Freeway Fire Valley Region Date: 11/28/2008	30,000 acres Cause: Vehicle	14 firefighters injured; destroyed and damaged more than 300 structures
Sheep Fire Mountain Region Date 10/03/2009	7,100 Acres Cause: Human	Eight firefighters injured; no fatalities; destroyed five structures
Lake Fire Mountain Region Date: 06/17/2015	31,300 acres Cause: Human	6 minor firefighter injuries; no fatalities
Blue Cut Fire Mountain Region Date: 08/16/2016	36,274 acres Cause: Under investigation	destroyed 110 homes and 200 outbuildings
Urban Fire Response		
Victorville Accident Date: 03/21/1992	Cause: Inclement Weather	3 collisions involving nearly 100 vehicles on I-15 in Cajon Pass; killed 1 person and injured 46
Cajon Dump Fire Date: 1999	Cause: Human	Fire in illegal dumpsite
San Bernardino Freeway Accidents, Date: 04/30/1999	Cause: Inclement Weather	About 57 collisions involving 200 vehicles on I-10 through the Inland Empire; 48 hospitalized
Fontana Tire Fire Date: 05/19/2012	Cause: Unknown	Fire in pallet and tire storage yard
Cajon Pass Fire Date: 07/17/2015	Cause: Brush Fire	Up to 70 vehicles on I-15 northbound near San Bernardino were damaged or destroyed by the North Fire.

Source: Appendix G of PEIR.

Wildland Fire Hazards

A fire needs three things to burn: heat, fuel, and oxygen. Fire behavior is determined by several factors, especially topography, fuels, and weather.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Topography

Steep and mountainous terrain presents the greatest wildfire risk. An upslope draft is often created by rising warming air during the day. The steeper the slope, the greater the draft, and the more rapidly a fire will burn upslope. The direction a slope faces determines how much heat it receives from the sun. Vegetation on more sun-exposed slopes tends to be drier, ignite more easily, and burn more rapidly. In the Mountain and Valley regions, San Bernardino County has a prevalence of south- to southwest-facing slopes, which are more exposed to the sun than north- or east-facing slopes.

Ridges and mountains are generally barriers to the horizontal movement of fires. In contrast, ravines and gullies can increase funnel winds and change fire direction. Moreover, winds are typically higher through mountain saddles and gaps or passes, leading to drier fuels and more intense fire behavior. These terrain features and highly flammable fuels are found in the steep terrain around the mountains in San Bernardino County.

Fuel

All vegetation is fuel for fire, but some is more flammable than others. The risk of fire is related to factors such as fuel loading (type and density of the fuels), the moisture content of the fuels, and weather (temperature, humidity, rain and wind). Determining fire danger or risk of wildfire at a given time or location considers each of these factors.

In the Desert Region, the predominant vegetative cover is generally more resistant to wildfire than other vegetation. Fuels that produce high heat intensity and high flame lengths, such as chaparral, brush, and forest fuel types, occur in the wildland-urban interface and in the Mountain Region. The Valley Region predominantly contains urban fuel, except Chino Hills, communities north of SR-210, and the Yucaipa Valley region.

Diseases and Pests

Forest pathogens and insect infestations can kill trees, increasing dead fuel loads. Dead fuel load requires treatment and/or removal, especially in wildland-urban interface areas. Bark beetle infestations and related pine-tree mortality is widespread in the mountains. During droughts, trees get weaker, and more trees tend to die because of bark beetles. Polyphagous shot hole borer, which burrows into a tree and infects it with fungus, killing it—has been detected in western San Bernardino County.

Weather

Hot, dry summers dry vegetation, contributing to wildfire hazard. Santa Ana winds are common in the Valley Region during spring and fall as warm and dry winds blow from the deserts into southern California. Due to their very low humidity, seasonal timing, and high velocity, these winds increase wildfire risk in affected areas.

Fire Responsibility Areas

Fire responsibility areas are designated federal, state, and local responsibility areas according to who has primary financial responsibility for preventing and suppressing fires. Federal responsibility areas are generally protected by the US Forest Service, National Park Service, or Bureau of Land Management. Most of the county is in federal responsibility areas, as shown on Figure 5.8-3, *Fire Responsibility Areas*.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

The primary agency in state responsibility areas is the California Department of Forestry and Fire Protection (CAL FIRE). SRAs are generally immediately to the north and south of the San Bernardino and San Gabriel mountains and the wildland-urban interface areas (see Figure 5.8-3).

Local responsibility areas are generally incorporated cities. Fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government. The vast majority of communities in the Valley Region and the High Desert are in local responsibility areas (see Figure 5.8-3). The San Bernardino County Fire Protection District (County Fire) is one of the largest providers of fire protection services in these areas.

Fire Hazard Severity Zones

CAL FIRE is mandated by California Public Resources Code Sections 4201 to 4204 and California Government Code Sections 51175 to 51189 to identify fire hazard severity zones (FHSZ) for all communities in California. These are areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors. In SRAs, CAL FIRE has mapped three hazard ranges—moderate, high, and very high. In a local responsibility area, the law only requires identification of very high FHSZs. Local governments accept CAL FIRE's determination or make other, local determinations.

Valley Region

Most of the very high FHSZs in the Valley Region are along its north and northeast edges at the foot of the San Bernardino and San Gabriel mountains; at its southeast margin in the north end of the San Timoteo Badlands; and in the southwest corner of the region in Chino Hills (see Figure 5.8-4, *Fire Severity Zones and Potential Growth Areas in the Valley and Mountain Regions*).

Mountain Region

Nearly the entire Mountain Region is mapped as very high FHSZ (see Figure 5.8-4).

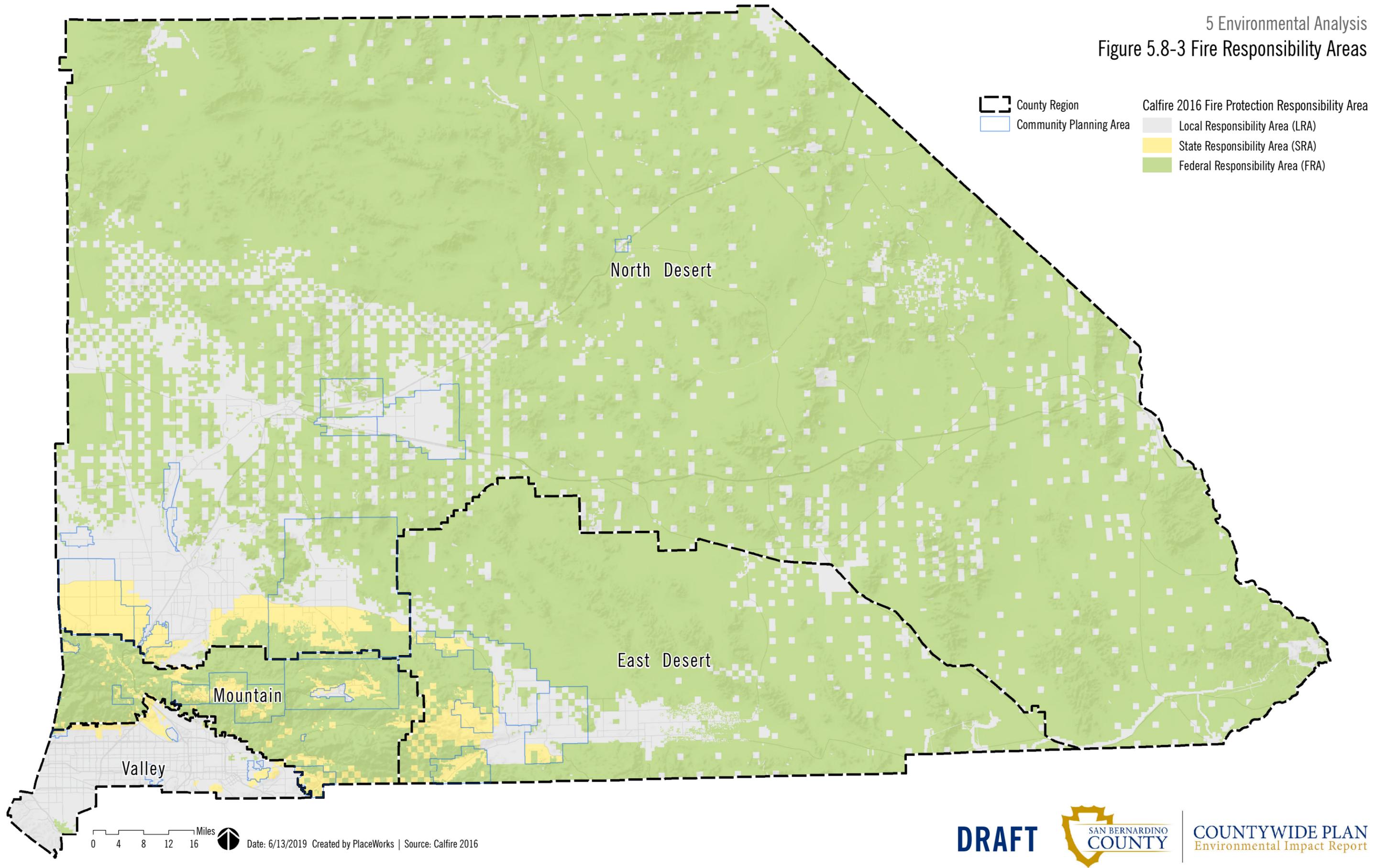
Desert Regions

Most of the desert regions are mapped outside of high or very high FHSZs (see Figures 5.8-5 and 5.8-6).

Population at Risk

Wildfire risk is a great concern to people living in the moderate, high, and very high FHSZs. The San Bernardino County census block data was used to estimate populations in the hazard zones. More than 34,000 residents in the unincorporated county live in very high fire hazard areas, and more than 63,000 live in high fire hazard areas (San Bernardino County 2017).

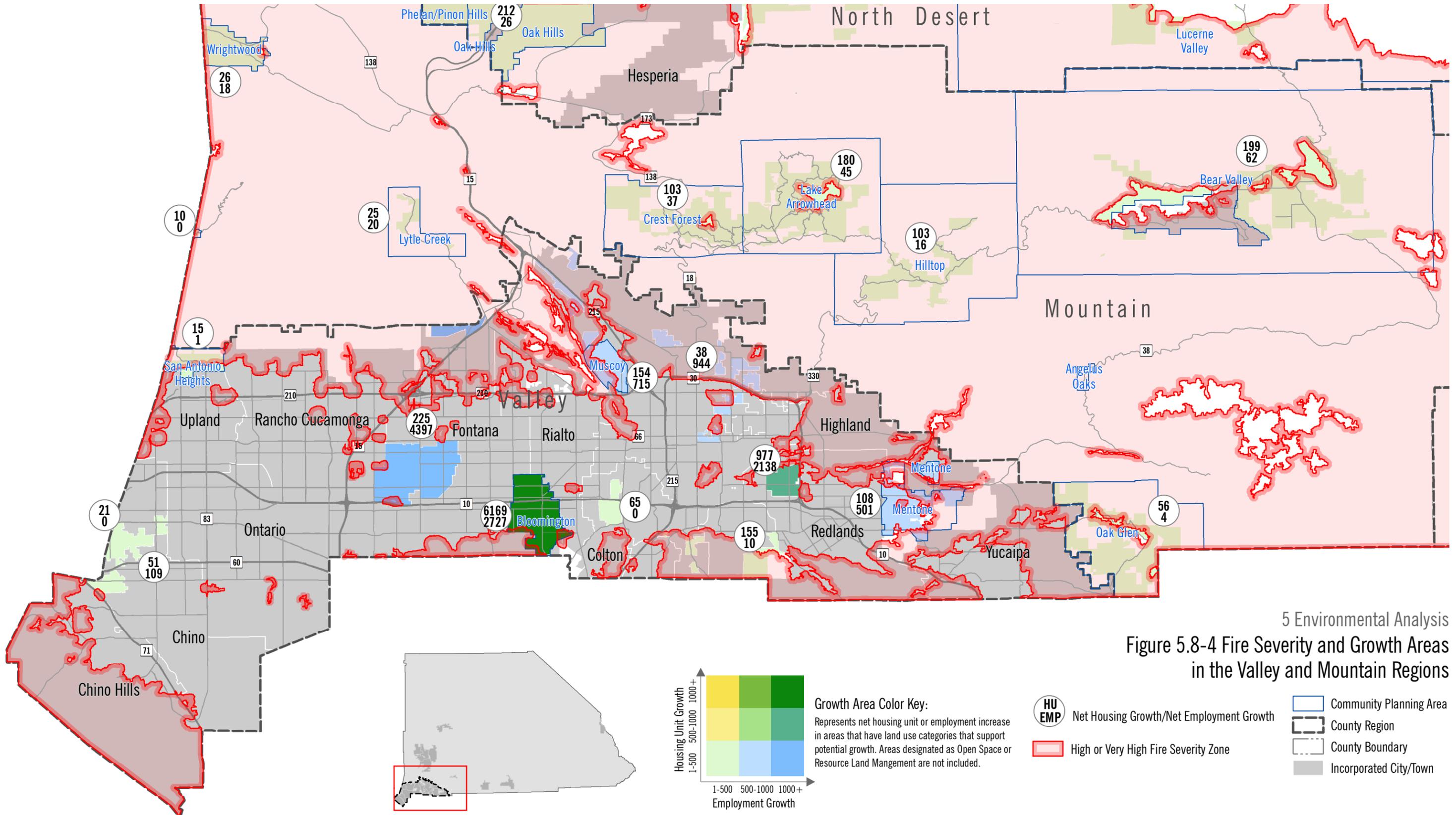
5 Environmental Analysis
Figure 5.8-3 Fire Responsibility Areas



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

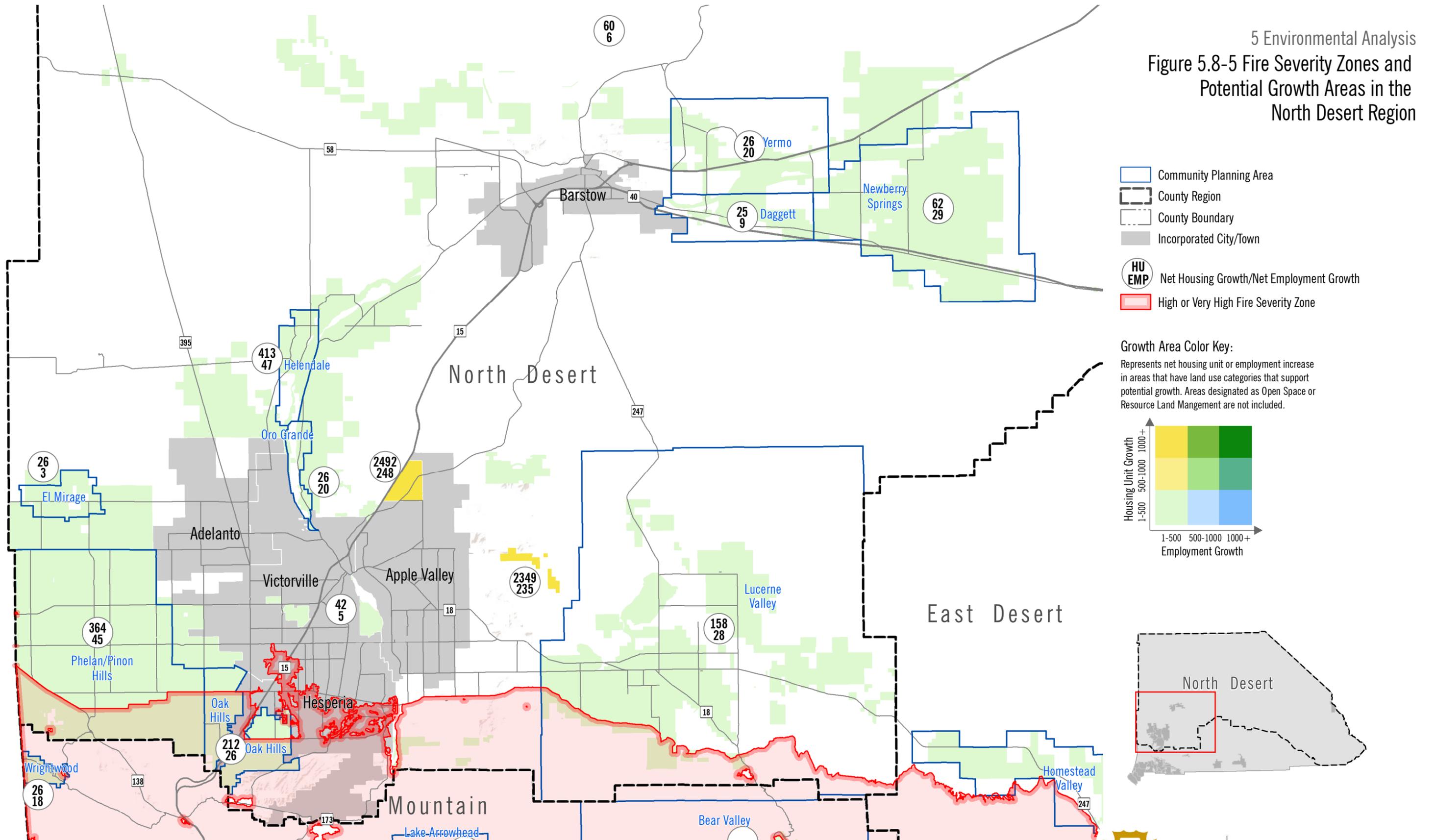


5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

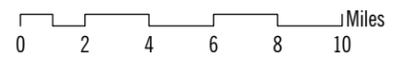
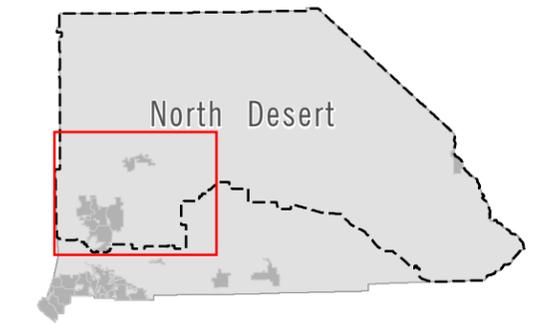
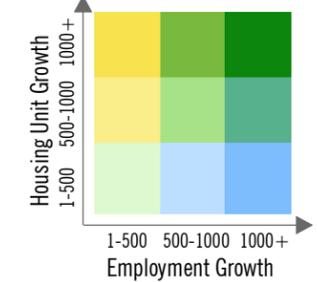
This page intentionally left blank.

5 Environmental Analysis
 Figure 5.8-5 Fire Severity Zones and
 Potential Growth Areas in the
 North Desert Region



- Community Planning Area
- County Region
- County Boundary
- Incorporated City/Town
- HU**
EMP Net Housing Growth/Net Employment Growth
- High or Very High Fire Severity Zone

Growth Area Color Key:
 Represents net housing unit or employment increase in areas that have land use categories that support potential growth. Areas designated as Open Space or Resource Land Mangement are not included.



DRAFT

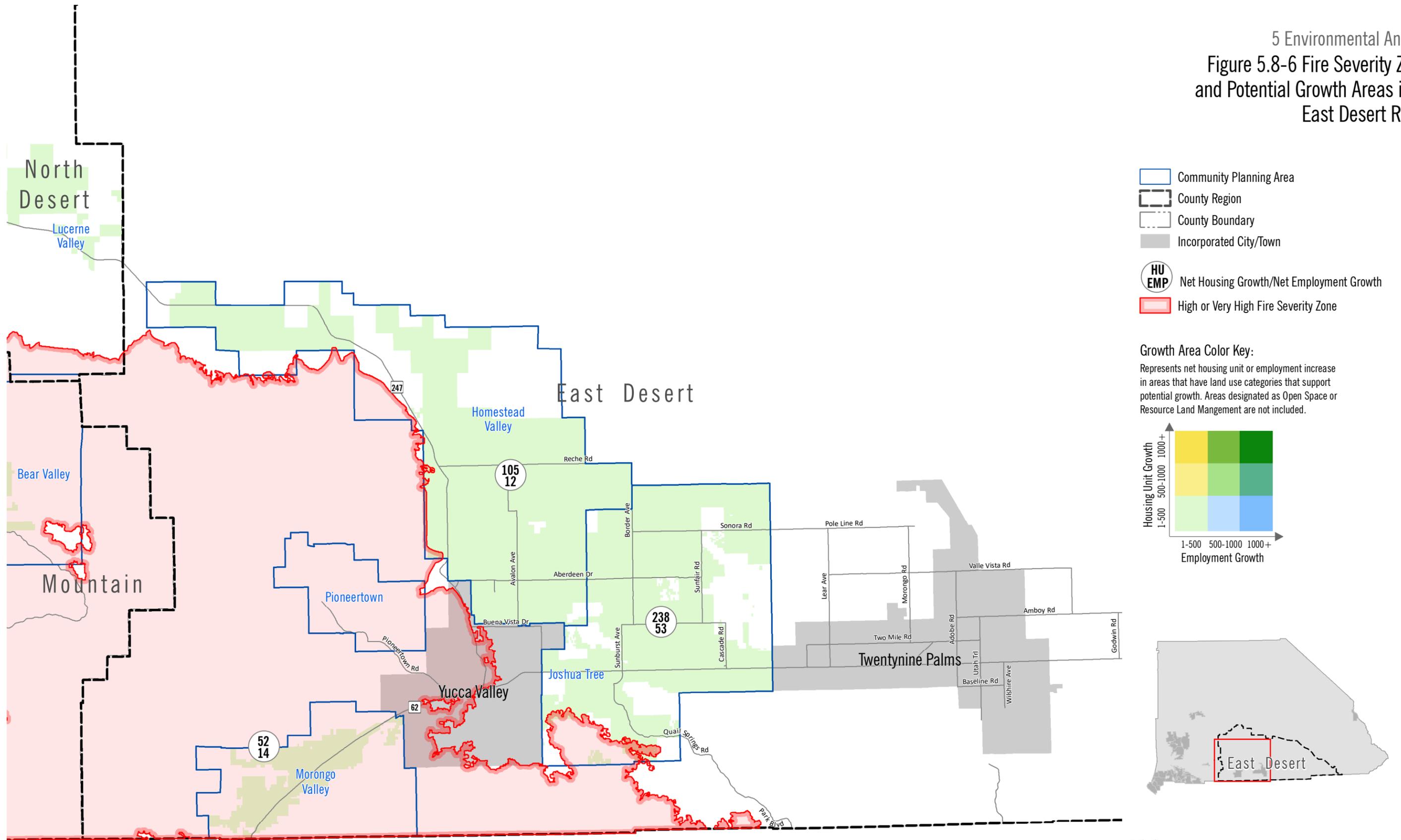


5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

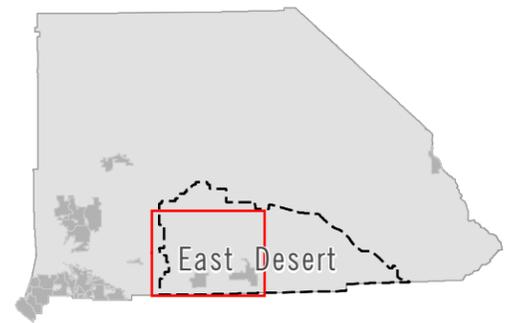
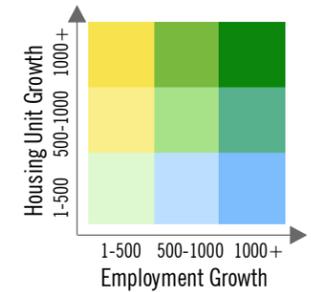
This page intentionally left blank.

5 Environmental Analysis
 Figure 5.8-6 Fire Severity Zones
 and Potential Growth Areas in the
 East Desert Region



- Community Planning Area
- County Region
- County Boundary
- Incorporated City/Town
- HU**
EMP Net Housing Growth/Net Employment Growth
- High or Very High Fire Severity Zone

Growth Area Color Key:
 Represents net housing unit or employment increase in areas that have land use categories that support potential growth. Areas designated as Open Space or Resource Land Mangement are not included.



5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

This page intentionally left blank.

**5. Environmental Analysis
 HAZARDS AND HAZARDOUS MATERIALS**

Emergency Planning and Response

County Fire’s Office of Emergency Services (OES) is responsible for countywide emergency planning, mitigation, response and recovery activities. OES manages the County’s emergency operations center and develops and maintains the County’s emergency operations plan and hazard mitigation plan. The current emergency operations plan, adopted by the County Board of Supervisors in 2013, specifies roles and responsibilities of various County and other local agencies in each of the four phases of emergency management: preparedness/planning, response, recovery, and mitigation. The San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan, approved by FEMA in July 2017, includes risk assessments for many types of hazards, both natural and man-made; an assessment of community capabilities for hazard mitigation; and mitigation strategies. County-identified evacuation routes consist of major and secondary highways (see Figure 6-3 of the Safety Background Report, included as Appendix G to this PEIR).

San Bernardino County implements an extensive emergency preparedness system that adheres to the National Incident Management System (NIMS), which provides a comprehensive and standardized incident management system. Because San Bernardino County is NIMS compliant, it is eligible for federal preparedness grants. The County also follows the Standardized Emergency Management System (SEMS) adopted by California, which makes it eligible for reimbursement of response-related costs under state disaster assistance programs.

The County has a wide variety of programs to mitigate the potential for catastrophic wildfires. Table 5.8-9 shows these programs.

Table 5.8-9 Wildfire Mitigation Programs

Program	Responsible Agency	Comments
MAST (Mountain Area Safety Taskforce)	Multiple	MAST is a coordinated effort by cities, counties, state, federal, and nonprofit agencies to provide for protection from wildfire, mainly by reducing dead fuel load and maintaining healthy forest conditions.
Community-based fuels reduction programs	County Fire	This program is designed to create community-based fuel modification programs across the mountain communities.
Various	CAL FIRE	CAL FIRE programs include public education, fuel modification with inmate crews, reforestation, and forestry activities on private lands within US Forest Service boundary.
County Fire Hazard Abatement Program	County Fire	Reduces the potential for an individual’s property to be the source of fire and structural ignitability.
Contractor certification	City of Big Bear Lake Fire Department	Trains and certifies landscape contractors to provide a qualified workforce to conduct fuels reduction on individual properties.
Dead tree removal	Southern California Edison (SCE)	SCE removes dead trees near power lines to reduce fire hazards.
Wood shake roof replacement ordinance	County	This code requires that all roof coverings in Fire Safety Overlays must be either noncombustible or made of fire-retardant material.
Fire Safe Councils	Inland Empire Fire Safe Alliance	The Alliance was created to act as a forum for all Fire Safe Councils in San Bernardino County.
Community wildfire protection plans (CWPP)	County Fire	CWPPs provide a means for communities to participate in the planning, strategy, goals, and objectives of creating a fire-safe community.
Organized group volunteer activities	County Fire	Several volunteer citizen groups provide significant resources that government agencies do not provide.

Source: County of San Bernardino 2017.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Emergency Response Agencies

San Bernardino County Fire Protection District

County Fire is an all-risk department providing emergency mitigation and management for fire suppression, emergency medical services, ambulance services, HAZMAT response, arson investigation, and search and rescue. The Office of Emergency Services (OES), a division of County Fire, is responsible for countywide emergency planning, mitigation, response, and recovery activities. The OES works with all County departments, all 24 cities, and many nongovernment organizations. The Community Emergency Response Team (CERT) Program educates people about disaster preparedness and trains them in basic response skills. Following a catastrophic event, CERT members can assist until professional responders arrive. The OES administers the program locally and has sworn in over 1,000 CERT participants as California Disaster Service Workers.

California Office of Emergency Services

Cal OES is responsible for the coordination of overall state agency response to disasters; ensuring the state's readiness to respond to and recover from all hazards; and assisting local governments in their emergency preparedness, response, recovery, and mitigation. Cal OES is also responsible for the statewide hazard mitigation plan.

Community Organizations Active in Disaster/San Bernardino County Voluntary Organizations Active in Disaster

COAD is based in a community or geographic area and has representatives from public, private, nonprofit, and faith-based agencies, community groups, and businesses. Their mission is to strengthen area-wide disaster coordination and enhance the community's ability to prepare, respond, recover, and mitigate. The overarching San Bernardino County Voluntary Organizations Active in Disaster comprises six regional COADs: Big Bear Valley, East End, High Desert, Morongo Basin, Rim Communities, and West End.

Mutual Aid

California Disaster and Civil Defense Master Mutual Aid

The master mutual aid agreement creates a formal structure wherein each jurisdiction retains control of its own facilities, personnel, and resources, but may also receive or render assistance to other jurisdictions. State government is obligated to provide available resources to assist local jurisdictions in emergencies. It is the responsibility of local jurisdictions to negotiate, coordinate, and prepare mutual aid agreements.

Interstate Mutual Aid

California is a member of the interstate Emergency Management Assistance Compact (EMAC), an organization that provides form, structure, and procedures for rendering emergency assistance between states. Cal OES and the state's EMAC coordinator are responsible for facilitating requests for assistance pursuant to EMAC.

Statewide Mutual Aid

San Bernardino County participates in the California Disaster and Civil Defense Master Mutual Aid Agreement for law enforcement, search and rescue, coroner, emergency managers, public works, and medical. The San

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Bernardino County Fire and Rescue Mutual Aid Operational Plan identifies the mutual aid system for the county.

Volunteer and Private Mutual Aid

A significant component of the mutual aid system is volunteer and private agencies. These include agencies such as the American Red Cross and Salvation Army as well as private agencies, churches, nonprofits, and other organizations. The California Disaster Corps trains volunteers, the Emergency Communications Service provides front-line communications and technical and logistical support to County Fire and OES, and the Community Emergency Response Team Program educates people about disaster preparedness and provides training fire safety, light search and rescue, and disaster medical operations.

5.8.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- H-7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- H-8 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to the urbanized areas or where residences are intermixed with wildlands.

5.8.3.3 REGULATORY REQUIREMENTS AND GENERAL PLAN POLICIES

Regulatory Requirements

- RR HAZ-8 **State Building Materials and Structural Design Regulations.** All projects in fire hazard severity zones shall be designed, built, and operated in accordance with state regulations specifying building materials and structural designs for structures in such zones, including California Building Code Chapter 7A and California Fire Code (CFC) Chapter 49; and regulatory requirements for defensible space including California Public Resources Code Sections 4291 et seq. and San Bernardino County Code of Ordinances Sections 23.0301 et seq.
- RR HAZ-9 **Wildfire State Responsibility Area (SRA) Fire Safe Regulations.** All projects will implement the Wildfire SRA Fire Safe Regulations' basic wildland fire protection standards.
- RR HAZ-10 **San Bernardino County Fire Hazard Abatement (FHA) Program.** The FHA program shall enforce the fire hazard requirements outlined in San Bernardino County Code Sections 23.0301 to 23.0319.
- RR HAZ-11 **Fire Prevention Standards for Electric Utilities.** Utilities installing, operating, and maintaining overhead powerlines would be required to comply with fire safety regulations

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

pertaining to electric utilities included in the California Code of Regulations Title 14 Sections 1250 et seq.;

RR HAZ-12 **California Public Utilities Commission (CPUC) Fire Safety Regulations.** Electric utilities are required to abide by the requirements of the CPUC fire safety regulations as they relate to utility poles and wires, and vegetation management.

RR GEO-1 **San Bernardino County Code: Building Code.** All projects implemented under the Countywide General Plan will be designed and constructed in accordance with the San Bernardino County Code, which adopts the California Building Code (CBC), which is based on the International Building Code (IBC). In accordance with Section 1803.2 of the 2016 CBC, a geotechnical investigation is required that must evaluate soil classification, slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness, as necessary, determined by the County Building Official. The geotechnical investigation must be prepared by registered professionals (i.e., California Registered Civil Engineer or Certified Engineering Geologist). Recommendations of the report, as they pertain to structural design and construction recommendations for earthwork, grading, slopes, foundations, pavements, and other necessary geologic and considerations, must be incorporated into the design and construction of projects implemented under the Countywide General Plan.

Policy Plan

Wildfire Hazards

Goal HZ-1 **Natural Environmental Hazards.** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policy HZ-1.2 **New development in environmental hazard areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

- Policy HZ-1.5** **Existing properties in environmental hazard areas.** We encourage owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.
- Policy HZ-1.6** **Critical and essential facility location.** We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.
- Policy HZ-1.7** **Underground utilities.** We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.
- Policy HZ-1.9** **Hazard areas maintained as open space.** We minimize risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.

The Personal and Property Protection Element of the proposed Countywide Plan includes the following policies relevant to reducing harm from wildfires:

- Goal PP-3** **Fire and Emergency Medical.** Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.
- Policy PP-3.7** **Fire safe design.** We require new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards.
- Policy PP-3.8** **Fire adapted communities.** We inform and prepare our residents and businesses to collaboratively plan and take action to more safely coexist with the risk of wildfires.
- Policy PP-3.11** **Post-burn risks.** In areas burned by wildfire, we require new and reconstructed development to adhere to current development standards, and may require additional study to evaluate increased flooding, debris flow, and mudslide risks.

Emergency Response Planning

The Personal and Property Protection Element of the proposed Countywide Plan includes the following policies pertaining to emergency response planning:

- Goal PP-4** **Emergency Preparedness and Recovery.** A reduced risk of and impact from injury, loss of life, property damage, and economic and social disruption resulting from emergencies, natural disasters, and potential changes in climate.
- Policy PP-4.1** **Emergency management plans.** We maintain, update, and adopt the Emergency Operations Plan, Continuity of Operations Plan, and the Multi-Jurisdictional Hazard Mitigation Plan.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

- Policy PP-4.2** **Critical and essential facility operation.** We ensure that critical and essential County facilities remain operational during emergencies.
- Policy PP-4.3** **Automatic and mutual aid.** We participate in agreements for automatic and mutual aid with other local, state, federal, and nongovernmental emergency service providers to improve protection services and emergency response throughout the county.
- Policy PP-4.4** **Emergency shelters and routes.** We identify and publicize emergency shelters and sign and control evacuation routes for use during emergencies.
- Policy PP-4.5** **Vulnerable populations.** We coordinate with and encourage the use of community-based networks to aid vulnerable populations prepare for emergencies and provide assistance with evacuation and recovery.
- Policy PP-4.6** **Recovery.** We reestablish and expedite County services to assist affected residents and businesses in the short- and long-term recovery from emergencies and natural disasters.
- Policy PP-4.7** **Public outreach and education.** We engage with the community to increase awareness of and preparedness for emergencies and natural disasters.

5.8.3.4 ENVIRONMENTAL IMPACTS

The applicable thresholds are identified in brackets after each impact statement.

Impact 5.8-4: Unincorporated growth would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. [Threshold H-7]

The 2007 General Plan identified evacuation routes based on their location and ability to provide adequate capacity for residents living in the Valley, Mountain, and Desert regions. The identified routes consist mostly of interstate freeways and state highways; however, these roads are not meant to be a comprehensive evacuation plan. Specific evacuation routes would be designated during an emergency by the San Bernardino County Sheriff's Department in accordance with the County's emergency management plan.

Table 5.8-10 displays the evacuation routes in San Bernardino identified during the 2007 General Plan Update. The vast majority of these routes are assumed to still be relevant.

5. Environmental Analysis
 HAZARDS AND HAZARDOUS MATERIALS

Table 5.8-10 Evacuation Routes in San Bernardino County

Type of Evacuation Route	Valley Region	Mountain Region	Dessert Region
Interstate Freeways	I-10; I-15; I-215	none	I-15; I-40; US-395; US-95
State Highways	SR-60; SR-66; SR-71; SR-330; SR-83; SR-142	SR-2; SR-18; SR-38; SR-138; SR-173; SR-330	SR-18, SR-58, SR-62, SR-127, SR-95; SR-138, and SR-247
Major and Secondary Highways	Yes See cities for locations	Yes See cities for locations	Yes See cities for locations

Source: Appendix G of PEIR.

Furthermore, the Mountain Area Safety Taskforce has created emergency evacuation route maps to help residents of the Mountain Region prepare for emergencies (MAST 2007). The maps are intended to support pre-emergency identification of options for ingress and egress in the Mountain Region. The specific emergency routes employed in the case of an actual emergency will be designated by evacuation authorities based on emergency conditions and will be communicated to residents at the time of the emergency. County Fire OES has a “Critical Route Planning Committee” that is developing countywide routes and alternate routes for use in evacuating residents from a disaster area while simultaneously allowing first responders’ access into a disaster area without congestion and gridlock. The committee members are from County departments, city and town representatives, and key state and federal agencies. The Critical Route Planning effort is being coordinated with surrounding counties to prevent congestion and gridlock at the county boundaries.

Projects developed under the Countywide Plan would not block or otherwise interfere with use of evacuation routes. Projects would not interfere with operation of the County Emergency Operations Center and would not interfere with operations of emergency response agencies or with coordination and cooperation between such agencies.

Level of Significance before Mitigation: Impact 5.8-4 is less than significant.

Impact 5.8-5: Unincorporated growth, per the Countywide Plan, would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to the urbanized areas or where residences are intermixed with wildlands. [Threshold H-8]

Countywide Plan buildout could involve development of some projects in Fire Hazard Severity Zones (see Figures 5.8.4, 5.8.5, and 5.8.6). Projects developed in FHSZs are required to comply with regulations governing development in such zones, including CBC Chapter 7A, CFC Chapter 49, and California Public Resources Code Sections 4291 et seq.

Valley Region

Most development under the Countywide Plan in the Valley Region would occur in three areas: the Bloomington community plan areas; City of Fontana sphere of influence (SOI), and East Valley Area Plan area. There are some small areas of Moderate and High FHSZs in the southwest and southeast margins of the Bloomington CPA. There are Moderate, High, and Very High FHSZs in the southwestern and western parts

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

and in the northeast corner of the Fontana SOI. There is a small area of Moderate fire hazard in the southeast corner of the East Valley Area Plan area (see Figure 5.8-4).

Mountain Region

Nearly the entire Mountain Region is mapped as Very High FHSZ (see Figure 5.8-4). No considerable growth is planned for this area.

Desert Regions

Most of the desert regions are mapped as Moderate FHSZs, including the two areas of the Town of Apple Valley SOI where most development in the North Desert Region would occur (see Figures 5.8-5 and 5.8-6).

Countywide Plan Policies

Policy HZ-1.2 requires all new development to be outside of High or Very High FHSZs. If any lot or parcel does not have sufficient buildable area outside of such hazard areas, the plan requires adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters. Policy HZ-1.5 encourages owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters. Policy HZ-1.6 requires new critical and essential facilities to be outside of hazard areas whenever feasible, and HZ-1.7 requires that underground utilities be hardened to fire risk. Furthermore, fire risk is minimized by encouraging fire zones to be preserved and maintained as open space (see Policy HZ-1.9).

The Personal and Property Protection Element of the proposed Countywide Plan includes Policy PP-3.7, which requires new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards. Policy PP-3.8 relates to informing and preparing residents and businesses to collaboratively plan and take action to more safely coexist with the risk of wildfires. In areas burned by wildfire, the County requires new and reconstructed development to adhere to current development standards (see Policy PP-3.11).

San Bernardino County's emergency preparedness system, along with established regulations and policies, will reduce wildfire hazards to structures and/or residences to less than significant. Furthermore, no new development associated with the Countywide Plan would be allowed in High or Very High FHSZs.

Level of Significance before Mitigation: With implementation of RR HAZ-8 through RR HAZ-10 and Countywide Plan policies, Impact 5.8-5 would be less than significant.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Impact 5.8-6: Due to slope, prevailing winds, and other factors, unincorporated growth in or near state responsibility areas or lands classified as very high fire hazard severity zones could expose occupants to or exacerbate risks from pollutant concentrations from a wildfire or from the uncontrolled spread of a wildfire. [Threshold H-8]

Figures 5.8-4, 5.8-5, and 5.8-6 show areas of planned unincorporated growth with respect to fire severity zones. Figure 5.8-3 shows state responsibility areas.

In addition to the regulations and policies described under Impact 5.8-5, additional measures are in place to sidestep the impacts of pollutant concentrations from wildfire ash. Recognition of the growing threat that wildfire smoke poses to public health and safety has resulted in a response led by the US Forest Service and enhanced through partnership with many other agencies, such as the National Park Service. The Wildland Fire Air Quality Response Program (WFAQRP) was created to directly assess, communicate, and address risks posed by wildfire smoke to the public as well as fire personnel. The program depends on four primary components: specially trained personnel called Air Resource Advisors (ARAs), air quality monitoring, smoke concentration and dispersion modeling, and coordination and cooperation with agency partners.

ARAs are technical specialists that are trained to work on smoke issues from wildland fire. They are deployed nationwide during large smoke events. Air Resource Advisors are dispatched to an incident to assist with understanding and predicting smoke impacts on the public and fire personnel. They analyze, summarize, and communicate these impacts to incident teams, air quality regulators, and the public (USFS 2018a).

Furthermore, the South Coast Air Quality Management District (SCAQMD) issues air quality alerts, advisories, and forecasts by email through AirAlerts.org. SCAQMD also maintains an interactive online map to view current air quality conditions in the region (SCAQMD 2018).

The primary purpose of the CWP's wildfire hazard policies, prevailing regulatory requirements, and air quality response programs, is to minimize the exposure of people to a significant risk of loss, injury, or death due to natural hazards. However, due to slope, prevailing winds, and other factors it is not possible to eliminate the impact from pollutant concentrations from a wildfire or from the uncontrolled spread of a wildfire to less than significant.

Level of Significance before Mitigation: Impact 5.8-6 would be potentially significant.

Impact 5.8-7: Unincorporated growth may require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment. [Threshold H-8]

Growth under the proposed Project—as shown in Chapter 3—would add structures, residents, and workers in the service boundaries of County Fire. This growth would be supported by expanded infrastructure and associated maintenance, including new roads, fuel breaks, emergency water sources, power lines and other utilities. The Countywide Plan generally concentrates growth in existing urbanized areas where fire protection services are most concentrated under existing conditions. While some facilities in the County do have existing

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

or projected deficiencies related to staffing, equipment, and building space, the Countywide Plan aims to minimize any exacerbation of such deficiencies by limited suburban sprawl. By focusing growth into (or near) existing urbanized areas and having numerous Countywide policies that address provision of fire protection and emergency services (see Section 5.14.1.3), the plan would limit growth in fire-prone areas (e.g., areas of the Mountain Region that feature an urban-forest interface) and areas far from emergency services.

Power Lines

Countywide Plan buildout could involve installation of overhead powerlines. New powerlines could increase wildfire hazard. Utilities installing, operating, and maintaining overhead powerlines would be required to comply with fire safety regulations pertaining to electric utilities including California Code of Regulations Title 14 Sections 1250 et seq.; and California Public Utilities Commission fire safety regulations.

Level of Significance Before Mitigation: With the implementation of RR HAZ -11, RR HAZ-12, and Countywide Plan policies Impact 5.8-7 would be less than significant.

Impact 5.8-8: Unincorporated growth may expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of post fire slope instability. [Threshold H-8]

Catastrophic wildfire can create favorable conditions for other hazards, such as flooding and landslides during the rainy season. In addition to fire hazard regulations and policies described under Impact 5.8-5, mitigation measures are in place to sidestep the risk from flooding and landslides.

The Forest Service's Burned Area Emergency Response (BAER) program is designed to determine the need for and to prescribe and implement emergency treatments on federal lands to minimize threats to life or property resulting from the effects of a fire or to stabilize and prevent unacceptable degradation to natural resources. A BAER assessment usually begins before the wildfire has been fully contained. Severely burned areas, very steep slopes, places where water runoff will be excessive, fragile slopes above homes or businesses, municipal water supplies, and other valuable facilities are focus areas. The treatments are installed as soon as possible, generally before the next damaging storm. There are a variety of emergency stabilization techniques that the BAER team might recommend. Primary techniques are reseeding ground cover; mulching; constructing straw, rock, or log dams in small tributaries; and placing logs to catch sediment on slopes. The team also assesses the need to modify road and trail drainage mechanisms such as debris traps, culverts, drainage dips, and emergency spillways.

BAER assessment plans and implementation are often a cooperative effort between federal agencies and state, tribal, and local forestry and emergency management departments. They are closely coordinated with private landowners (USFS 2018b). The National Resource Conservation Service's EWP program, or Emergency Watershed Protection program, provides similar services on private lands. These two programs are often run cooperatively on a large fire, with both agencies working together. EWP work is not limited exclusively to any one set of prescribed measures. A case-by-case investigation of the needed work is made by NRCS.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

Landslides are another hazard that are exacerbated by wildfire. They are influenced by the nature of the rock or soil type, slope angle, groundwater levels, and rainfall. Landslide susceptibility is shown on Figure 5.6-3 (Geology and Soils). New subdivisions and developments must either be built outside of debris flow hazard areas or debris flow hazards must be mitigated for new developments such that occupants would have adequate time to evacuate out of the debris flow hazard area during times of relatively high debris flow hazard—that is, during and shortly after intense rainstorms—under Countywide Plan Hazard Element policies HZ-1.1 and HZ-1.2. Furthermore, each project would be required to conduct a geotechnical investigation of its site that would assess existing landslide susceptibility and impacts of proposed grading and construction on landslide hazard and provide any needed recommendations to minimize landslide hazards. Furthermore, all projects will implement the Wildfire SRA Fire Safe Regulations’ basic wildland fire protection standards and the FHA program shall enforce the fire hazard requirements outlined in San Bernardino County Code Sections 23.0301 to 23.0319.

The primary purpose of the CWP’s wildfire hazard policies, prevailing regulatory requirements, and the BAER program, is to minimize risks from downslope or downstream flooding or landslides as a result of post fire slope instability. However, it is not possible to reduce this impact to less than significant.

Level of Significance before Mitigation: Impact 5.8-8 would be potentially significant.

5.8.3.5 CUMULATIVE IMPACTS

The areas considered for cumulative impacts related to wildfires are fire hazard severity zones in the county, both in unincorporated areas and in incorporated cities and towns. Projects may be proposed within such zones, which could subject people and structures to wildfire hazards. Such projects are required to comply with regulations governing development in such zones, including CBC Chapter 7A, CFC Chapter 49, and California Public Resources Code Sections 4291 et seq. Wildfire hazard mitigation regulations and policies described under Impact 5.8-5 would also apply to incorporated areas. Wildfire impacts of the Countywide Plan buildout would not be cumulatively considerable.

5.8.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

With implementation of RR HAZ-8 through RR HAZ-10 and Countywide Plan policies, Impact 5.8-5 would be less than significant.

With the implementation of RR HAZ -11, RR HAZ-12, and Countywide Plan policies Impact 5.8-7 would be less than significant.

Without mitigation Impact 5.8-6 and 5.8-8 would be potentially significant.

5.8.3.7 MITIGATION MEASURES

Impact 5.8-6

The CWP’s wildfire hazard policies requires that all new development be outside of High or Very High FHSZs, and details mitigation measures for any lot or parcel that do not have sufficient buildable area outside of such

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

hazard areas. The policies also encourage owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have enough time to evacuate during times of extreme weather and natural disasters. New critical and essential facilities are required to be outside of hazard areas whenever feasible, and underground utilities need to be hardened to fire risk. Furthermore, fire risk is minimized by encouraging fire zones to be preserved and maintained as open space.

The CPW also includes policies under the Personal and Property Element which require new development in the Fire Safety Overlay to comply with additional site design, building, and access standards. The Personal and Property Element also includes a policy relating to informing and preparing residents and businesses to collaboratively plan and act to more safely coexist with the risk of wildfires. In areas burned by wildfire, the County requires new and reconstructed development to adhere to current development standards.

However, the Countywide Plan buildout could involve development of some projects in Fire Hazard Severity Zones. Projects developed in FHSZs are required to comply with regulations governing development in such zones, including CBC Chapter 7A, CFC Chapter 49, and California Public Resources Code Sections 4291 et seq.

Additional measures are also in place to sidestep the impacts of pollutant concentrations from wildfire ash. The WFAQRP directly assess, communicate, and address risks posed by wildfire smoke to the public as well as fire personnel. The program depends technical specialists that are trained to work on smoke issues from wildland fire. They are deployed nationwide during large smoke events. The SCAQMD issues air quality alerts, advisories, and forecasts by email through AirAlerts.org and maintains an interactive online map to view current air quality conditions in the region.

Even though the County has numerous policies, regulations, and comprehensive mitigation program in place, feasible mitigation for wildfire pollutant exposure has not been identified.

Impact 5.8-8

In addition to fire hazard regulations and policies described under Impact 5.8-6 above, additional policies, regulations, and mitigation measures are in place to sidestep the risk from flooding and landslides as a result of post fire slope instability.

Policy HZ 1.1 and HZ 1.2 require new subdivisions and developments either be built outside of debris flow hazard areas or debris flow hazards must be mitigated for new developments. Furthermore, each project would be required to conduct a geotechnical investigation of its site that would assess existing landslide susceptibility and impacts of proposed grading and construction on landslide hazard and provide any needed recommendations to minimize landslide hazards. All projects will also implement the Wildfire SRA Fire Safe Regulations' basic wildland fire protection standards and the FHA program shall enforce the fire hazard requirements outlined in San Bernardino County Code Sections 23.0301 to 23.0319.

Post fire land stabilization programs such as Forest Service's BAER program and the National Resource Conservation Service's EWP program are also in place to mitigate flooding and landslides in burned areas.

5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

However, even though the County has numerous policies, regulations, and comprehensive mitigation program in place, feasible mitigation for post fire slope stability has not been identified.

5.8.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.8-6

The various goals and policies of the Countywide Plan, in addition to applicable regulations and programs, would minimize the impact from pollutant concentrations from a wildfire or from the uncontrolled spread of a wildfire. However, due to the magnitude and intensity of development accommodated by the Countywide Plan, as well as slope, prevailing winds, and other factors beyond the control of the County of San Bernardino, Impact 5.8-6 would remain **significant and unavoidable**.

Impact 5.8-8

The various goals and policies of the Countywide Plan, in addition to applicable regulations and programs, would minimize the risk from flooding and landslides as a result of post fire slope instability. However, due to the magnitude and intensity of development accommodated by the Countywide Plan, as well as other factors beyond the control of the County of San Bernardino, Impact 5.8-8 would remain **significant and unavoidable**.

5.8.4 References

- Apple Valley, Town of. 1995, March. Town of Apple Valley Airport Comprehensive Airport Land Use Compatibility Plan. <http://www.sbcounty.gov/Uploads/lus/Airports/AppleValley.pdf>.
- . 2015, March 5. Town of Apple Valley Zoning Map. <http://www.applevalley.org/Home/ShowDocument?id=12366>.
- Department of Toxic Substances Control (DTSC). 2018, February 15. EnviroStor. <http://www.envirostor.dtsc.ca.gov/public/>.
- Hazards and Vulnerability Research Institute (HVRI). 2015. Spatial Hazard Events and Losses Database for the United States. Version 14.1. Online database. Department of Geography. Columbia, SC: University of South Carolina. <http://hvri.geog.sc.edu/SHELDUS/>.
- Mountain Areas Safety Taskforce (MAST). 2017. Emergency Evacuation Routes. http://www.sbcounty.gov/calmast/sbc/html/emergency_plan_routes.asp.
- Ontario, City of. 2011, April 19. LA/Ontario International Airport Land Use Compatibility Plan. http://www.ontarioplan.org/wp-content/uploads/sites/4/pdfs/ALUCP_FULL.pdf.
- PlaceWorks and Dudek. 2017, April 5. County of San Bernardino Safety Background Report. Appendix G of this PEIR.

5. Environmental Analysis

HAZARDS AND HAZARDOUS MATERIALS

Riverside County Airport Land Use Commission (RCALUC). 2004, December. Riverside County Airport Land Use Compatibility Plan. Chapter 3: Individual Airport Policies and Compatibility Maps. FL: Flabob Airport. <http://www.rcaluc.org/Portals/0/PDFGeneral/plan/newplan/14-%20Vol.%201%20Flabob.pdf>.

San Bernardino, County of. 2017, July 13. Multi-jurisdictional Hazard Mitigation Plan. http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf.

San Bernardino County Fire Department (SBCFD). 2018. About CUPA (Certified Unified Program Agency). <https://www.sbcfire.org/ofm/Hazmat/CUPA.aspx>.

San Bernardino International Airport Authority (SBIAA). 2010, September 22. Airport Layout Plan Narrative Report. <http://www.sbiaa.org/wp-content/uploads/2015/10/ALP-Narrative-Report-Complete.pdf>.

South Coast Air Quality Management District (SCAQMD). 2018, Wildfire Smoke & Ash Health & Safety Tips. Accessed August 2, 2018. <https://www.aqmd.gov/wildfire-health-info-smoke-tips>.

State Water Resources Control Board (SWRCB). 2018, February 15. GeoTracker. <http://geotracker.waterboards.ca.gov/>.

US Forest Service (USFS). 2018a. Wildland Fire Air Quality Response Program. United States Department of Agriculture. Accessed August 2, 2018. <https://www.wildlandfiresmoke.net/>.

———. 2018b. Burned Area Emergency Response Plan. Accessed, July 31, 2018. <https://www.fs.usda.gov/detail/sbnf/landmanagement/?cid=stelprdb5433862>.