4.9 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing conditions for hazardous materials, airports, emergency planning, and wildland fires in the San Diego region. Environmental impacts associated with implementation of the 2050 RTP/SCS as they relate to these conditions are described. As the 2050 RTP/SCS is a programmatic document and does not include specific projects or details of future developments, formal, site-specific hazardous assessments or technical reports have not been performed, though they would be required under CEQA as specific projects are implemented.

4.9.1 EXISTING CONDITIONS

Hazardous Materials and Wastes

Hazardous materials and wastes are defined and regulated in the United States by federal, state, and local regulations, including those administered by the U.S. Environmental Protection Agency (USEPA), the California Environmental Protection Agency (Cal/EPA) the U.S. Occupational Safety and Health Administration, the U.S. Department of Transportation, the U.S. Nuclear Regulatory Commission, and a large number of other agencies named in the following discussion. The California Health and Safety Code, in Section 25501, defines hazardous material as:

Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous waste is hazardous material generated, intentionally or unintentionally, as a byproduct of some process or condition. Hazardous wastes are defined in California Health and Safety Code Section 25141(b) as wastes that:

…because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hazardous materials may be released through spilling, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. Transportation-related use of hazardous materials poses a risk to residents within the project area in several ways. Actual transport of hazardous materials via truck, rail, and other modes involves a degree of risk of accident and release. The use of hazardous materials and the generation of hazardous waste in the construction and maintenance of the transportation system are other avenues of risk or exposure. Finally, the past storage, use, and/or disposal of hazardous materials and/or wastes in a manner that creates residual contamination of soil and/or groundwater can be a source of risk when such sites are disturbed in the course of future projects that may be associated with the proposed project.
The universe of hazardous wastes is large and diverse. Hazardous wastes can be liquids, solids, or contained gases. They can be the by-products of manufacturing processes, discarded used materials, or discarded unused commercial products such as cleaning fluids (solvents) or pesticides.

The management of hazardous materials and wastes, as it applies to the potential unauthorized release of such substances, is composed of three elements: generation, transportation, and use of hazardous materials and waste. These are discussed in the subsections below.

**Generation and Disposal of Hazardous Materials and Waste**

Many chemicals used in household cleaning, construction, dry cleaning, film processing, landscaping, and automotive maintenance and repair are considered to generate hazardous materials and waste. USEPA and other federal, state, and county regulatory agencies closely monitor these businesses and the disposition of hazardous materials. Hazardous materials require special methods of disposal, storage, and treatment, and the release of hazardous materials requires an immediate response to protect human health and safety, and/or the environment. Improper disposal can harm the environment and people who work in the waste management industry.

Businesses that handle/generate hazardous materials within the region are monitored by USEPA; San Diego Regional Water Quality Control Board (RWQCB); the County of San Diego Department of Environmental Health (DEH) Hazardous Materials Division (HMD); Local Enforcement Agency (LEA) programs; and the County of San Diego Air Pollution Control District (SDAPCD). Generators of hazardous waste fall into two categories: large-quantity generators (LQGs) and small-quantity generators (SQGs). An LQG is defined as a person or facility generating more than 2,200 pounds of hazardous waste per month. An SQG is defined as generating greater than 100 kilograms (kg) and less than 1,000 kg (2,200 pounds) of hazardous waste per month. LQGs include industrial and commercial facilities, such as manufacturing companies, petroleum refining facilities, and other heavy industrial businesses.

LQGs must comply with general federal and state requirements for managing hazardous waste. LQGs need an EPA identification number that is used to monitor and track hazardous waste activities. SQGs include facilities such as service stations, automotive repair, dry cleaners, and medical offices. The regulatory requirements for SQGs are less stringent than the requirements for LQGs. However, SQGs must also obtain an EPA identification number, which must be used for traceability on all hazardous waste documentation.

Pursuant to federal law, all such generators must register with EPA for record-keeping and recording. The EPA Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs related to hazardous materials and hazardous waste. The state agencies responsible for these programs set the standards for their program while local governments implement the standards. Cal/EPA oversees the implementation of the program as a whole. The Unified Program is implemented at the local level by 84 government agencies certified by the Secretary of Cal/EPA. These Certified Unified Program Agencies (CUPAs) have typically been established as a function of a local environmental health or fire department. The CUPA is the local administrative agency that coordinates the following six programs regulating hazardous materials and hazardous wastes:

- Hazardous Waste
- Underground Storage Tanks (USTs)
- Aboveground Storage Tanks (ASTs)
- Hazardous Materials Disclosure (HMD)
- Hazardous Materials Business Plan (HMBP)
• California Accidental Release Program (CalARP)

The County of San Diego DEH HMD has been certified by the Cal/EPA as the local CUPA. Thus, the DEH HMD is responsible for implementing the federal and state laws and regulations for all jurisdictions within the San Diego region.

Transportation of Hazardous Materials and Waste

Transportation of hazardous materials and wastes in the San Diego region occurs through a variety of modes: truck, rail, air, and pipeline. Because the construction and maintenance of transportation systems involve contact with soil and possibly groundwater, this section will be limited to a discussion of the transportation, storage, use, and generation of hazardous substances and the potential impacts to soil and groundwater. Air-related issues are not discussed in this section.

Transportation of hazardous materials by truck and rail is regulated by USDOT. The USDOT regulations establish criteria for safe handling procedures. Federal safety standards are also included in the California Administrative Code. The California Health Services Department regulates the haulers of hazardous waste. According to the USDOT, Office of Hazardous Materials Safety’s (OHMS) most recent Biennial Report on Hazardous Materials Transportation, highway transportation accounts for the largest share of incidents, deaths, and injuries associated with hazardous materials transportation. Rail accounts for the next largest portion, followed by air and water modes of transport. Highway incidents also account for the largest share of economic damage among modes of transport. While hazardous waste incidents account for a small percentage of overall highway incidents, the impact of those incidents can be more significant due to the nature of the material(s) involved. Specific programs have been developed by various responsible agencies to limit or prevent the impact to human health and the environment when hazardous materials/waste incidents occur. These programs are discussed in Section 4.9.2.

In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by the Department of Toxic Substances Control (DTSC). The DTSC maintains a list of active registered hazardous waste transporters throughout California. There are 42 registered hazardous waste transporters within the San Diego region. A list of these transporters can be found on the DTSC website at http://www.dtsc.ca.gov/database/Transporters/TRANSRCH04.CFM.

Shipments of hazardous materials and wastes include a wide variety of chemicals, such as petroleum products, medical waste, and radioactive materials. Each movement of hazardous materials/wastes implies a degree of risk, depending on the material being moved, the mode of transport, and numerous other factors. On a tonnage basis, petroleum products make up the majority—more than 80 percent—of hazardous material moved.

Aside from rail and pipeline, hazardous materials transported within the San Diego region use many of the same freeways, arterials, and local streets as other traffic. This creates a risk of accidents and associated release of hazardous materials for other drivers and for people along these routes, as does the use of rail modes for hazardous materials shipments.

Use of Hazardous Materials

Many activities in the San Diego area involve the use of hazardous materials. The use of hazardous materials is commonplace in commercial, industrial, and manufacturing activities, and many businesses within the San Diego region are permitted to handle and transport hazardous materials. There are historic and existing land uses that have generated hazardous waste as part of daily business operations. Large-
and small-quantity generators of hazardous materials include such commercial uses as painters, dry cleaners, and photographers, and industrial uses such as automotive service stations, sheet metal works, metal scrap yards, truck yards, cement and lime warehouses, coal yards, battery manufacture, and SDG&E substations. In addition, older structures may contain building materials that are considered hazardous, such as asbestos and lead-based paint. In general, these historic and current uses and building materials are located throughout the San Diego region.

Identification of Contaminated Sites

California Government Code Section 65962.5 requires Cal/EPA to prepare an annual Hazardous Waste and Substances List, commonly referred to as the Cortese List. The list, or a site’s presence on the list, has bearing on the local permitting process and compliance with CEQA. Projects that occur on a Cortese List site are not eligible for categorical exemptions to CEQA. The Cortese List is not maintained as a centralized list. A variety of government data sources identify sites where hazardous substances may have been released or may have created a hazardous condition on-site. These include:

- DTSC EnviroStor database (Cortese List)
- Leaking Underground Storage Tank Sites by County and Fiscal Year from the State Water Resources Control Board (SWRCB) GeoTracker database.
- Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- Active Cease and Desist Orders (CDOs) and Cleanup and Abatement Orders (CAOs) from the SWRCB.
- Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
- Active and closed solid waste sites (Solid Waste Inventory System-SWIS database) maintained by the California Integrated Waste Management Board;
- Resource Conservation and Recovery Information System (RCRIS) database of Resource Conservation and Recovery Act (RCRA) facilities maintained by USEPA.
- The U.S. Army Corps of Engineers list of Formerly Used Defense Sites.
- The DTSC School Property Evaluation and Cleanup Division list of school properties with environmental assessments and findings.
- Hazardous Materials Establishment Listing maintained by the County of San Diego.
- The County of San Diego Site Assessment and Mitigation Case Listing of contaminated sites that have previously or are currently undergoing environmental investigations and/or remedial actions.

All databases listed above (with the exception of three: solid waste disposal sites identified by SWRCB; hazardous waste facilities subject to corrective action by H&SC; and the DTSC school property list) have identified sites located within the San Diego region. These databases are discussed in more detail in the paragraphs below. Sites listed in the RCRIS and the Hazardous Materials Establishment databases are not included in this discussion because information contained in these databases is repetitive of other databases.
**DTSC EnviroStor Database (Cortese List)**

The DTSC EnviroStor database (Cortese List) identified 22 hazardous waste and substances sites within the San Diego region (DTSC 2011). Table 4.9-1 provides a summary of the 22 sites included on the Cortese List.

The majority of the hazardous waste and substance sites included on the Cortese List in the San Diego region are related to military and industrial use.

**SWRCB GeoTracker Database**

The SWRCB maintains a database, Geotracker, which allows interested parties to obtain information related to permitted USTs, leaking underground storage tanks (LUSTs), Department of Defense sites, landfills, and Spills-Leaks-Investigations-Cleanups (SLIC) sites. Geotracker provides information in graphical form to easily identify the location of a site and also maintains information about specific sites including the current status, chemicals of concern, potential media affected, regulatory activities, and reports including data submitted to the oversight agency, such as contaminant concentrations in monitoring wells. Also listed in the LUST database are sites that fall under the jurisdiction of the RWQCB or Local Oversight Program for unauthorized releases by the San Diego County DEH.

Concentrations of contaminants in soil and groundwater, as well as the lateral and vertical extent of the areas of impacted soil and groundwater, can change significantly over time based on the nature of the contaminants identified and the local geology, hydrology, and soil characteristics associated with a particular impacted site. According to the Geotracker database, there are over 6,600 documented LUST sites within the San Diego region (SWRCB 2011). Many of these sites have been remediated to the satisfaction of the respective oversight agency; however, there are thousands of sites that are open for assessment and remediation. Due to the large number of LUST cases open for assessment and remediation, and the programmatic nature of this document, providing specific information regarding the number of LUST facilities located in proximity of each project assumed as part of the 2050 RTP/SCS is not feasible or practical. Additional information will be required during completion of the project-specific environmental reviews to assess whether these facilities are likely to present an environmental concern to the projects associated with the 2050 RTP/SCS.

**SWRCB CDO and CAO Database**

The list of active CDOs and CAOs from the SWRCB is a compilation of “all cease and desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13004 of the Water Code, that concern the discharge of wastes that are hazardous materials.” The orders that are “active,” meaning the necessary actions have not yet been completed, are on this list. The SWRCB updates this list by deleting sites when there is no longer any discharge of wastes and/or where the necessary cleanup or abatement actions were taken.

According to the most recent search of the CDO and CAO database, more than 150 “active” CDO and/or CAO sites are listed in the San Diego region (Cal/EPA 2011).

**SWIS Database**

The SWIS database contains information on solid waste facilities, operations, and disposal sites throughout the California. The types of facilities found in this database include landfills; closed disposal sites; transfer stations; materials recovery facilities; composting sites; transformation facilities; waste tire
Table 4.9-1  
EnviroStor Hazardous Waste and Substances Sites in the San Diego Region

<table>
<thead>
<tr>
<th>Site/ Facility Name</th>
<th>Site / Facility Type</th>
<th>Cleanup Status</th>
<th>Address Description</th>
<th>City</th>
<th>Zip</th>
<th>County</th>
<th>Near 2050 RTP/SCS Transportation Network Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallbrook NWS</td>
<td>State Response</td>
<td>Active</td>
<td>14 square miles; 53 miles north of San Diego, CA</td>
<td>Fallbrook</td>
<td>92028</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>Imperial Beach Outlying Landing Field</td>
<td>Military Evaluation</td>
<td>Active</td>
<td>Off Route 75 bordering the landing field</td>
<td>Imperial Beach</td>
<td>92032</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>San Diego Naval Space Command</td>
<td>Military Evaluation</td>
<td>Backlog</td>
<td>San Diego</td>
<td>San Diego</td>
<td>92101</td>
<td>San Diego</td>
<td>n/a n/a n/a</td>
</tr>
<tr>
<td>San Diego PWC</td>
<td>Military Evaluation</td>
<td>Backlog</td>
<td>San Diego</td>
<td>San Diego</td>
<td>92101</td>
<td>San Diego</td>
<td>n/a n/a n/a</td>
</tr>
<tr>
<td>San Diego Sima</td>
<td>Military Evaluation</td>
<td>Backlog</td>
<td>San Diego</td>
<td>San Diego</td>
<td>92101</td>
<td>San Diego</td>
<td>n/a n/a n/a</td>
</tr>
<tr>
<td>Naval Base San Diego</td>
<td>State Response</td>
<td>Active</td>
<td>San Diego Bay, 113 Naval Base 610</td>
<td>San Diego</td>
<td>92136</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>San Diego Space Surveillance Station</td>
<td>State Response</td>
<td>Active</td>
<td>Naval Space Service Field Station Brownfield, 989 Havitage Road</td>
<td>San Diego</td>
<td>91132</td>
<td>San Diego</td>
<td>Yes Yes Yes</td>
</tr>
<tr>
<td>Sunflower Properties Inc.</td>
<td>State Response</td>
<td>Active</td>
<td>9755 Distribution Avenue</td>
<td>San Diego</td>
<td>92121</td>
<td>San Diego</td>
<td>Yes Yes Yes</td>
</tr>
<tr>
<td>Naval Amphibious Base- Coronado</td>
<td>State Response</td>
<td>Active</td>
<td>Naval Amphibious Base, Coronado</td>
<td>San Diego</td>
<td>92155</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>San Diego Nise-West (NOCSCS) Old Town Campus</td>
<td>State Response</td>
<td>Active</td>
<td>4297 Pacific Coast Highway</td>
<td>San Diego</td>
<td>92186</td>
<td>San Diego</td>
<td>No Yes Yes</td>
</tr>
<tr>
<td>Camp Pendleton MCB</td>
<td>Federal Superfund - Listed</td>
<td>Active - Land Use Restrictions</td>
<td>125,000 acres; 35 miles north of San Diego, CA</td>
<td>Oceanside</td>
<td>92055</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>Camp Pendleton</td>
<td>State Response</td>
<td>Active</td>
<td>In Orange County, along border of San Diego County, just east/southeast of San Clemente in Oceanside</td>
<td>San Diego</td>
<td>92136</td>
<td>San Diego</td>
<td>Yes Yes Yes</td>
</tr>
<tr>
<td>MCAS Miramar</td>
<td>State Response</td>
<td>Active</td>
<td>Off of Miramar Boulevard</td>
<td>San Diego</td>
<td>92136</td>
<td>San Diego</td>
<td>Yes Yes Yes</td>
</tr>
<tr>
<td>North Island Naval Air Station</td>
<td>State Response</td>
<td>Active</td>
<td>2,520 acres; adjacent to Coronado, CA</td>
<td>San Diego</td>
<td>92135</td>
<td>San Diego</td>
<td>No No No</td>
</tr>
<tr>
<td>Chatham Brothers Barrel Yard</td>
<td>State Response</td>
<td>Active</td>
<td>2257 Bernardo Ave</td>
<td>Escondido</td>
<td>92029</td>
<td>San Diego</td>
<td>Yes Yes Yes</td>
</tr>
</tbody>
</table>
### 4.9 Hazards and Hazardous Materials

<table>
<thead>
<tr>
<th>Site/ Facility Name</th>
<th>Site / Facility Type</th>
<th>Cleanup Status</th>
<th>Address Description</th>
<th>City</th>
<th>Zip</th>
<th>County</th>
<th>Near 2050 RTP/SCS Transportation Network Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camp Elliott-J09ca0067</td>
<td>State Response</td>
<td>Active</td>
<td>Northern portion Of San Diego</td>
<td>San Diego</td>
<td>92103</td>
<td>San Diego Yes No No Yes</td>
<td></td>
</tr>
<tr>
<td>San Diego Bay Primary Ship Channel/Stennis Homeporting</td>
<td>Military Evaluation</td>
<td>Active</td>
<td>San Diego Bay</td>
<td>San Diego</td>
<td>92136</td>
<td>San Diego No No No</td>
<td></td>
</tr>
<tr>
<td>Borrego Sites (J09ca701100 And J09ca701800 and Other Anza Borrego Impact Areas)</td>
<td>Military Evaluation</td>
<td>Active</td>
<td>Anza-Borrego Desert State Park</td>
<td>Borrego Springs</td>
<td>92004</td>
<td>San Diego No No No</td>
<td></td>
</tr>
<tr>
<td>Naval Submarine Base San Diego</td>
<td>State Response</td>
<td>Active</td>
<td>140 Sylvester Road (Code 12)</td>
<td>San Diego</td>
<td>92106</td>
<td>San Diego No No No</td>
<td></td>
</tr>
<tr>
<td>Point Loma Complex (SPAWAR-PLC)</td>
<td>State Response</td>
<td>Active</td>
<td>Sylvester &amp; Humphries</td>
<td>San Diego</td>
<td>92152</td>
<td>San Diego No No No</td>
<td></td>
</tr>
<tr>
<td>Carroll Canyon Dem Area</td>
<td>Military Evaluation</td>
<td>Active</td>
<td>Approx. 9 miles north of central San Diego, within Section 11 of Township 15 South, Range 3 West, San Bernardino Meridian</td>
<td>San Diego</td>
<td>92152</td>
<td>San Diego Yes Yes Yes</td>
<td></td>
</tr>
<tr>
<td>Tri-City Plating, Incorporated</td>
<td>State Response</td>
<td>Active</td>
<td>1307 South Coast Highway</td>
<td>Oceanside</td>
<td>92054</td>
<td>San Diego Yes Yes Yes</td>
<td></td>
</tr>
</tbody>
</table>

Source: DTSC 2011
sites; and construction, demolition and inert debris facilities and operations. For each facility, the database contains information about location, owner, operator, facility type, regulatory and operational status, authorized waste types, local enforcement agency, and inspection and enforcement records.

There are 142 facility/site listings within the San Diego region that are under the jurisdiction of the County of San Diego Local Enforcement Agency (SWIS 2011).

**Formerly Used Defense Sites (FUDS) Listing**

The U.S. Army Corps of Engineers (USACE) maintains a list of FUDS within the San Diego region. FUDS are real properties that were under the jurisdiction of the Secretary of Defense and owned by, leased by, or otherwise possessed by the United States. FUDS are located throughout the United States. In many cases, the ownership of these properties have been transferred to private individuals, corporations, state and local governments, federal agencies, and tribal governments. FUDS include, but are not limited to, hazardous, toxic, and radioactive waste; military munitions including munitions constituents; containerized hazardous, toxic, and radioactive waste; building demolition and debris removal; and potentially responsible party sites (government shares burden with private entity).

According to a list prepared by USACE in September 2008, there are 31 FUDS in the San Diego region (USACE 2008). Many FUDS have potential hazardous waste contamination problems such as disposal areas and leaking underground fuel tanks (LUFTs). Other FUDS utilized practice rounds for training, and some FUDS used live munitions and explosives, known collectively as ordnance and explosives. The live munitions that were fired but did not detonate are known as unexploded ordnance, or UXO. The UXO that remain on FUDS properties today pose the greatest safety hazard to the public, if they are disturbed (USACE 2008). Many FUDS sites in San Diego County are under investigation by USACE to identify and remediate potential hazards.

**County of San Diego Site Assessment and Mitigation (SAM) Case Listing**

The primary goal of the Site Assessment and Mitigation Program (SAM) is to protect public health, water resources, and the environment from releases of contaminants by providing oversight of assessments and cleanups in accordance with the California Health and Safety Code and the California Code of Regulations (CCR). The SAM’s Voluntary Assistance Program also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects pertaining to properties contaminated with hazardous substances. The DEH SAM Program maintains the SAM list of contaminated sites that have previously or are currently undergoing environmental investigations and/or remedial actions.

The SAM Program covers the entire San Diego region and includes remediation sites of all sizes. The SAM case listing is revised and updated regularly and the number of sites on the list is continually changing but may contain upwards of 5,000 cases at one time. There is some overlap with the information in other regulatory databases; however, the list also contains sites that often are not covered by some of the larger regulatory databases. If a project is submitted to the County for discretionary review and is located on a site found on the SAM list, the project’s status must be determined and any ongoing remediation requirements coordinated with the DEH SAM project manager.

**Schools**

CEQA Guidelines require EIRs to assess whether a project would emit hazardous air emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (see PRC Sections 21151.2 and 21151.4; Appendix G of the CEQA Guidelines). Children are particularly susceptible to long-term impacts from emissions of hazardous materials from
roadways near schools as well as high-volume motor vehicle travel on roadways through residential areas. There are numerous schools located throughout the San Diego region. For a detailed discussion of schools in the San Diego region, refer to Section 4.14, Public Services, Utilities, and Energy.

**Airports**

In the San Diego region, the relationships of transportation, transit, and mobility, and of population growth to hazards associated with or affecting aircraft in flight are the responsibility of the San Diego County Regional Airport Authority, established under state law to protect the safety and welfare of the general public and the ability of airports to operate now and in the future (SDCRAA 2011). One of the Authority's responsibilities is to serve as the Airport Land Use Commission (ALUC) for San Diego County. The ALUC is charged with creating or updating Airport Land Use Compatibility Plans (ALUCPs) for the region's 16 public-use and military airports in accordance with applicable state and federal laws.

The ALUC reviews land use plans, development proposals, and certain airport development plans for consistency with adopted ALUCPs. An ALUCP focuses on a defined area around each airport known as the Airport Influence Area (AIA). The AIA is composed of noise, safety, airspace protection, and overflight factors, in accordance with guidance from the California Airport Land Use Planning Handbook published by Caltrans, Division of Aeronautics. ALUCPs provide guidance on appropriate land uses surrounding airports to protect the health and safety of people and property within the vicinity of an airport, as well as the public in general.

The ALUC is responsible for adopting ALUCPs for 16 public-use and military airports in the San Diego region (Figure 4.9-1). The ALUC has no jurisdiction over the operation of airports or over existing land uses, regardless of whether such uses are incompatible with airport activities. Once ALUCPs have been adopted by the ALUC, local agencies with land located within the AIA boundary for any of the airports must, by law, amend their planning documents to conform to the applicable ALUCP.

ALUCPs have been adopted for 14 of the 16 public use or military airports in the region. Those airports, with the year of adoption of the latest ALUCP, are:

- Agua Caliente Airport (2006)
- Borrego Valley Airport (2006)
- Brown Field (2010)
- Fallbrook Community Airpark (2006)
- Gillespie Field (2010)
- Jacumba Airport (2006)
- Marine Corps Air Station Camp Pendleton (2008)
- Marine Corps Air Station Miramar (2010)
- McClellan-Palomar Airport (2010)
- Montgomery Field (2010)
- Oceanside Municipal Airport (2010)
- Ocotillo Airport (2006)
- Ramona Airport (2008)
- SDIA - Lindbergh Field (2004)

The two airports that do not have ALUCPs are both military airfields: the Navy’s Outlying Landing Field Imperial Beach, and Naval Air Station North Island. The Department of Defense requires military
airfields to adopt Air Installation Compatible Use Zone (AICUZ) studies, which assess compatible land uses in the vicinity of a military air station in a way equivalent to ALUCPs.

The four compatibility factors considered in an ALUCP are noise, safety, airspace protection, and overflight. The objectives of planning for each of these factors are:

**Noise:** Avoid introducing new noise-sensitive land uses in the vicinity of an airport that would be exposed to significant levels of aircraft noise, taking into account the characteristics of the airport and the communities surrounding the airport.

**Safety:** Minimize the risks associated with potential off-airport aircraft accidents and emergency landings. This objective has two components:

- *Safety on the Ground:* Provide for the safety of people and property on the ground in the event of an aircraft accident near an airport.
- *Safety of Aircraft Occupants:* Enhance the chances of survival of the occupants of an aircraft involved in an accident beyond the immediate runway area.

**Airspace Protection:** Avoid the development of land use conditions that, by posing hazards to flight, can increase the risk of an accident occurring. The particular hazards of concern are:

- Airspace obstructions;
- Wildlife hazards, particularly bird strikes; and
- Land use characteristics that pose other potential hazards to flight by creating visual or electronic interference with air navigation.

**Overflight:** Avoid, to the extent possible, new land use development that would be disrupted by overflight activity and might lead to annoyance and complaints; notify people about the presence of aircraft overflights near airports so they can make informed decisions regarding acquisition or lease of property.

In addition to the public or military airports, there are numerous private airports, airstrips, and helipads in the region. Many of these private airports are located in the eastern areas of the region or remote vacation destinations. There are several private helipads located on the roofs of hospitals and buildings owned by large corporations, or used by police stations. The majority of these private airports have not adopted an ALUCP or Comprehensive Land Use Plan (CLUP).

**Emergency Response and Evacuation Plans**

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disasters, human-made and natural. It is the responsibility of government to undertake an ongoing comprehensive approach to emergency management in order to avoid or minimize the effects of hazardous events. Local governments have the primary responsibility for preparedness and response activities.

In San Diego County, the County Office of Emergency Services (OES) and the Unified Disaster Council (UDC) play a central role in the preparation and execution of emergency response and evacuation plans.
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4.9 Hazards and Hazardous Materials

OES alerts and notifies appropriate agencies when disaster strikes, coordinates all responding agencies, ensures resources are available and mobilized, develops plans and procedures for response and recovery, and develops and provides preparedness materials for the public (OES 2011).

The UDC is the governing body of the Unified San Diego County Emergency Services Organization. The UDC is composed of the Chair of the San Diego County Board of Supervisors, who serves as Chair of the Council, and representatives from the 18 incorporated cities. The primary purpose of the UDC and the Emergency Services Organization is to provide for the coordination of plans and programs designed for the protection of life and property in the San Diego region.

The UDC, with OEM acting as staff, has prepared and adopted the Unified San Diego County Emergency Service Organization Operational Area Emergency Plan (Emergency Plan) (UDC 2007). The Emergency Plan outlines strategies, procedures, recommendations, and organizational structures that can be used to implement a coordinated evacuation effort in the San Diego Operational Area. It is intended to be used as a template for the development of other jurisdictional evacuation plans and will support or supplement the evacuation plans prepared and maintained by each local jurisdiction. The Emergency Plan has been designed to follow the state mandated Standardized Emergency Management System (SEMS) and the federal mandated National Incident Management System (NIMS). SEMS and NIMS are based on the Incident Command System and the Multiple Agency Coordination System, both of which have been used by fire departments for years. The California Emergency Management Agency (Cal EMA) has certified that the Emergency Plan meets state guidelines (OES 2010).

The Emergency Plan provides guidance on command and control, communications, transportation, sheltering considerations, and care and protection of animals. Disasters for which the plan is prepared include earthquakes, floods, pandemic influenza, nuclear accident (San Onofre), terrorism, tsunamis, and wildland fires. Any of these disasters could involve evacuation of affected areas. The Emergency Plan assumes that the primary mode of transportation used during jurisdictional evacuation efforts will be privately owned automobiles.

If evacuation is required, local jurisdictions work with the Operational Area Emergency Operations Center, law enforcement officials, Caltrans, the California Highway Patrol, County Public Works, and other applicable agencies/departments to identify evacuation points and transportation routes. In addition, transportation points will be identified to collect and transport people without transportation resources to evacuation points. Response will be coordinated by the Operational Area Emergency Operations Center.

Any large-scale response to an incident, including those resulting in the evacuation of more than two impacted communities, will need to be coordinated through the Operational Area Emergency Operations Center operating under a unified command. The Coordinator of Emergency Services will coordinate the overall multijurisdictional evacuation effort and the Operational Area Law Enforcement Coordinator will be responsible for coordinating Operational Area-wide evacuation activities. Evacuation operations in the field will be conducted by law enforcement agencies, highway/road/street departments, and public and private transportation providers.

The following freeways and highways are identified in the Emergency Plan as the primary transportation routes for an evacuation effort in the San Diego region.

<table>
<thead>
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<td>SR 54</td>
<td>SR 75</td>
<td>SR 94</td>
<td>SR 905</td>
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</table>
4.9 Hazards and Hazardous Materials

The OES maintains Dam Evacuation Plans for the Operational Area, and there are other stand-alone plans for places and events that might produce the need for evacuations (OES 2010). These are:

- The San Diego County Nuclear Power Plant Emergency Response Plan
- The San Diego County Operational Area Oil Spill Contingency Element of the Area Hazardous Materials Plan
- The San Diego County Operational Area Emergency Water Contingencies Plan
- The Unified San Diego County Emergency Services Organization Operational Area Energy Shortage Response Plan
- The Unified San Diego County Emergency Services Organization Recovery Plan
- The San Diego County Multi-Jurisdictional Hazard Mitigation Plan
- The San Diego Urban Area Tactical Interoperable Communications Plan
- The San Diego County Draft Terrorist Incident Emergency Response Protocol

Wildland Fires

PRC Section 4201–4204 directs the California Department of Forestry and Fire Protection (CDF or CAL FIRE) to map fire hazards within State Responsibility Areas, based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant damage to urban and residential development from wildland fires; consequently, wildfire hazards are described in the statutes principally according to their potential for igniting buildings.

The San Diego region is subject to both urban and wildland fires. In urbanized areas of the San Diego region, the land is highly developed with buildings, streets, and hardscape. In most of these urbanized areas, there are canyons and other strips or areas of native vegetation that are susceptible to wildland fires. The largest such fire in California history was the Cedar Fire of 2003, when 280,278 acres, 2,232 homes, and 588 other buildings burned in the San Diego region as wildland fire, whipped by Santa Ana winds, swept into residential areas. Fueled by native vegetation, eucalyptus trees, and other combustible material, the Cedar Fire crossed highways and even I-15. So many other wildfires raged in Southern California that year and in 2007 that the collective events became known as the “Fire Sieges” of 2003 and 2007.

Climate, topography, and native vegetation contribute to the region’s vulnerability. The extended droughts characteristic of the region’s Mediterranean climate result in large areas of dry vegetation that provide fuel for wildland fires. The most critical times of year are late summer and fall when Santa Ana winds bring hot, dry desert air into the region. The hot winds quickly dry vegetation, thereby increasing the flammability of natural fuel. Once fires begin, the high winds fan the flames, sometimes catastrophically increasing the destructive intensity of the conflagration. As urbanization spreads and reaches into wildland areas, the threat of wildland fire to human populations and property increases.

A large wildfire in the San Diego region triggers responses from a network of many fire departments, including CAL FIRE, the U.S. Forest Service, Department of Defense installation forces on military bases, municipal fire departments of the region’s cities, and County Fire Protection Districts and County Service Areas. Responses to wildland fires are coordinated through the office of the Regional Director of CAL FIRE. Each jurisdiction or agency is tasked with responding to fires in its service area, but all also participates in a long-standing Mutual Aid Agreement to assist any of the member departments if needed (Steinhoff, pers. comm., 2011).
**Wildland-Urban Interface Zones**

WUI zones are areas identified by CDF as “Fire Hazard Severity Zones” that are at a significant risk from wildfires. Lands in the state are classified by the CDF Director in accordance with the severity of wildfire hazard expected in those areas and the responsibility for fire protection, so that measures may be identified that will reduce the potential for losses to life, property, and resources from wildfire.

CDF identifies areas of responsibility for fire prevention and suppression in Fire Hazard Severity Zones. Areas of responsibility may be federal, state, or local. Fire Hazard Severity Zones in State Responsibility Areas are further designated as Moderate, High, or Very High (Figure 4.9-2). Local Responsibility Zones are designated as Very High Fire Hazard Severity Zones (Figure 4.9-3). In these zones, all new building must comply with California Building Code (CBC) requirements regarding Standards of Quality for materials, systems, and methods of construction.

Two categories of WUI zones around areas of residential density of 1 house per 20 acres (development) are designated in the San Diego region: Threat Zones and Defense Zones. Defense Zones are within 0.25 mile of development; Threat Zones are 0.25 to 1.5 miles from development (Figure 4.9-3). The delineation of threat zones allows prioritizing areas of risk to life and property from wildfire and may serve as a fundamental land attribute for assigning regional policy for land use and fire management. Because of the affinity between development and major transportation corridors, significant elements of the region’s transportation network are in or near WUI designated Threat Zones.

In the wake of the 2003 Fire Siege, the California Building Standards Commission in 2005 approved the Office of the State Fire Marshal’s emergency regulations amending CCR Title 24, Part 2 (2007 CBC). Standards for development in fire hazard zones, applicable principally to new buildings, were incorporated into the CBC and are known as the Wildland-Urban Interface Fire Area Building Standards.

The broad objective of the Wildland-Urban Interface Fire Area Building Standards is to establish minimum standards for materials and material assemblies and provide a reasonable level of exterior wildfire exposure protection for buildings in WUI areas. The use of ignition-resistant materials and design to resist flames or burning embers from a vegetation fire is California’s effort to control the repeating cycle of interface fire disasters.

Fire planning incorporates concepts of the National Fire Plan, the California Fire Plan, individual CAL FIRE Unit Fire Plans, and Community Wildfire Protection Plans (CWPPs). Fire Plans outline the fire situation within each CAL FIRE Unit. CWPPs do the same for communities. Each identifies prevention measures to reduce risks, informs and involves the local community or communities in the area, and provides a framework to diminish potential losses due to wildfire. Planning includes other state, federal, and local government agencies as well as Fire Safe Councils (CDF 2011).

**4.9.2 REGULATORY SETTING**

Numerous federal, state, and local laws, regulations, and programs have been enacted to prevent or mitigate damage to public health and safety and the environment from the release or threatened release of hazardous substances into the workplace or environment, and to protect human health and environmental resources from potential existing site contamination. Some of these laws, regulations, and programs were described in Section 4.9.1. The following paragraphs provide a discussion of the typical regulations, programs, guidelines, and mechanisms used within the San Diego region.
Figure 4.9-2
San Diego County Fire Hazard Severity Zones
October 2011

- Incorporated Cities
- Local Responsibility Area:
  - Very High Fire Hazard Severity Zone
  - Non-Very High Fire Hazard Severity Zone
- State or Federal Responsibility Area:
  - Non-Very High Fire Hazard Severity Zone
  - Very High Fire Hazard Severity Zone

Source: CalFire 2007
Figure 4.9-3
San Diego County
Wildland Urban Interface

October 2011

Zones of Influence

Development Density
=> 1 house per 20 acres

- Developed
- Defense Zone Buffer Within 0.25 miles
  - Defense Zone
- Threat Zone Buffer 0.25 to 1.25 miles
  - Threat Zone

Source: CalFire 2007
Federal Laws, Regulations, and Programs

Chemical Accident Prevention Provisions

The provisions listed under Part 68 of the Code of Federal Regulations (CFR) set forth the list of regulated substances and thresholds, the petition process for adding or deleting substances to the list of regulated substances, the requirements for owners or operators of stationary sources concerning the prevention of accidental releases, and the state accidental release prevention programs approved under Section 112(r). The CalARP Program, described below, is the state adaptation of this federal regulation. The list of federally regulated substances and federally regulated flammable substances and their threshold quantities can be accessed online from the California Office of Emergency Services’ website (http://www.oes.ca.gov).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) of 1986

Congress enacted CERCLA, setting up what has become known as the Superfund program, in 1980 to establish prohibitions and requirements concerning closed and abandoned hazardous waste sites; provide for liability of persons responsible for releases of hazardous waste at these sites; and establish a trust fund to provide for cleanup when no responsible party can be identified. SARA amended the CERCLA in 1986, emphasizing the importance of permanent remedies and innovative treatment technologies to clean up hazardous waste sites; requiring Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; providing new enforcement authorities and settlement tools; increasing involvement of the states in every phase of the Superfund program; increasing the focus on human health problems posed by hazardous waste sites; encouraging greater citizen participation in making decisions on how sites should be cleaned up; and increasing the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act (EPCRA)

EPCRA, or SARA Title III, was enacted in October 1986. SARA Title III requires any infrastructure at the state and local levels to plan for chemical emergencies, including identifying potential chemical threats. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by USEPA's Office of Emergency Management. USEPA's Office of Information Analysis and Access implements EPCRA’s Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

Federal Aviation Administration (FAA) Functions

The FAA has primary responsibility for the safety of civil aviation. The FAA’s major functions related to hazards include:

- Developing and operating a common system of air traffic control and navigation for both civil and military aircraft;
- Developing and implementing programs to control aircraft noise and other environmental effects of civil aviation;
- Regulating U.S. commercial space transportation; and
• Conducting reviews to determine that the safety of persons and property on the ground are protected.

Federal Aviation Regulations (FAR), Notice of Proposed Construction or Alteration

The FAA imposes height restrictions in order to prevent obstructions to navigable airspace to protect flights and surrounding structures. In certain cases, the FAA should be notified of proposed development pursuant to Section 77.11 of FAR. The notification of proposed development enables the FAA to provide a basis for:

• Evaluating the effect of the construction or alteration on operational procedures and proposed operational procedures;
• Determinations of the possible hazardous effect of the proposed construction or alteration of air navigation;
• Recommendations for identifying the construction or alteration in accordance with current FAA Advisory Circular AC 70/7460-1K dated August 1, 2000, Obstruction Marking and Lighting;
• Determining other appropriate measures to be applied for continued safety of air navigation; and
• Charting and other notification to airmen of the construction or alteration.

Certain projects that may affect public and military airports require notification to the FAA. Individual jurisdictions can request an FAA evaluation of proposed development when certain features appear to be potentially hazardous.

Federal Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 provided a new set of mitigation plan requirements that emphasize state and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a “Standard” or an “Enhanced” Natural Mitigation Plan. “Enhanced” plans demonstrate increased coordination of mitigation activities at the state level and, if completed and approved, would increase the amount of funding through the Hazard Mitigation Grant Program. California’s updated State Hazard Mitigation Plan was adopted on October 8, 2007, and approved by FEMA Region IX on December 17, 2007.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (HMTA), which is administered by the Research and Special Programs Administration (RSPA) of

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USDOT. HMTA provides USDOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property, which is inherent in the commercial transportation of hazardous materials. The HMTA governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water. RSPA carries out these responsibilities by prescribing regulations and managing a user-funded grant program for planning and training grants for states and Indian tribes. USDOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. USDOT regulations pertaining to the actual movement govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing. Additionally, USDOT is responsible for developing curriculum to train for emergency response, and administers grants to states and Indian tribes for ensuring the proper training of emergency responders. HMTA was enacted in 1975 and was amended and reauthorized in 1990, 1994, and 2005.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code (IBC) use a hazard classification system to determine what protective measures are required for fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

National Fire Plan

The Department of the Interior’s National Fire Plan is intended to ensure an appropriate federal response to severe wildland fires, reduce fire impacts to rural communities, and ensure sufficient firefighting capacity in the future. The Rural Fire Assistance program is funded to enhance the fire protection capabilities of rural fire districts and safe and effective fire suppression in the wildland/urban interface. The program promotes close coordination among local, state, tribal, and federal firefighting resources by conducting training, equipment purchase, and prevention activities on a cost-shared basis.


RCRA establishes a framework for national programs to achieve environmentally sound management of both hazardous and nonhazardous wastes. RCRA was designed to protect human health and the environment, reduce/eliminate the generation of hazardous waste, and conserve energy and natural resources. RCRA also promotes resource recovery techniques. The Hazardous and Solid Waste Amendments of 1984 (HSWA) both expanded the scope of RCRA and increased the level of detail in many of its provisions. The Hazardous Waste Management subchapter of RCRA deals with a variety of issues regarding the management of hazardous materials, including the export of hazardous waste, state programs, inspections of hazardous waste disposal facilities, enforcement, and the identification and listing of hazardous waste. DTSC is responsible for implementing the RCRA program as well as California’s own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the CUPA program, Cal/EPA has, in turn, delegated enforcement authority to the County of San Diego for state law regulating hazardous waste producers or generators. The County of San Diego is the designated CUPA for all local jurisdictions within the project area.
The Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-288), as amended, (42 U.S.C. Sections 5121–5206), and Related Authorities

CFR Sections 206.31–206.48 provide the statutory framework for a presidential declaration of an emergency or a declaration of a major disaster. Such declarations open the way for a wide range of federal resources to be made available to assist in dealing with an emergency or major disaster. The Stafford Act structure for the declaration process reflects the fact that federal resources under this act supplement state and local resources for disaster relief and recovery. Except in the case of an emergency involving a subject area that is exclusively or preeminently in the federal purview, the governor of an affected state, or acting governor if the governor is not available, must request such a declaration by the president.

U.S. Department of Defense (DOD) Air Installations Compatible Use Zone (AICUZ) Program

Safety compatibility criteria for military air bases are set forth through the AICUZ Program administered by the DOD. This program applies to military air installations located within the United States, its territories, trusts, and possessions. The AICUZ Program has the following four purposes: (1) to set forth DOD policy on achieving compatible use of public and private lands in the vicinity of military airfields; (2) to define height and land use compatibility restrictions; (3) to define procedures by which AICUZ may be defined; and (4) to provide policy on the extent of government interest in real property within these zones that may be retained or acquired to protect the operational capability of active military airfields.

USEPA Region 9 Regional Screening Levels

Region 9 is the Pacific Southwest Division of USEPA, which includes California. Regional Screening Levels (RSLs) are tools for evaluating and cleaning up contaminated sites. RSLs for the Superfund/RCRA programs are concentrations of hazardous constituents that are considered to be protective for humans (including sensitive groups) over a lifetime, because they are derived from standardized equations combining conservative exposure information assumptions with USEPA toxicity data. However, RSLs do not address nonhuman health issues such as ecological impacts. Region 9’s RSLs are agency guidelines and are not legally enforceable standards.

RSLs are risk-based tools for evaluating contaminated sites (USEPA 2000). They are intended to streamline and standardize all stages of the risk decision-making process.

RSL values combine current USEPA toxicity values with "standard" or default exposure factors in standard exposure pathways (e.g., ingestion, inhalation, and dermal contact) to estimate contaminant concentrations in environmental media (soil, air, and water) that are considered health protective of humans, including sensitive groups, over a lifetime.

Chemical concentrations greater than these RSL values would not automatically designate a site as "dirty" or trigger a response action. However, exceeding the RSL values does imply that further evaluation of the potential risks that may be posed by site contaminants is appropriate.

Further evaluation may include additional sampling, consideration of ambient levels in the environment, or a reassessment of the assumptions contained in these screening-level estimates (e.g., appropriateness using chronic toxicity values to evaluate childhood exposures, appropriateness of generic exposure factors for a specific site, etc.).

When considering RSLs as preliminary screening values, residential concentrations (RSLr) are recommended for maximum beneficial uses of the property and as a first step in evaluating potential
adverse impacts of detected concentrations of chemicals in the matrices sampled on-site. Industrial concentrations (RSLi) are suggested as screening values for soils on properties historically used for industrial purposes, for which the intended future use of the property is commercial and/or industrial, and for which a deed-restriction limiting future use of the property to industrial is acceptable.

**State Laws, Regulations, and Programs**

**California Education Code (CEC)**

The CEC establishes the law for California public education. The CEC requires that DTSC be involved in the environmental review process for the proposed acquisition and/or construction of school properties that will use state funding. The CEC requires that a Phase I Environmental Site Assessment be completed prior to acquiring a school site or engaging in a construction project. Depending on the outcome of the Phase I Environmental Site Assessment, a Phase II Environmental Assessment, including the collection and submittal of samples for analysis may be warranted. Depending upon the results of the Phase II ESA and most usually a human health risk assessment, remediation may be necessary. The CEC also requires potential, future school sites that are proposed within 2 miles of an airport to be reviewed by the Caltrans Division of Aeronautics. If Caltrans does not support the proposed site, no state or local funds can be used to acquire the site or construct the school.

**California Emergency Services Act**

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

**California Fire Code (CFC)**

The CFC is Chapter 9 of CCR Title 24. It is created by the California Building Standards Commission and it is based on the IFC created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the CBC use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

**California Health and Safety Code (H&SC), Hazardous Materials Release Response Plans and Inventory**

Two programs found in the California H&SC Chapter 6.95 are directly applicable to the CEQA issue of risk due to hazardous substance release. In San Diego County, these two programs are referred to as the HMBP program and the CalARP program. DEH is responsible for the implementation of the HMBP program and the CalARP program in San Diego County. The HMBP and CalARP programs provide threshold quantities for regulated hazardous substances. When the indicated quantities are exceeded, an HMBP or Risk Management Plan (RMP) is required pursuant to the regulation. Congress requires USEPA Region 9 to make RMP information available to the public through the USEPA’s Envirofacts Data Warehouse. The Envirofacts Data Warehouse is considered the single point of access to select USEPA environmental data.
California Health and Safety Code Section 25270, Aboveground Petroleum Storage Act

The Aboveground Petroleum Storage Act requires registration and spill prevention programs for ASTs that store petroleum. In some cases, ASTs for petroleum may be subject to groundwater monitoring programs that are implemented by the RWQCBs and the SWRCB.

California Human Health Screening Levels

The California Human Health Screening Levels (CHHSLs) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Preparation of the CHHSLS was required by the California Land Environmental Restoration and Reuse Act of 2001 (Cal-EPA 2005).

The CHHSLs are concentrations of 54 hazardous chemicals in soil or soil gas the Cal/EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA) a agency under the umbrella of Cal/EPA and are contained in its report entitled *Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil* (OEHHA and CEPA 2004). The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of 1 in 1 million and a hazard quotient of 1.0 for noncancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by USEPA and Cal/EPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/industrial CHHSLs) at the site.

California Natural Disaster Assistance Act (NDAA)

The NDAA provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The NDAA is activated after the following occurs: (1) a local declaration of emergency, or (2) Cal EMA gives concurrence with the local declaration, or (3) the governor issues a Proclamation of a State Emergency. Once the NDAA is activated, local government is eligible for certain types of assistance, depending upon the specific declaration or proclamation issued.

California State Aeronautics Act

The State Aeronautics Act is implemented by the Caltrans Division of Aeronautics. The purpose of this act is to (1) foster and promote safety in aeronautics; (2) ensure that the state provides laws and regulations relating to aeronautics that are consistent with federal aeronautics laws and regulations; (3) ensure that persons residing in the vicinity of airports are protected against intrusions by unreasonable levels of aircraft noise; and (4) develop informational programs to increase the understanding of current air transportation issues. The State Aeronautics Act provides for the right of flight over private property, unless conducted in a dangerous manner or at altitudes below those set by federal authority, and prohibits any use of a property that would interfere with the right of flight. Additionally, the act gives Caltrans and local governments the authority to protect airspace defined by FAR Part 77 criteria. The Caltrans Division of Aeronautics issues permits for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within 2 miles of an airport runway, and authorizes helicopter landing sites at/near schools.
Public Resources Code Section 21098

PRC Section 21098 requires lead agencies to submit a notice to the military service that would be affected by a proposed General Plan Amendment; project of statewide, regional, or areawide significance; or a project that must be referred to the airport land use commission when the project is located within specific boundaries of a low-level flight path, military impact zone, or special use airspace. Noticing is required when an NOP of an EIR is issued and when environmental documents are released for public review. Government Code Section 65352 requires that, prior to action by a legislative body to adopt or substantially amend a general plan, the lead agency shall refer the proposed action to various entities, including the branches of the United States Military that have provided the Office of Planning and Research with a mailing address, when the proposed action is:

- Located within 1,000 feet of a military installation;
- Located beneath a low-level flight path; or
- Within special use airspace as defined in PRC Section 21098.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government, and private agencies. The plan is administered by Cal EMA and includes response to hazardous materials incidents. Cal EMA coordinates the response of other agencies, including Cal/EPA, California Highway Patrol, CDFG, Regional RWQCB, SDAPCD, the City of San Diego Fire Department, and DEH Hazardous Incident Response Team (DEH-HIRT).

Government Code Section 65962.5 (a), Cortese List

The Hazardous Waste and Substance Sites Cortese List is a planning document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires Cal/EPA to develop, at least annually, an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous-material-release information for the Cortese List. (The Cortese list was last updated April 1, 2001; it has been superseded by the EnviroStor database.)

Title 14 Division 1.5 of the California Code of Regulations

CCR Title 14 Division 1.5 establishes the regulations for CAL FIRE and is applicable in all State Responsibility Areas (SRAs)—areas where CAL FIRE is responsible for wildfire protection. Most of the unincorporated area of the County is SRA and any development in these areas must comply with these regulations. Among other things, Title 14 establishes minimum standards for emergency access, fuel modification, setback to property line, signage, and water supply.

Title 22 of the California Code of Regulations & Hazardous Waste Control Law, Chapter 6.5

DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under RCRA and the California Hazardous Waste Control Law. Both laws impose “cradle to grave” regulatory systems for handling hazardous waste in a manner that protects human health and the environment. Cal/EPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs, including the San Diego County DEH.
Title 23 of the California Code of Regulations, Underground Storage Tank (UST) Act

The UST monitoring and response program is required under Chapter 6.7 of the California Health and Safety Code and Title 23 of the CCR. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning USTs. The County DEH is the local administering agency for this program.

Title 27 of the California Code of Regulations, Solid Waste

Title 27 of the CCR contains a waste classification system that applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and that, therefore, must be discharged to waste management sites for treatment, storage, or disposal. The California Integrated Waste Management Board (CIWMB) and its certified LEA regulate the operation, inspection, permitting, and oversight of maintenance activities at active and closed solid waste management sites and operations.

SB 1889, Accidental Release Prevention Law/California Accidental Release Prevention Program (CalARP)

SB 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as “regulated substances,” that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

State Fire Regulations

State fire regulations are set forth in Sections 13000 et seq. of the California H&SC, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The State Fire Marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

Local Plans, Policies, and Ordinances

Airport Land Use Compatibility Plans

The state requires that the San Diego County Regional Airport Authority (SDCRAA) Board, as the Airport Land Use Commission (ALUC), prepare Airport Land Use Compatibility Plans (ALUCPs) for each public use airport in the County of San Diego as directed in PRC Section 21675. An ALUCP contains policies and criteria that address compatibility between airports and future land uses that surround them by addressing noise, overflight, safety, and airspace protection concerns to minimize the public’s exposure to excessive noise and safety hazards within the airport influence area for each airport over a 20-year horizon. Adopted CLUPs for airports in the region are further discussed in Section 4.9.1.
Country of San Diego Consolidated Fire Code

The San Diego region is unique within California in having 17 fire protection districts within its boundaries. For the purposes of prescribing regulations in the unincorporated area of San Diego County, the applicable fire code is known as the County Fire Code and includes the Consolidated Fire Code and adopts, by reference, the California Fire Code, 2001 edition (CCR T-24 part 9). The Consolidated Fire Code consists of local Fire Protection District ordinances that have modified the Fire Code portion of the State Building Standards Code and any County of San Diego modification to the Fire Districts’ amendments. The purpose of the Code is for the protection of the public health and safety, which includes permit and inspection requirements for the installation, alteration, or repair of new and existing fire protection systems, and penalties for violations of the Code. The Code provides the minimum requirements for access, water supply and distribution, construction type, fire protection systems, and vegetation management. Additionally, the Fire Code regulates hazardous materials and associated measures to ensure that public health and safety are protected from incidents relating to hazardous substance releases.

Country of San Diego Site Assessment and Mitigation Program

The San Diego County SAM Program, within the Land and Water Quality Division of the County DEH, consists of project managers, field technicians, supervisors, and support staff whose primary purpose is to protect human health, water resources, and the environment within San Diego County by providing oversight of assessments and cleanups in accordance with the California H&SC and the CCR. The SAM’s Voluntary Assistance Program (VAP) also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects pertaining to properties contaminated with hazardous substances. The SAM maintains an environmental assessment case listing at http://www.co.sandiego.ca.us/deh/lwq/sam/index.html.

Country of San Diego Underground Storage Tank Program

The DEH HMD UST Program administers and enforces federal and state laws and regulations and local ordinances for the construction/installation, modification, upgrade, and removal of USTs in San Diego County. If contamination is discovered or likely to be present, owners or operators of USTs are required by law to report the contamination to the DEH HMD and SAM programs and to take corrective action.

San Diego County Area Plan

The County of San Diego DEH HMD established the San Diego County Area Plan (Area Plan) based on requirements of Chapter 6.95 of the California H&SC, Title 19 of the CCR and SARA Title III for emergency response to a release or threatened release of a hazardous material within the County. The Hazardous Materials Program and Response Plan contained in the Area Plan serves the majority of the cities in the San Diego region.

San Diego County Multi-Jurisdictional Hazard Mitigation Plan

The Multi-Jurisdictional Hazard Mitigation Plan is a countywide plan that identifies risks and ways to minimize damage by natural and manmade disasters. The plan is a comprehensive resource document that serves many purposes such as enhancing public awareness, creating a decision tool for management, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, and providing inter-jurisdictional coordination. The plan evaluates risks associated with coastal storms, erosion, tsunami, dam failure, earthquakes, floods, rain-induced landslides,
liquefaction, structure/wildfire fires, and manmade hazards. It also provides goals, objectives, and actions to reduce impacts from these hazards.

**Local Municipal Fire Codes**

Each of the 18 cities in the San Diego region has a Fire Code included in its Municipal Code. Like the County of San Diego Consolidated Fire Code, these codes all conform to the California Fire Code and are similar in their provisions with regard to fire safety, although they may differ in their approach to vegetation management.

**Organization Operational Area Emergency Plan (Emergency Plan)**

The San Diego County Emergency Plan describes a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. It delineates operational concepts relating to various emergency situations, identifies components of the Emergency Management Organization, and describes the overall responsibilities for protecting life and property and ensuring the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies, and the private sector.

The plan cites authorities and references to support the plan and has five objectives:

1. To provide a system for the effective management of emergency situations.
2. To identify lines of authority and relationships.
3. To assign tasks and responsibilities.
4. To ensure adequate maintenance of facilities, services, and resources.
5. To provide a framework for adequate resources for recovery operations.

The San Diego County Operational Area consists of 19 jurisdictions that range in population from several thousand to over 1,000,000. To foster a regional approach, the cities and County joined together in 1961 to form an Operational Area and entered into a Joint Powers Authority (JPA). The JPA establishes procedures and protocols for assisting each other in the event of a disaster or major emergency that would be beyond the capability of any single jurisdiction to handle. An Operational Area is defined as a county and each of its political jurisdictions, including Special Districts. The Unified Disaster Council is the policy making body for the Unified Organization, and the Office of Emergency Services is staff to the Unified Organization (OES 2010).

**Voluntary Assistance Program (VAP)**

The DEH VAP is a voluntary option for project oversight on various types of properties that are environmentally impacted. Through the VAP, members of the SAM team at the DEH provide consultation and overview, and report concurrence on projects involving properties suspected or known to be contaminated with hazardous substances. The SAM utilizes current guidelines and policies of the DEH and RWQCB to reach site assessment and cleanup goals at sites under the VAP. Assistance is customized to meet the needs of the applicant. The objective of the VAP is to allow rapid and cost-effective resolution of contamination problems. Examples of projects that have been processed through the VAP include conversion of a property from agricultural to residential land use, conversion of a gas station property to a retail facility, a release of solvent from a dry cleaners, review of work plans prior to initiating work, and review of assessment and mitigation reports for lenders. The most commonly
submitted documents are work plans, Phase I Environmental Site Assessment (ESA) reports, Phase II ESA reports, and health risk evaluations.

### 4.9.3 SIGNIFICANCE CRITERIA

The 2050 RTP/SCS would have a significant impact associated with hazards and hazardous materials if implementation were to:

**HM-1** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

**HM-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.

**HM-3** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

**HM-4** Be located on hazardous materials sites, including those sites listed on the Cortese list, and, as a result, create a significant hazard to the public or the environment.

**HM-5** Result in a safety hazard for people residing or working in the project area for projects located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.

**HM-6** Result in a safety hazard for people residing or working in the project area for projects within the vicinity of a private airstrip or helipad.

**HM-7** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

**HM-8** Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

### 4.9.4 IMPACT ANALYSIS

This section analyzes the impacts associated with the implementation of the 2050 RTP/SCS. It is organized in sections to address the main components of the 2050 RTP/SCS; regional growth/land use change and transportation network improvements. Analysis for each significance criterion will include a programmatic-level discussion of anticipated impacts in the planning horizon years of 2020, 2035, and 2050. Significant impacts are identified and mitigation measures are provided where appropriate.

**HM-1 ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS**

Future development in the San Diego region would involve a variety of land uses, including residences, commercial uses, industrial uses, community uses, office space, and public services facilities (i.e., educational and institutional uses). The range and types of land uses forecasted as part of the 2050 RTP/SCS are identified only in general terms. Specific types of businesses that would occur in every land use designation are unknown, as well as whether they would generate or use hazardous materials.
4.9 Hazards and Hazardous Materials

Businesses such as gasoline service stations and dry cleaners are some of the most common retail operations that typically use hazardous materials (motor fuels and solvents, respectively), but other possible commercial and industrial uses could potentially use a range of oils and lubricants, solvents, fertilizers, pesticides and herbicides, and other chemicals and materials in liquid, solid, or gas form.

Transportation-related use of hazardous materials poses a risk to residents within the project area in several ways. Actual transport of hazardous materials via truck, rail, and other modes involves a degree of risk of accident and release. The use of hazardous materials and the generation of hazardous waste in the construction and maintenance of the transportation system are other avenues of risk or exposure. Finally, the past disposal of hazardous materials and/or wastes in a manner that creates residual contamination of soil and/or groundwater can be a source of risk when such sites are disturbed in the course of future projects that may be associated with the 2050 RTP/SCS.

2020

Regional Growth/Land Use Change

By 2020, regional growth and development would increase throughout the San Diego region by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. While the 2050 RTP/SCS assumes a compact land use pattern with development focused in existing urban areas and along major transportation corridors, new development and intensification of existing land uses are expected to accommodate this growth. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

Most land uses are likely to involve activities in which hazardous materials would be routinely used, stored, handled, and transported. Increased residential and mixed use development would increase the use, storage, and disposal of household hazardous materials. Some solvents, cleaning materials, horticultural chemicals, and other products in common use would be classified as hazardous substances. New commercial and industrial development would also result in increased use, storage, and/or disposal of hazardous materials during routine operations. Of particular concern are facilities with USTs or other methods of storage that could accidentally leak into the soil, water, or air. Specific examples of such facilities include gas stations, automotive repair shops, and dry cleaners. Further, construction activities, regardless of the type or location of development, involve a variety of products and materials that may be a hazardous material. Wherever hazardous materials are used or stored, or hazardous waste generated, there is the potential for human exposure, and, under certain conditions, potential releases to the environment.

As described in Section 4.9.2, the current regulatory environment provides a high level of protection from the hazardous materials manufactured within, transported to, and disposed of within the San Diego region. Any development or redevelopment that would use hazardous materials on-site would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases and protect the public health. OSHA and local regulatory agencies (e.g., APCD, fire departments) mandate the use of controls to limit exposure to workers and the public from chemicals of
potential concern through the use of various controls (e.g., the use of warning signs and containment areas, implementation of work plans and health and safety plans, reduction of dust emissions through the use of wet methods, use of personal protective equipment by workers). USDOT requires that safety measures be used during the transportation of hazardous materials and wastes (e.g., packaging, labeling, use of secondary containment, recordkeeping), and these procedures are monitored through the use of hazardous waste manifests. To operate in California, all hazardous waste transporters must be registered with DTSC. Unless specifically exempted, hazardous waste transporters must comply with the California Highway Patrol Regulations, the California State Fire Marshal Regulations, and the United States Department of Transportation Regulations. Individual jurisdictions will continue to enforce disclosure laws that require all users, producers, and transporters of hazardous materials and wastes to clearly identify the materials that they store, use, or transport, and to notify the appropriate city, county, state, and federal agencies in the event of a violation. Adherence to the regulations would ensure that impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.

**Transportation Network Improvements**

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

Implementation of the transportation network improvements anticipated as part of the 2050 RTP/SCS would involve the routine transport, use, or disposal of hazardous materials, particularly the highway, light rail, and arterial improvement projects, which may result in transport of hazardous goods as well as the use of equipment that contains or uses routine hazardous materials (e.g., diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated. In addition, the construction and maintenance of transportation facilities included in the 2050 RTP/SCS would likely involve the use of hazardous materials such as solvents, paints, and other architectural coatings. The highway improvements to be implemented by 2020 primarily involve the increase in the capacity of existing roadways, indirectly increasing the capacity of routes used to transport hazardous materials. Hazardous materials are also transported by freight rail, improvements to which are included in the 2050 Goods Movement Strategy. Double-tracking of the LOSSAN rail corridor along the COASTER rail alignment would increase the capacity of goods, including hazardous materials, to be carried by freight rail throughout the region.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 that govern the use of hazard materials strictly regulate the proper handling of such materials and their containers to ensure the routine transport, use, and disposal of hazardous materials do not create a significant hazard to the public or the environment. Adherence to the regulations above would ensure impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.
Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2020, thereby increasing the risk of hazards to the public and/or the environment through the routine transport, use, or disposal of hazardous materials. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created through the routine transport, use, or disposal of hazardous materials. Therefore, this impact is less than significant.

2035

Regional Growth/Land Use Change

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors: northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the 1-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As described in the 2020 analysis, increased residential, and mixed-use development would increase the use, storage, and disposal of household hazardous materials. New commercial and industrial development would also result in increased use, storage, and/or disposal of hazardous materials during routine operations. Hazardous materials would be used or stored, and hazardous waste would be generated from
these land uses. Therefore, there is the potential for human exposure, and, under certain conditions, potential releases of hazardous materials into the environment.

As described in Section 4.9.2, the current regulatory environment provides a high level of protection from the hazardous materials manufactured within, transported to, and disposed of within the San Diego region. Adherence to the regulations above would ensure that impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.

Transportation Network Improvements

By 2035, additional transportation network improvements would occur in the San Diego region as part of the 2050 RTP/SCS. Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINTER service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINTER rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

As true with the 2020 analysis above, the types of activities that would involve the routine transport, use, or disposal of hazardous materials would continue to occur into 2035 as additional transportation network improvements are implemented. The highway improvements to be implemented by 2035 involve the increase in the capacity of existing roadways, indirectly increasing the capacity of routes used to transport hazardous materials. By 2035, the extension of transit routes or expansion of rail lines (i.e., double tracking of the COASTER and SPRINTER rail lines) would necessitate the use and transport of hazardous materials for construction purposes. In addition, these rail expansions would increase the capacity of goods, including hazardous materials, to be carried by freight rail throughout the region.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 that govern the use of hazard materials strictly regulate the proper handling of such materials and their containers to ensure the routine transport, use, and disposal of hazardous materials do not create a significant hazard to the public or the environment. Adherence to the regulations above would ensure that impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.

Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2035, thereby increasing the risk of hazards to the public and/or the environment through the routine transport, use, or disposal of hazardous materials. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created through the routine transport, use, or disposal of hazardous materials. Therefore, this impact is less than significant.
2050

Regional Growth/Land Use Change

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

As described in the 2020 and 2035 analyses, as development and redevelopment increases, as does the routine transport, use, or disposal of hazardous materials. Therefore, an increased potential for human exposure exists, and, under certain conditions, potential releases of hazardous materials into the environment.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 that govern the use of hazard materials strictly regulate the proper handling of such materials and their containers to ensure the routine transport, use, and disposal of hazardous materials do not create a significant hazard to the public or the environment. Adherence to the regulations above would ensure that impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.
Transportation Network Improvements

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego to El Cajon Boulevard/Mid-City would be constructed; extended to San Diego State University; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

As true with the 2020 and 2035 analyses above, the types of activities that would involve the routine transport, use, or disposal of hazardous materials would continue to occur into 2050 as additional transportation network improvements are implemented. The highway improvements to be implemented by 2050 involve the increase in the capacity of existing roadways, indirectly increasing the capacity of routes used to transport hazardous materials. By 2050, the extension of the Trolley light rail lines discussed above would necessitate the use and transport of hazardous materials for construction purposes.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 that govern the use of hazard materials strictly regulate the proper handling of such materials and their containers to ensure the routine transport, use, and disposal of hazardous materials do not create a significant hazard to the public or the environment. Adherence to the regulations above would ensure that impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.

Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2050, thereby increasing the risk of hazards to the public and/or the environment through the routine transport, use, or disposal of hazardous materials. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created through the routine transport, use, or disposal of hazardous materials. Therefore, this impact is less than significant.

HM-2 RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT

Hazardous materials may be released through spilling, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. The potential for release of hazardous materials associated with the 2050 RTP/SCS would primarily occur from construction-related activities (e.g., demolition, soil disturbances); routine use, disposal, and storage of common hazardous materials such as paints, solvents, and cleaning products; and/or accidents during the routine transport of hazardous materials. The severity of potential effects varies with the activity conducted, the concentration of and type of hazardous material or wastes present, and the proximity of sensitive receptors.
2020

Regional Growth/Land Use Change

As regional growth and development increase in the San Diego region by 2020, so do the number of residential, commercial, industrial, and governmental operations that handle hazardous materials. By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

Growth would increase the demand for goods and services, such as industrial manufacturing or drycleaners, both of which involve the use of hazardous materials and have the potential for the accidental release of these materials. The number of trips transporting hazardous materials would be expected to increase because of the increased amount of hazardous materials generated by new commercial and industrial development. The potential for traffic and freight rail accidents, due in part to the overall growth and demand for goods and services, would also be expected to increase. In addition, there may also be more sensitive receptors, such as those in residential uses, schools, home care facilities, and other buildings, along these routes and near the businesses and government operations that handle hazardous materials. Therefore, increases in the frequency of accidental release incidents, both on the site of the operations and on the routes used during the transport of hazardous materials, would be expected to proportionally increase along with regional growth and development. In addition, construction activities, regardless of the type or location, involve a variety of products and materials that may be a hazardous material. In some cases, former uses of the land, such as agriculture and industrial processes, may leave a residue of hazardous substances contained the soil. In sufficient concentrations, these substances could pose a risk to humans or the environment.

Wherever hazardous materials are used or stored, or hazardous waste generated, there is the potential for releases to the environment. In each situation, the hazards and the risks they would pose to people or the environment would depend on the nature and amount of the hazardous materials used, the location and containment measures where the materials would be used and stored, the processes and handling procedures for the materials, and the personnel dealing with the hazardous materials. Although such activities involve strict regulations regarding monitoring and handling, accidental release of hazardous materials due to natural disasters, human error, or misuse is possible.

As described in Section 4.9.2, numerous federal, state, and local regulations exist that reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Transportation of hazardous materials on area roadways is regulated by CHP and Caltrans, and the USDOT (through the Hazardous Materials Transportation Act), and other regulatory agencies (including the California Public Utilities Commission for natural gas transmission lines) provide standards designed to avoid releases, including provisions regarding securing materials and container design. The County of San Diego’s DEH-HMD is also required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release.
of hazardous substances. Compliance with such regulations would minimize the potential for a release to occur and provide planning mechanisms for prompt and effective cleanup if an accidental release did occur. Adherence to existing regulations would ensure impacts related to the accidental release of hazardous materials into the environment would be less than significant.

**Transportation Network Improvements**

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

The construction of regional transportation improvements would employ materials such as oils, greases, and solvents that could be released into the environment accidentally if not transported, handled, used, or disposed of properly. During construction activities, hazardous waste sites could be encountered and materials released into the environment. Most of the proposed highway and freeway improvements are increases in the capacity of existing roadways, which would facilitate the movement of goods, including hazardous materials, throughout the San Diego region thus increasing the risk of accidents and the release of hazardous materials into the environment.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Adherence to the regulations above would ensure impacts associated with an accidental release of hazardous materials into the environment would be less than significant.

**Conclusion**

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2020, thereby increasing the risk related to the release of hazardous materials into the environment. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created due to upset or accident conditions involving the release of hazardous materials into the environment. Therefore, this impact is less than significant.

**2035**

**Regional Growth/Land Use Change**

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors; northeast of the SR 94 corridor in the
unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the I-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As described in the 2020 analysis, this growth would cause an increase in the demand for goods and services, including those that involve the use of hazardous materials and have the potential for the accidental release of these materials. Additional growth would also increase the number of trips transporting hazardous materials and increase the potential for traffic and freight rail accidents. In addition, construction activities would increase, which involve a variety of products including hazardous materials. In some cases, former uses of the land, such as agriculture and industrial processes, may leave a residue of hazardous substances contained in the soil, which could pose a significant risk to humans or the environment. By 2035, the storage, use, or generation of hazardous materials or hazardous waste would be greater, increasing the potential for releases to the environment.

As described in Section 4.9.2, numerous federal, state, and local regulations exist that reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Compliance with such regulations would minimize the potential for a release to occur and provide planning mechanisms for prompt and effective cleanup if an accidental release did occur. Adherence to existing regulations would ensure impacts related to the accidental release of hazardous materials into the environment would be less than significant.

**Transportation Network Improvements**

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of
portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINT service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINT rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

The construction of regional transportation improvements would employ materials such as oils, greases, and solvents that could be released into the environment accidentally if not transported, handled, used, or disposed of properly. During construction activities, hazardous waste sites could be encountered and materials released into the environment. Most of the proposed highway and freeway improvements are increases in the capacity of existing roadways, which would facilitate the movement of goods, including hazardous materials, throughout the San Diego region thus increasing the risk of accidents and the release of hazardous materials into the environment.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Adherence to the regulations above would ensure impacts associated with an accidental release of hazardous materials into the environment would be less than significant.

Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2035, thereby increasing the risk related to the release of hazardous materials into the environment. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created due to upset or accident conditions involving the release of hazardous materials into the environment. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use Change

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and
office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

As described in the 2020 and 2035 analyses, this growth would increase the demand for goods and services, including those that involve the use of hazardous materials and have the potential for the accidental release of these materials. Additional growth would also increase the number of trips transporting hazardous materials and increase the potential for traffic and freight rail accidents. In addition, construction activities would increase, which involve a variety of products including hazardous materials. In some cases, former uses of the land, such as agriculture and industrial processes, may leave a residue of hazardous substances contained in the soil, which could pose a significant risk to humans or the environment. By 2035, the storage, use, or generation of hazardous materials or hazardous waste would be greater, increasing the potential for releases to the environment.

As described in Section 4.9.2, numerous federal, state, and local regulations exist that reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Compliance with such regulations would minimize the potential for a release to occur and provide planning mechanisms for prompt and effective cleanup if an accidental release did occur. Adherence to existing regulations would ensure impacts related to the accidental release of hazardous materials into the environment would be less than significant.

Transportation Network Improvements

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; and a line from University Town Center to San Ysidro/Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City would be established.
The construction of regional transportation improvements would employ materials such as oils, greases, and solvents that could be released into the environment accidentally if not transported, handled, used, or disposed of properly. During construction activities, hazardous waste sites could be encountered and materials released into the environment. Most of the proposed highway and freeway improvements are increases in the capacity of existing roadways, which would facilitate the movement of goods, including hazardous materials, throughout the San Diego region thus increasing the risk of accidents and the release of hazardous materials into the environment.

As discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the potential for humans or the environment to be impacted by an accidental release of hazardous materials. Adherence to the regulations above would ensure that impacts associated with an accidental release of hazardous materials into the environment would be less than significant.

**Conclusion**

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2050, thereby increasing the risk related to the release of hazardous materials into the environment. However, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the public or the environment would not be created due to upset or accident conditions involving the release of hazardous materials into the environment. Therefore, this impact is less than significant.

**HM-3 HAZARDOUS EMISSIONS OR THE HANDLING OF HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS WITHIN ONE-QUARTER MILE OF SCHOOLS**

Throughout the San Diego region, both public and private schools can be found close to environmental hazards such as industrial facilities, underground gasoline pipelines, or busy highways. Children are particularly susceptible to long-term impacts from emissions of hazardous materials from roadways near schools as well as a high volume motor vehicle travel on roadways through residential areas.

**2020 Regional Growth/Land Use Change**

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

As discussed in impact HM-1, almost all land use designations allow activities that have the potential to involve the handling, use, and/or disposal of hazardous materials. Given the regional extent of the 2050 RTP/SCS and the large number of existing schools located throughout the San Diego region (approximately 1,040 public and private), it is likely that additional development and redevelopment forecasted by 2020 would occur within one-quarter mile of an existing school. Also, it is possible that
new or proposed schools could be sited near locations where hazardous materials, substances, and/or waste may be handled or emitted. With the forecasted increase in population and development by 2020, there is an increased risk of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

However, as stated in Section 4.9.2, the current regulatory environment provides a high level of protection, which is monitored and enforced at the federal, state, and local levels. The California Education Code (Section 17210 et seq.) outlines the requirements of siting school facilities near or on known or suspected hazardous materials sites, or near facilities that emit hazardous air emissions, or handle hazardous or acutely hazardous materials, substances, or waste. The code requires that, prior to commencing the acquisition of property for a new school site, an environmental site investigation be completed to determine the health and safety risks (if any) associated with a site. Furthermore, permitting requirements for individual hazardous materials handlers or emitters, including enforcement of PRC Section 21151.4, would require evaluation and notification where potential materials handling and emissions could occur within one-quarter-mile proximity of schools (existing or proposed). In addition, local regulatory agencies (e.g., fire departments, DEH) have developed emergency response programs designed to limit exposure of schools and other sensitive receptors to hazardous materials and wastes. Therefore, adherence to existing regulations would ensure that the risk of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized.

Transportation Network Improvements

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, and Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

Construction activities associated with the anticipated transportation network improvements by 2020 may result in hazardous emissions or the handling of hazardous or acutely hazardous materials, particularly those activities that may involve the use of equipment that contains hazardous materials (e.g., diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated. In addition, hazardous materials carried on the existing highways, freight rail, and arterials could affect these schools via exposure of sensitive receptors to health hazards if there were to be a release or incident during transportation.

Using SANDAG’s GIS database for schools located within the San Diego region, the 2050 RTP/SCS transportation network improvements anticipated by 2020 were overlain on the region to identify where impacts to existing schools may occur if hazardous materials were to be accidentally released into the environment. The results of this analysis indicate that there are approximately 86 schools located within one-quarter mile of anticipated transportation network improvements. These schools may be impacted if hazardous materials carried on these roadways or rail lines were to be released during transportation. In
addition, construction of the transportation network improvements anticipated by 2020 would result in the generation of certain types of emissions (e.g. petroleum hydrocarbons, fugitive dust) or the handling of hazardous substances or waste within one-quarter mile of an existing or proposed school site.

However, as discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the risk of hazardous emissions or the handling of hazardous materials, substances, or waste near schools. Therefore, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that the risk of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized.

Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2020, thereby increasing the risk related to the handling and emission to hazardous materials near schools. However, adherence to existing regulations discussed above would ensure that risks associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized. Therefore, this impact is less than significant.

2035

Regional Growth/Land Use Change

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors; northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the 1-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.
By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

The regional growth and land use development increases anticipated as part of the 2050 RTP/SCS would increase the types and amounts of hazardous materials throughout the San Diego region relative to existing conditions and those experienced by 2020. Allowable land uses anticipated by 2035 would also likely result in siting sensitive land uses, including schools, near facilities that use hazardous materials. As a result, hazardous emissions or the handling of hazardous or acutely hazardous materials within one-quarter mile of schools or other sensitive receptors would occur.

However, as stated in Section 4.9.2, the current regulatory environment provides a high level of protection, which is monitored and enforced at the federal, state, and local levels. The California Education Code (Section 17210 et seq.) outlines the requirements of siting school facilities near or on known or suspected hazardous materials sites, or near facilities that emit hazardous air emissions, or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, adherence to the regulations above would ensure that impacts associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be less than significant.

Transportation Network Improvements

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINT service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINT rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

Construction activities associated with the anticipated transportation network improvements by 2035 may result in hazardous emissions or the handling of hazardous or acutely hazardous materials, or the transportation of excavated soil and/or groundwater containing contaminants near schools. Using SANDAG’s GIS database for schools located within the San Diego region, the 2050 RTP/SCS transportation network improvements anticipated by 2035 were overlain on the region to identify where impacts to existing schools may occur if hazardous materials were to be accidentally released into the environment. The results of this analysis indicate that there are approximately 44 schools located within one-quarter mile of anticipated transportation network improvements by 2035. These schools may be impacted if hazardous materials carried on these roadways or rail lines were to be released during transportation. In addition, hazardous materials carried on the existing highways and arterials could affect these schools via exposure of sensitive receptors to health hazards if there were to be a release or incident during transportation.
However, as discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the risk of hazardous emissions or the handling of hazardous materials, substances, or waste near schools. Therefore, adherence to existing regulations discussed above and in Section 4.9.2 would ensure that the risk of hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized.

Conclusion

An increase in regional growth, land use development, and transportation network improvements is anticipated by 2035, thereby increasing the risk related to the handling and emission to hazardous materials near schools. However, adherence to existing regulations discussed above would ensure that risks associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use Change

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is
a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

The regional growth and land use development increases anticipated as part of the 2050 RTP/SCS would increase the types and amounts of hazardous materials throughout the San Diego region relative to existing conditions and those experienced in 2020 and 2035. Allowable land uses anticipated by 2050 would also likely result in siting sensitive land uses, including schools, near facilities that use hazardous materials. As a result, hazardous emissions or the handling of hazardous or acutely hazardous materials within one-quarter mile of schools or other sensitive receptors would occur.

However, as stated in Section 4.9.2, the current regulatory environment provides a high level of protection, which is monitored and enforced at the federal, state, and local levels. The California Education Code (Section 17210 et seq.) outlines the requirements of siting school facilities near or on known or suspected hazardous materials sites, or near facilities that emit hazardous air emissions, or handle hazardous or acutely hazardous materials, substances, or waste. Therefore, adherence to the regulations above would ensure impacts associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be less than significant.

**Transportation Network Improvements**

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed to San Diego State University; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

Construction activities associated with the anticipated transportation network improvements by 2050 may result in hazardous emissions or the handling of hazardous or acutely hazardous materials, or the transportation of excavated soil and/or groundwater containing contaminants near schools. Using SANDAG’s GIS database for schools located within the San Diego region, the 2050 RTP/SCS transportation network improvements anticipated by 2050 were overlain on the region to identify where impacts to existing schools may occur if hazardous materials were to be accidentally released into the environment. The results of this analysis indicate that there are approximately 62 schools located within one-quarter mile of anticipated transportation network improvements by 2050. These schools may be impacted if hazardous materials carried on these roadways were to be released or during transportation. In addition, hazardous materials carried on the existing highways and arterials could affect these schools via exposure of sensitive receptors to health hazards if there were to be a release or incident during transportation.

However, as discussed above, existing federal, state, and local laws, regulations, and programs included in Section 4.9.2 reduce the risk of hazardous emissions or the handling of hazardous near schools. Therefore, adherence to the regulations above would ensure impacts associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be less than significant.
Conclusion
An increase in regional growth, land use development, and transportation network improvements is anticipated by 2050, thereby increasing the risk related to the handling and emission to hazardous materials near schools. However, adherence to existing regulations discussed above would ensure that risks associated with the handling or emissions of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be minimized. Therefore, this impact is less than significant.

HM-4 LOCATION ON HAZARDOUS MATERIALS SITES

This analysis is limited to a qualitative evaluation of impacts associated with the potential presence of hazardous materials or hazards in the region, and an evaluation of the extent to which the 2050 RTP/SCS would allow transportation network improvements and land uses that commonly employ or generate hazardous materials or waste in their production processes. A preliminary review of environmental risk databases, including Government Code Section 65962.5 (Cortese List), was conducted but this analysis does not include any sampling, site-specific review, laboratory analysis, or inspection of buildings or site surfaces.

2020 Regional Growth/Land Use Change

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

As stated in Section 4.9.1, there are 22 Cortese-listed hazardous materials sites within the San Diego region. Given the regional extent of the 2050 RTP/SCS and the increase in development and redevelopment activity anticipated by 2020, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. There has not been a regionwide survey to identify all possible sites, because such studies must be performed on a site-specific basis when land use, ground disturbance, and development footprints are known. Additionally, it is possible that USTs that were in use prior to permitting and record keeping requirements may be present. The grading, excavation, and dewatering of sites for new development and redevelopment throughout the region could expose construction workers and the public to such known or potentially unknown hazardous substances present in the soil or groundwater. In the event undiscovered hazardous material contamination is found in the soil or groundwater during construction activities for new development and redevelopment, such contamination could cause various short-term or long-term adverse health effects in persons exposed to the hazardous substances. In addition, exposure to contaminants could occur if the contaminants migrated from the contaminated zone to surrounding areas either before or after the surrounding areas were developed, or if contaminated zones were disturbed by future development at the contaminated location.
Contamination (if any) must be properly identified and managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Under these regulations, the project applicant would consult all known databases of contaminated sites in the process of project planning, environmental review, and construction. Site-specific investigation for projects developed as part of the 2050 RTP/SCS would be required to address hazardous materials conditions. For example, Phase I environmental site assessments would be required for specific projects pursuant to California Government Code Section 65962.5, and if this assessment indicates the presence or likely presence of contamination, Phase II soil/groundwater testing and remediation could be required before development on a site-specific basis. The investigation and cleanup of a contaminated site would be subject to federal and state laws and regulations that are administered at the local level. Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. No construction would be allowed to occur at such locations until a “no further action” or similar determination is issued by the SDAPCD, DTSC, RWQCB, and/or other responsible agencies. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

Transportation Network Improvements

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

Construction activities associated with the transportation network improvements anticipated by 2020 may involve construction through, or next to, contaminated sites, leading to the disturbance and release of hazardous materials.

As stated in Section 4.9-1, there are 22 Cortese-listed hazardous materials sites within the San Diego region (Table 4.9-1). As shown in Table 4.9-1, there are eight Cortese-listed sites that are located within 1 mile of any of the transportation network improvements forecasted to occur by 2020. In addition, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. As mentioned above, the grading, excavation, and dewatering of sites for construction of transportation-related infrastructure could expose construction workers and the public to such known or potentially unknown hazardous substances present in the soil or groundwater. In the event undiscovered hazardous material contamination is found in the soil or groundwater during construction activities for transportation improvements, such contamination could cause various short-term or long-term adverse health effects in persons exposed to the hazardous substances. In addition, exposure to contaminants could occur if the contaminants migrated from the contaminated zone to surrounding areas either before
or after the surrounding areas were developed, or if contaminated zones were disturbed by future development at the contaminated location.

As discussed above, contamination (if any) must be properly identified and managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Under these regulations, the project applicant would consult all known databases of contaminated sites in the process of project planning, environmental review, and construction. If it is determined that a project is located on or near a contaminated site, the implementing agency shall consult with the appropriate regulatory agencies to either devise a remediation plan or avoid disturbance of contaminated areas. The investigation and cleanup of a contaminated site would be subject to federal and state laws and regulations that are administered at the local level. Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. No construction would be allowed to occur at such locations until a “no further action” or similar determination is issued by the SDAPCD, the State Department of Toxic Substances Control, RWQCB, and/or other responsible agencies. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

Conclusion

By 2020, increased development and construction of transportation network improvements may occur through, or next to, Cortese sites that are currently listed, or sites to be listed in the future as they are discovered. Adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the environment would not be created through a project being located on or near a hazardous materials site. Therefore, this impact is less than significant.

2035

Regional Growth/Land Use

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors: northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the 1-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.
In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As stated in Section 4.9.1, there are 22 Cortese-listed hazardous materials sites within the San Diego region. Given the regional extent of the 2050 RTP/SCS and the increase in development and redevelopment activity anticipated by 2035, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. As discussed in the 2020 analysis, contamination found in the soil or groundwater during construction activities could cause short-term or long-term adverse health effects if people are exposed. Exposure to contaminants would also occur with the migration of contaminants to surrounding areas, or if contaminated zones were disturbed by future development. Contamination (if any) must be properly identified and managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

**Transportation Network Improvements**

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINTER service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINTER rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

Construction activities associated with the transportation network improvements anticipated by 2035 may involve construction through, or next to, contaminated sites, leading to the disturbance and release of hazardous materials. As stated in Section 4.9-1, there are 22 Cortese-listed hazardous materials sites within the San Diego region (Table 4.9-1). As shown in Table 4.9-1, there are nine Cortese-listed sites that are located within 1 mile any of the transportation network improvements forecasted to occur by 2035. In addition, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. Contamination (if any) must be properly identified and
managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

Conclusion

By 2035, increased regional growth and land use development, and construction of transportation network improvements may occur through, or next to, Cortese sites that are currently listed, or sites to be listed in the future as they are discovered. Adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the environment would not be created through a project being located on or near a hazardous materials site. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.
4.9 Hazards and Hazardous Materials

As stated in Section 4.9.1, there are 22 Cortese-listed hazardous materials sites within the San Diego region. Given the regional extent of the 2050 RTP/SCS and the increase in development and redevelopment activity anticipated by 2050, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. As discussed in the 2020 and 2035 analyses, contamination found in the soil or groundwater during construction activities could cause short-term or long-term adverse health effects if people are exposed. Exposure to contaminants would also occur with the migration of contaminants to surrounding areas, or if contaminated zones were disturbed by future development. Contamination (if any) must be properly identified and managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

Transportation Network Improvements

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

Construction activities associated with the transportation network improvements anticipated by 2035 may involve construction through, or next to, contaminated sites, leading to the disturbance and release of hazardous materials. As stated in Section 4.9-1, there are 22 Cortese-listed hazardous materials sites within the San Diego region (Table 4.9-1). As shown in Table 4.9-1, there are nine Cortese-listed sites that are located within 1 mile of any of the transportation network improvements forecasted to occur by 2020. In addition, there may be other sites where contaminants may be present at levels that can pose significant public health and safety impacts. Contamination (if any) must be properly identified and managed prior to any construction or development activities on any of these listed sites to prevent exposure of people and the environment to these hazards, as described in Section 4.9.2. Therefore, adherence to the regulations above would ensure impacts associated with hazardous materials sites would be less than significant.

Conclusion

By 2050, increased development and construction of transportation network improvements may occur through, or next to, Cortese sites that are currently listed, or sites to be listed in the future as they are discovered. Adherence to existing regulations discussed above and in Section 4.9.2 would ensure that a significant hazard to the environment would not be created through a project being located on or near a hazardous materials site. Therefore, this impact is less than significant.

HM-5  PUBLIC AIRPORTS

Hazards associated with public airports concern aviation-related safety. The flight operations associated with public airports can pose a hazard to objects and activities on the ground, and some activities and objects on the ground can pose a hazard to flight operations. An aircraft accident may harm people and property on land located within airport hazard zones. Hazards may occur in the air if the aircraft...
navigation or visual ability is compromised, which can be caused by unsafe building heights and locations, electronic impairments, or any location or activity that attracts large numbers of birds. Flight-related accidents may produce a serious, immediate risk to those residing in or traveling within areas adjacent to the airport.

2020

Regional Growth/Land Use Change

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

As indicated in Section 4.9.1, there are 16 public-use and military airports located within the San Diego region. The future development of land uses in areas subject to off-airport air crash hazards could substantially increase the risk of loss of lives and property if those uses are incompatible with safe aircraft navigation. While the 2050 RTP/SCS includes the Trolley extension to SDIA, it does not propose any land use changes or incompatible land uses within the vicinity of public airports. Nonetheless, it is possible that if an aircraft-related accident occurred, a significant safety hazard could be presented to individuals on the ground within the project area. Regional growth in areas located close to other public or military airports or in flight paths could expose people or structures to aircraft accidents.

To prevent incompatible uses in areas of higher aircraft hazard potential, the ALUC has adopted ALUCPs with land use policies and criteria in the interest of public safety. While the ALUCPs cannot prevent aircraft accidents from occurring, they do contain policies and criteria to limit future incompatible uses and emergency response and evacuation plans to minimize safety impacts. As described in Sections 4.9.1 and 4.9.2, the SDCRAA, which is the ALUC for the San Diego region, is required to assist local agencies in ensuring compatible land uses in the vicinity of existing or proposed airports; to coordinate planning at state, regional, and local levels; to prepare and adopt an airport land use plan as required by PRC Section 21675; to review plans or regulations submitted by local agencies; and to review and make recommendations regarding the land uses, building heights, and other issues relating to air navigation safety and promotion of air commerce.

ALUCPs identify where distinct levels of risk exist. Safety compatibility zones identify areas where distinct levels of risk exist. As a result of the distinct levels of risk in each safety compatibility zone, ALUCPs and CLUPs differentiate allowed and prohibited land uses according to safety compatibility zones. The shapes and sizes of the zones are largely based on accident data and other analyses prepared by the FAA. Data have shown that a higher percentage of crashes occur at each end of a runway, with a lower percentage occurring along the length of a runway. As a result, ALUCPs and CLUPs typically restrict land uses to a greater degree at each end of a runway (County of San Diego 2007).

The Department of Defense requires military airfields to adopt AICUZ studies, which assess compatible land uses in the vicinity of a military air station in a way equivalent to ALUCPs. PRC Section 21098
would reduce hazards associated with development near military airports by requiring lead agencies to submit a notice to the military service that would be affected by a proposed General Plan Amendment or significant project located within specific boundaries of a low-level flight path, military impact zone, or special use airspace.

Additionally, development projects associated with the 2050 RTP/SCS would be subject to FAA evaluation. The FAA evaluates proposed development projects for obstruction hazards and potential hazards to air safety. Obstruction standards are regulated by height and whether a proposal is distracting and/or hazardous to a pilot. FAA evaluation would occur where the project proposes certain components that trigger FAA notification, including projects located within a 2-mile radius around public-use airports that exceed a specified height, that could create electronic or visual hazards, or that could increase the attraction of wildlife around airports. There are no specific FAA standards for visual or electronic hazards, and potential hazards are evaluated by the FAA on a case-by-case basis.

Existing regulations, FAA procedures, ALUCPs, and AICUZ studies ensure compatibility between uses and reduce the potential for aircraft accidents. Therefore, adherence to the regulations above would ensure hazards associated with airports or air traffic would be less than significant.

**Transportation Network Improvements**

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

Some of these improvements discussed above would involve only operational changes, such as increased transit service frequencies, and would not involve construction of new infrastructure near public airports. These operational improvements would not cause interferences with air traffic or cause airport-related safety hazards. Many of the physical transportation network improvements developed by 2020 would be located near public airports. Highway improvements along the SR 94 corridor near downtown San Diego, and rail improvements including double-tracking of the LOSSAN corridor and the extension of the Mid-Coast light rail would occur near SDIA. The addition of general purpose lanes along SR 905 in the southern portion of the region would occur near Brown Field Municipal Airport. Improvements to highways, rail lines, and arterials included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height or location of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with airports or air traffic would be less than significant.
Conclusion

By 2020, increased development and construction of transportation network improvements would occur near public or military airports. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with airports. Therefore, this impact is less than significant.

2035

Regional Growth/Land Use

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors: northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the I-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As described in the 2020 analysis, a portion of this growth would occur near public-use or military airports, particularly those located in near existing urban development. The 2050 RTP/SCS includes the Trolley extension to SDIA, it does not propose any land use changes or incompatible land uses within the vicinity of public airports. Nonetheless, it is possible that if an aircraft-related accident occurred, a significant safety hazard could be presented to individuals on the ground within the project area. Regional growth in areas located close to other public or military airports or in flight paths could expose people or structures to aircraft accidents. The future development of land uses in areas subject to off-airport air
4.9 Hazards and Hazardous Materials

crash hazards could substantially increase the risk of loss of lives and property if those uses are incompatible with safe aircraft navigation. However, existing regulations, FAA procedures, ALUCPs, and AICUZ studies ensure compatibility between land uses and airports and reduce the potential for aircraft accidents. Therefore, adherence to the regulations above would ensure hazards associated with airports or air traffic would be less than significant.

Transportation Network Improvements

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINTER service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINTER rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

As discussed in the 2020 analysis, transportation improvements included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height, location, or other characteristics of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with airports or air traffic would be less than significant.

Conclusion

By 2035, increased development and construction of transportation network improvements would occur near public or military airports. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with airports. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and
office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

As described in the 2020 and 2035 analyses, a portion of this growth would occur near public-use or military airports, particularly those located in near existing urban development. The future development of land uses in areas subject to off-airport air crash hazards could substantially increase the risk of loss of lives and property if those uses are incompatible with safe aircraft navigation. However, existing regulations, FAA procedures, ALUCPs, and AICUZ studies ensure compatibility between land uses and airports and reduce the potential for aircraft accidents. Therefore, adherence to the regulations above would ensure hazards associated with airports or air traffic would be less than significant.

**Transportation Network Improvements**

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; extended to San Diego State University; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

As discussed in the 2020 and 2035 analyses, transportation improvements included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height, location, or other characteristics of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with airports or air traffic would be less than significant.
Conclusion

By 2050, increased development and construction of transportation network improvements would occur near public or military airports. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with airports. Therefore, this impact is less than significant.

HM-6 PRIVATE AIRSTRIPS AND HELIPADS

Safety-related hazards at private and special-use airports affect less land because of lower activity levels compared to public-use airports. In addition, the general public has very limited access to or ability to utilize these facilities due to their ownership by private citizens or public agencies (such as the Bureau of Land Management or the U.S. Forest Service). Land use controls differ substantially between public airports and private airports. First, there is no AIA identified around these airports and land use restrictions are much less defined than with public airports. Second, Caltrans’ Division of Aeronautics controls private and special-use airports through a permitting process, and is also responsible for regulating operational activities at these airports.

2020

Regional Growth/Land Use

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

Given the compact land use pattern set forth in the 2050 RTP/SCS, additional development and redevelopment anticipated by 2020 is primarily focused along the existing major commercial and transportation corridors within the urbanized areas of the region. A high rate of residential or commercial development is not projected to occur in rural areas of the region, where there are several private airstrips. However, regional growth is forecasted to occur near other private or special-use airstrips or helipads, such as hospitals and police stations. Appropriate separation between private airports and land use development is identified in accordance with the Airport Safety Compatibility Zones of the California Airport Land Use Planning Handbook or FAA standards. Appropriate separation between project development and the airstrip or helipad would be identified in accordance with existing regulatory mechanisms. If it determines it necessary, the FAA may condition certain requirements for project sites, including enhanced-visibility paint schemes or special lighting. Sites are also required to comply with applicable airport land use plans, which govern the heights of structures within defined areas around airports. The purpose of this review is to ensure that the construction of new facilities will not create hazards to aviation. All towers that meet the criteria will be required to undergo this process prior to construction as part of standard regulatory compliance. These existing regulations and FAA procedures would ensure compatibility between land uses and airports and reduce the potential for aircraft accidents. Therefore, adherence to the regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.
Transportation Network Improvements

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

Transportation improvements developed by 2020 would be located near private or special-use airports or helipads, particularly if they are located in the western portion of the region. Improvements to highways, rail lines, and arterials included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height, location, or other characteristics of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.

Conclusion

By 2020, increased development and construction of transportation network improvements would occur near private airstrips or helipads. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with private airstrips and helipads. Therefore, this impact is less than significant.

2035

Regional Growth/Land Use

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors; northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the I-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.
In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

By 2035, additional regional growth is forecasted to occur near private or special-use airstrips or helipads, particularly in the urbanized areas of the region. As described above, appropriate separation between project development and the airstrip or helipad would be identified in accordance with existing regulatory mechanisms. The FAA may condition certain requirements for project sites to avoid or reduce hazards associated with air safety. Existing regulations and FAA procedures would ensure compatibility between land uses and airports and reduce the potential for aircraft accidents. Therefore, adherence to the regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.

**Transportation Network Improvements**

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINTER service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINTER rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

Transportation improvements developed by 2035 would be located near private or special-use airports or helipads, particularly if they are located in the western portion of the region. As discussed in the 2020 analysis, improvements to highways, rail lines, and arterials included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height, location, or other characteristics of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.
Conclusion

By 2035, increased development and construction of transportation network improvements would occur near private airstrips or helipads. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with private airstrips or helipads. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

By 2050, additional regional growth is forecasted to occur near private or special-use airstrips or helipads, particularly in the urbanized areas of the region. As described above, appropriate separation between project development and the airstrip or helipad would be identified in accordance with existing regulatory mechanisms. The FAA may condition certain requirements for project sites to avoid or reduce hazards associated with air safety. Existing regulations and FAA procedures would ensure compatibility between land uses and airports and reduce the potential for aircraft accidents. Therefore, adherence to the
regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.

**Transportation Network Improvements**

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

Transportation improvements developed by 2050 would be located near private or special-use airports or helipads, particularly if they are located in the western portion of the region. As discussed in the 2020 and 2035 analyses, improvements to highways, rail lines, and arterials included in the 2050 RTP/SCS are unlikely to interfere with air traffic and cause safety hazards in the air or on the ground. If the height, location, or other characteristics of a transportation project would potentially pose a danger to air safety, the project would be evaluated per FAA requirements. Therefore, adherence to the regulations described above would ensure hazards associated with private airstrips or helipads would be less than significant.

**Conclusion**

By 2050, increased development and construction of transportation network improvements would occur near private airstrips or helipads. Adherence to the regulations described above and in Section 4.9.2 would minimize safety hazards associated with private airstrips or helipads. Therefore, this impact is less than significant.

**HM-7 EMERGENCY RESPONSE AND EVACUATION PLANS**

Emergency response and evacuation plans are developed to manage a variety of hazardous situations. Hazards requiring the development of emergency response and evacuation plans in the San Diego region generally include wildfire/structure fires; floods; coastal storms, erosion, and tsunamis; earthquakes/liquefaction; rain-induced landslides; dam failure; hazardous materials incidents; nuclear materials releases; and terrorism. Adverse impacts related to hazards may occur as a result of interference with an adopted emergency response or evacuation plan. A project would have a significant impact if it impairs the implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan.

**2020**

**Regional Growth/Land Use Change**

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 including Ocean Beach and...
the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 69,218 units; and employment by 103,353 jobs over 2010 conditions. To accommodate this growth, nearly 55,000 acres of land in the region would be developed or redeveloped. Development that proposes large concentrations of people or special needs individuals, such as stadiums or hospitals, in an area with increased hazards, such as a dam inundation area, could cause adverse effects related to the implementation of emergency plans implemented at the countywide and jurisdictional level, such as the OES Emergency Plan or the San Diego County Multi-Jurisdictional Hazard Mitigation Plan. Failure to provide reasonable access for emergency equipment and evacuation of civilians can also result in the major loss of life, property, and natural resources. Additionally, certain tall structures can physically interfere with the implementation of an emergency response if the height of the structure or tower interferes with the ability of emergency air support services to carry out missions associated with an emergency response.

While implementation of the 2050 RTP/SCS does not propose to change any of the policies or requirements within any of the established emergency plans, it is possible that land uses and development activities implemented by 2020 would have the potential to interfere with emergency plans and procedures if authorities are not properly notified, or multiple projects are constructed during the same time and multiple roadways used for emergency routes are concurrently blocked. In addition, increased land uses and development may occur in areas that may not have accounted for this growth in existing emergency response and evacuation plans.

However, emergency plans and programs are in place on a countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans (refer to Section 4.9.2). As required by the individual implementing in coordination with the OES, emergency plans and programs are revisited for updates as frequently as every year, as is the case for the San Diego County Multi-Jurisdictional Hazard Mitigation Plan, to adequately plan for growth within the region. This would include the evaluation of established evacuation routes, as described in the OES Emergency Plan. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. If impacts are determined to be significant at the project level, appropriate mitigation, such as requiring development to provide multiple ingress/egress routes in conformance with state law and local regulations or the identification of alternative traffic routes with appropriate signage, would be required on a project-specific basis. Therefore, measures are in place to ensure development projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

Transportation Network Improvements

The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, and Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations
would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

In general, implementation of the transportation network improvements in and of themselves would not impair or physically interfere with the implementation of any adopted emergency response plan or emergency evacuation plan. However, by 2020, improvements are planned for the majority of highways identified as evacuation routes in the Emergency Plan discussed above. While these improvements primarily consist of expansion through the addition of lanes, which would ultimately expand the capacity of those highways to help improve traffic flow, there is potential for traffic delays and roadway blockages during construction of individual improvements. In addition, expansion of light rail lines and other transit routes may also cause traffic congestion during construction activities, which would temporarily hinder emergency vehicle response or evacuation in the event of an emergency.

However, as described above and in Section 4.9.2, emergency plans and programs are in place on a countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. Therefore, measures are in place to ensure transportation network improvement projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**Conclusion**

By 2020, increased development and transportation network improvements may cause obstruction for emergency response vehicles or result in activities that would cause physical interference in the implementation of an emergency response or evacuation plan. However, adherence to the regulations described above and in Section 4.9.2 would ensure development and transportation projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**2035**

**Regional Growth/Land Use**

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 and SR 125 corridors; northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the 1-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by
2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As described in the 2020 analysis, land uses and development activities implemented by 2035 would have the potential to interfere with emergency plans and procedures. However, as described in Section 4.9.2, emergency plans and response programs are in place at the countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. Therefore, measures are in place to ensure development projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**Transportation Network Improvements**

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINTER service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINTER rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

As discussed in the 2020 analysis, implementation of the transportation network improvements in and of themselves would not impair or physically interfere with the implementation of any adopted emergency response plan or emergency evacuation plan. As described in Section 4.9.2, emergency plans and response programs are in place at the countywide, individual jurisdiction, and special district level that
contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. These plans are periodically evaluated by the implementing agencies in coordination with the OES. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. Therefore, measures are in place to ensure transportation network improvement projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

Conclusion

By 2035, increased development and transportation network improvements may cause obstruction for emergency response vehicles or result in activities that would cause physical interference in the implementation of an emergency response or evacuation plan. However, adherence to the regulations described above and in Section 4.9.2 would ensure development and transportation projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

2050

Regional Growth/Land Use

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development at present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.
By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

By 2050, additional growth and development are anticipated within the region. From 2035 to 2050, growth in the region is forecasted to increase by 358,736 people; 115,570 housing units; and 204,666 jobs. To accommodate this growth, nearly 94,000 more acres of land are forecasted to be developed or redeveloped from 2035 to 2050. From 2010, this represents a total increase of 1,160,435 people; 335,820 housing units; and 501,958 jobs within the region by 2050. As described in the 2020 and 2035 analyses, land uses and development activities implemented by 2050 would have the potential to interfere with emergency plans and procedures. However, as described in Section 4.9.2, emergency plans and response programs are in place at the countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. Therefore, measures are in place to ensure development projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**Transportation Network Improvements**

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.

As discussed in the 2020 and 2035 analysis, implementation of the transportation network improvements in and of themselves would not impair or physically interfere with the implementation of any adopted emergency response plan or emergency evacuation plan. As described in Section 4.9.2, emergency plans and response programs are in place at the countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. These plans are periodically evaluated by the implementing agencies in coordination with the OES. In addition, discretionary projects would require project-level review pursuant to CEQA to ensure that individual projects do not adversely impact emergency response or evacuation plans. Therefore, measures are in place to ensure transportation network improvement projects would not impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**Conclusion**

By 2050, increased development and transportation network improvements may cause obstruction for emergency response vehicles or result in activities that would cause physical interference in the implementation of an emergency response or evacuation plan. However, adherence to the regulations described above and in Section 4.9.2 would ensure development and transportation projects would not
impair implementation of or physically interfere with an emergency response or evacuation plan. Therefore, this impact is less than significant.

**HM-8 WILDLAND FIRES**

Generally, two types of significant impacts are associated with wildland fires: the immediate effects that occur during a wildland fire and the effects that occur in the aftermath. In addition to the loss of life and property, wildfires may result in the loss or permanent change of natural resources. Although wildfires are considered a natural process necessary to the functioning of many ecosystems, a wildfire’s aftermath typically leaves land scorched and exposed. Until the land rehabilitates, the exposed soils may contribute to adverse environmental impacts including air and water pollution and unstable soils conditions such as mudslides and erosion. The end result of uncontrolled wildfire also includes debris from burned homes, some of which can be highly toxic and adversely impact the environment by polluting local waterways such as streams and rivers. Although natural conditions make wildfires common in the San Diego region, locating high-density land uses adjacent to or within a WUI can result in increased fire related risk to people and structures.

Wildfire can create a multi-hazard effect, where areas burned by wildfire suddenly have greater flooding risks because the vegetation that prevented erosion is now gone. Watershed from streams and rivers will change and floodplain mapping may need to be updated. Also, air quality issues during a large-scale fire would cause further economic losses than only the structural losses described below. Road closures and business closures due to large-scale fires would also increase the economic losses. Areas burned are susceptible to flooding or debris flow as a result of significant rain events. Furthermore, other economic and environmental barriers within the region may prevent adequate response to wildland fire. For example, in the event of a major wildland fire, adequate fire response staff may not be available within the region, resulting in a need to recruit fire fighters from across or outside the state. Additionally, response times for a wildland fire may be inadequate due to insufficient access. Fire response is further discussed in Section 4.14, Public Services and Utilities. Infrastructure constraints, such as an insufficient supply of water to fight large wildland fires, may also contribute to an increased risk of wildland fire hazards. This issue is further discussed in Section 4.17, Water Supply.

In addition, global climate change may affect the frequency and intensity of wildfire events. In 2008, the San Diego Foundation published a study on the effects of climate change that are anticipated by 2050 in the San Diego region (San Diego Foundation 2008). The following major impacts were predicted:

- Climate will be hotter and drier.
- Sea level will be 12–18 inches higher.
- Water shortages will occur.
- Wildfires will be more frequent and intense.
- Public health will be at risk, especially among the elderly and children.

The study recommended that through proper planning of transportation, energy, water, and natural disaster preparation, risks can be minimized and managed. It further recommended that local governments and public agencies create climate action plans that assess current GHG emissions and vulnerabilities, adopt GHG reduction targets and measures to meet the targets, plan for adaptation, and continually reassess their plans with new knowledge and information.

More recently, SANDAG prepared a Climate Action Strategy (CAS) discussing the impacts to transportation infrastructure due to climate change and the need for adaptation strategies to reduce the environmental impacts (SANDAG 2010). The paper stems from the 2010 California Regional
4.9 Hazards and Hazardous Materials

Transportation Guidelines that call for climate change to be addressed in long-range transportation plans and includes assessments from the San Diego Foundation 2008 paper, California Climate Change Center’s Climate Change-Related Impacts (2009) in the San Diego Region by 2050, and California Natural Resources Agency 2009 California Climate Adaptation Strategy (2009). Recommendations included implementing strategies of the SANDAG CAS where feasible; developing maps of infrastructure vulnerable to climate change impacts; reevaluating design and planning standards to consider climate change impacts, and reinforcing and complementing state and federal direction on climate change adaptation.

While the majority of the transportation network improvements included in the proposed 2050 RTP/SCS are focused in the highly urbanized western portion of the region, portions of this area remain susceptible to wildland fires due to climate, topography, and native vegetation. The transportation projects and facilities proposed in the 2050 RTP/SCS are not typically susceptible to significant damage from wildfires and would not contribute added fuel to wildfires. Transit stations in the San Diego area are typically open and constructed predominantly of metal and concrete or other nonflammable or fire-resistant materials. No structures that would be occupied for more than relatively short periods are proposed. Moreover, transit is intended to serve areas of relatively dense population, meaning most transit stations would be in urbanized areas where extensive areas of flammable native vegetation are rare. Nonetheless, any structures constructed in the WUI would be obligated to conform to the statutory and regulatory requirements discussed in Section 4.9.2.

Paving and railroads generally are not, or are only minimally, damaged in wildfires, and rolling stock (occupied or not) is mobile and can be moved out of harm’s way. Generally, the most significant effect of wildland fires on the transportation and transit systems proposed would be temporary interruption of service with little expectation of significant exposure of property or people to damage or injury. In addition, improving the capacity of the existing transportation network would result in increased use of the existing corridors beyond the terminus of proposed improvements; that is, the accessibility of areas beyond the limits of proposed improvements would be indirectly enhanced.

2020

Regional Growth/Land Use Change

By 2020, population within the region is forecasted to increase by 310,568 people; housing by 113,062 units; and employment by 118,535 jobs. Some locations that would experience the most extensive land use change and development by 2020 would include areas such as eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor; City of San Diego coastal and bay communities south of I-8 and the Peninsula planning areas; portions of northern Santee; areas north and south of the SR 56 corridor in the San Diego planning areas of Carmel Valley, Del Mar Mesa, Pacific Highlands Ranch, and Torrey Highlands; the San Marcos area near both the SR 78 and I-15 corridors; and within unincorporated County communities such as Fallbrook, Pala-Pauma Valley, and Valley Center along the I-15 and SR 76 corridors. New development caused by regional growth would be in the form of new homes, services, commercial areas, industrial centers, schools, and civic uses.

As shown in Figures 4.9-2 and 4.9-3, much of San Diego region is subject to wildland fire hazards. Regional growth and increased development forecasted to occur have the potential to increase the threat of wildland fires on human populations and property, as development may be located closer to the WUI and Fire Hazard Severity zones. The expansion of the WUI by new development would occur throughout the region, but especially in eastern and southern portions of the region due to the increases in development forecasted in the eastern Chula Vista area along the SR 125 and I-805 corridors, and the San
Diego community planning areas of San Ysidro and Otay Mesa along the SR 905 corridor. These portions of the region have greater fire danger due to expansive areas of vegetation to fuel a fire. Aside from the less developed areas in the eastern portion of the region, the western portion of the region is also at high risk for fire hazards as it contains hundreds of miles of wildland/urban interfaces due to the multitude of canyons throughout the area and development along the canyon ridgelines where structures are in proximity to natural vegetation. Because of these existing land characteristics, around which many communities are formed, new growth and development in the interface areas may expose additional people and structures to a significant risk of loss, injury, or death involving wildland fires.

In addition, wildfires may result in immediate damage of infrastructure such as buildings and facilities, and long-term damage as a result of loss of forest or vegetation structure that may lead to erosion and unstable surfaces. As a result of climate change, more frequent and severe wildfires are predicted in the future. Given the level of uncertainty with climate change, it is difficult to predict the effects of wildfires on regional growth. However, given the predicted growth in the region and the location of potential wildfires, the impact of wildfire hazards as a result of regional growth and land use change will be significant.

The provision of defensible space would be needed to create a separation zone between wildlands and structures. Any development or redevelopment constructed adjacent to wildlands in the WUI zone would be obligated to conform to the statutory and regulatory requirements discussed in Section 4.9.2. These include specific fire code requirements, including ignition-resistant construction with exterior walls of noncombustible or ignition resistant material from the surface of the ground to the roof system. Other fire-resistant measures would be applied to eaves, vents, windows, and doors to avoid any gaps that would allow intrusion by flame or embers.

In addition to fire code regulations, the Multi-Jurisdictional Hazards Mitigation Plan, as well as local general plans, contains policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, and public outreach. To effectively mitigate wildland fire hazards in the San Diego region, a multilateral approach that involves federal, state, and local governments and fire agencies is necessary. Collectively, the local jurisdictions and fire agencies work together to prevent the loss of life in wildland fires; prevent the ignition of structures by wildland fires; prevent the encroachment of wildland fire upon communities; prevent a wildfire-caused structural conflagration; and limit the size of wildland fires. Also, at the jurisdictional level, the continued monitoring and updating of existing development regulations and plans make an effort to assist in creating defensible space to further reduce the impact of wildfire threat to people and structures. In addition, public education and firefighter training, support, and emergency operations efforts would reduce the risks of impacts involving wildfires.

While the existing policies and regulations included in Section 4.9.2 coupled with the strategies above would help reduce the risks to people and structures associated with wildland fires, it cannot be guaranteed that all future project-level impacts would be reduced to less than significant levels due to the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires. Therefore, impacts related to the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires would be significant.

**Transportation Network Improvements**

By 2020, numerous transportation network improvements would be implemented as part of the 2050 RTP/SCS. The transportation network improvements that would be implemented between 2010 and 2020 generally include widening and/or installation of HOV lanes, Managed Lanes, and Transit Lanes along portions of I-5, I-15, I-805, SR 78, and SR 94; completion of SR 905 and SR 11; and HOV
connector projects along I-805 and SR 78 at I-15. Some key transit network improvements in place by 2020 would include increases in existing COASTER service, including extension of COASTER service to the San Diego Convention Center and Petco Park. BRT downtown express services from inland and south bay locations would be expanded as well as new BRT routes from the south bay area and along I-15. Rapid bus service would add new routes and streetcar routes would be established. Airport express routes would also be developed. Local bus service would be improved to 15 minutes in key corridors. Double-tracking of the LOSSAN rail corridor would occur to accommodate increased frequency in COASTER and other rail services that utilize this rail line. In addition, the new Mid-Coast Trolley line from Old Town to University Town Center would be constructed and the Green Trolley line would be extended to downtown San Diego.

While the majority of these improvements would be focused in the highly urbanized western portion of the region, portions of this area remain susceptible to wildland fires due to climate, topography, and native vegetation as previously discussed. In general, transportation projects and facilities are not typically susceptible to significant damage from wildfires and would not contribute added fuel to wildfires. Generally, the most significant effect of wildland fires on the transportation and transit systems proposed would be temporary interruption of service with little expectation of significant exposure of property or people to damage or injury. In addition, improving the capacity of the existing transportation network would result in increased use of the existing corridors beyond the terminus of current conditions; indirectly enhancing potential evacuation routes and/or providing additional firebreaks.

However, as a result of climate change, more frequent and severe wildfires are predicted, which may occur near major transportation infrastructure. While direct impacts of wildfire may result, indirect impacts may also occur, when rainfall follows fire and creates transportation hazards through erosion, mudslides, and flooding. Any transportation network improvements constructed in fire hazard severity zones or the WUI would be obligated to conform to the statutory and regulatory requirements discussed in Section 4.9.2. However, the impact of wildfires on specific transportation network improvements is unknown given the level of uncertainty regarding the location, frequency, and severity of wildfires as exacerbated by climate change and it is likely that some transportation infrastructure will be located in areas susceptible to fire hazards. Therefore, implementation of the transportation network improvements would increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires. This is considered a significant impact.

Conclusion

Given the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires, additional growth and development forecasted by 2020 would expose additional people and structures to a significant risk of loss, injury, or death involving wildland fires; development would occur closer to WUI and Fire Hazard Severity zones. Adherence to the regulations described above and in Section 4.9.2 would reduce impacts associated with an increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires, but not to a level less than significant. Therefore, increased wildland fire hazards associated with the 2050 RTP/SCS would be significant.

2035

Regional Growth/Land Use Change

By 2035, the population of the region is expected to increase by 801,699 people; housing by 268,094 units; and employment by 312,292 jobs over existing 2010 conditions. Some locations that would experience the most extensive land use change and development by 2035 would include continued growth in eastern Chula Vista along the SR 125 and I-805 corridors; San Diego community planning areas of San
Ysidro and Otay Mesa along the SR 905 and SR 125 corridors; northeast of the SR 94 corridor in the unincorporated County planning areas of Jamul/Dulzura, Tecate, and Potrero; eastern Poway along the SR 67 corridor; the County planning area of Ramona along the SR 67 and SR 78 corridors; County planning areas of Lakeside and Alpine and the Crest, Granite Hills, Dehesa, Harbison Canyon subregion; and multiple north County planning areas along the I-15 and SR 76 corridors such as Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, and Hidden Valley.

The increased density can be seen when comparing the existing housing density to the 2035 housing density, as shown in Figures 4.13-2 and 4.13-8, respectively. Areas of increased residential density by 2035 would be apparent in some coastal cities such as Oceanside and Encinitas, and City of San Diego coastal communities. Also, increased density would occur in more inland areas along I-8 corridor through Mission Valley, College Area, and into the City of La Mesa, as well as eastern Chula Vista along the SR 125 corridor.

In the northern portion of the region, land use changes to accommodate growth in 2035 in the form of spaced rural residential development would occur along the I-15 corridor north of Escondido toward the northern county line and in more eastern areas along I-8, SR 67, SR 78, and SR 94.

The SR 78 corridor, from Escondido to I-5, would also experience growth and resulting land use density increases of both residential and commercial/office by 2035. The majority of this growth would be centered around the cities of Vista, San Marcos, and Escondido. The pattern of more dense growth along this segment of the SR 78 corridor is also apparent when comparing the existing housing density to 2035 housing density.

By 2035, some regional growth would be accommodated in the more eastern, rural areas of the region. Development in these areas would be centered mostly along highway corridors, such as SR 78, SR 67, I-8 east of El Cajon, and SR 94, and generally within San Diego County community planning areas. When comparing the existing land uses and 2035 land uses, the 2035 land use pattern would generally involve additional residential development in areas that were previously undeveloped open space or at some time in agricultural use (as discussed in Section 4.2).

As discussed in the 2020 analysis, increased regional growth and development would potentially increase the threat of wildland fires on human populations and property, as development would be located closer to WUI and Fire Hazard Severity zones as shown in Figure 4.9-2. In addition, growth experienced by 2035 may result in an increased demand for fire protection services and increased demand on the existing water supply. In the event of a major wildland fire, the lack of available fire response staff or adequate response times, or infrastructure constraints such as insufficient water supply, may also contribute to an increased risk of wildland fire hazard. Furthermore, climate change is likely to impact the severity and frequency of wildfires. The frequency and intensity are predicted to increase over time due to climate change. Therefore, the impact is significant.

While the existing fire code regulations included in Section 4.9.2 coupled with the strategies above would help reduce the risks to people and structures associated with wildland fires, it cannot be guaranteed that all future project-level impacts would be reduced to less than significant levels due to the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires. Therefore, impacts related to the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires would be significant.
Transportation Network Improvements

Some key highway improvements in place by 2035 would include continued widening along portions of I-5; additional HOV and Managed Lanes along portions of I-5, I-15, I-805, and SR 52; widening of portions of SR 125 and SR 67; and additional freeway and HOV connector improvements. Some important transit projects operational by 2035 would include continued increases in COASTER service, increases in SPRINT service, increases in downtown area streetcar service, and substantial increases in rapid bus service throughout the region. The Trolley Blue Line would be extended from UTC to Mira Mesa via Sorrento Mesa and Carroll Canyon; the Orange Line would be extended to Lindbergh Field; Phase 1 of the new Mid-City to Downtown San Diego line would provide service from the Mid-City transit station via El Cajon Boulevard to Downtown; and a new line from Pacific Beach to El Cajon via Kearny Mesa, Mission Valley, and San Diego State University would be established. Double-tracking along the SPRINT rail line through the cities of Oceanside, Vista, San Marco, and Escondido would take place by 2035 as well as continued double-tracking along the LOSSAN corridor.

Additional improvements to the transportation network are anticipated by 2035. As discussed in the 2020 analysis, the majority of the transportation network improvements included in the 2050 RTP/SCS are focused in the highly urbanized western portion of the region. However, portions of this area remain susceptible to wildland fires due to climate, topography, and native vegetation as discussed above. Furthermore, climate change is likely to impact the severity and frequency of wildfires. The frequency and intensity are predicted to increase over time due to climate change. Any transportation network improvements constructed in fire hazard severity zones or the WUI would be obligated to conform to the statutory and regulatory requirements discussed in Section 4.9.2. However, the impact of wildfires on specific transportation network improvements is uncertain given the level of uncertainty regarding the location, frequency, and severity of wildfires as exacerbated by climate change and it is likely that some transportation infrastructure will be located in areas susceptible to fire hazards. Therefore, implementation of the transportation network improvements would increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires. This is considered a significant impact.

Conclusion

Given the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires, additional growth and development forecasted by 2035 would expose additional people and structures to a significant risk of loss, injury, or death involving wildland fires. Adherence to the regulations described above and in Section 4.9.2 would reduce impacts associated with an increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires, but not to a level less than significant. Therefore, increased wildland fire hazards associated with the 2050 RTP/SCS would be significant.

2050

Regional Growth/Land Use Change

By 2050, the population of the region is forecast to increase by 1,160,435 people; housing by 379,664 units; and employment by 501,958 jobs over existing conditions. Areas of substantial land use change and development, beyond that described in 2035, would include significant industrial development in the County’s Otay planning area and San Diego Otay Mesa community surrounding the East Otay Mesa POE; throughout County planning areas located along the international border including Tecate, Potrero, Campo/Lake Morena, Boulevard, and Jacumba; throughout the Ramona and Julian planning areas in the unincorporated County; throughout other northeastern County planning areas including North Mountain, Desert, and Borrego Springs; and continued development throughout County planning areas located north
and east of Escondido extending to the northern border with Riverside County including Rainbow, Fallbrook, Bonsall, Pala-Pauma Valley, Valley Center, Hidden Valley, Twin Oaks Valley, and North County Metro.

Increased density is most apparent in City of San Diego communities near the downtown area near I-5 and I-805 and along the I-8 corridor to the east. Urban centers in the western third of the San Diego region would have most available land developed with single- and multi-family uses, commercial and office uses, and industrial uses. Consistent with the goals of the 2050 RTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented, and compact. Substantial dense growth within the urban centers corresponds with major transportation corridors such as I-5, I-8, I-15, and I-805 and these are also alignments that would have extensive transit opportunities.

Similar to the description in the 2035 analysis, growth would continue in more eastern locations of the region, such as east of I-15 in the northern area, east of SR 67 through the middle portion of the region, and east of SR 94 in the southern area. However, by 2050, spaced rural residential development would have expanded beyond areas along existing transportation corridors and established rural communities and into areas with very minimal development present. As shown in Figure 4.11-5, some of these areas include northeast of Escondido to SR 76, areas east of Camp Pendleton, and areas north and south of the SR 78 corridor. Large pockets of land currently used for agricultural purposes would be developed with spaced rural residential uses.

By 2050, a substantial pocket of industrial development would be located along the planned SR 905 corridor in conjunction with the new Otay Mesa East POE at the international border with Mexico. This is a newly developing area that is planned for mainly industrial use and is highly dependent upon the planned construction of SR 11, SR 905, and the Otay Mesa East POE.

By 2050, increased residential densities in proximity to WUI and Fire Hazard Severity zones as shown in Figure 4.9-2 would contribute to the significant risk of loss, injury, or death involving wildland fires. While the existing fire code regulations included in Section 4.9.2 coupled with the strategies above would help reduce the risks to people and structures associated with wildland fires, it cannot be guaranteed that all future project-level impacts would be reduced to less than significant levels due to the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires. Furthermore, climate change is likely to impact the severity and frequency of wildfires. The frequency and intensity are predicted to increase over time due to climate change. Therefore, impacts related to the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires would be significant.

Transportation Network Improvements

By 2050, most of the highway, transit, and active transportation (bicycle and pedestrian) improvements, along with other infrastructure projects, would be in place and operational in accordance with the proposed 2050 RTP/SCS. Some key highway improvements that would be in place by 2050 would include widening portions of SR 52, SR 56, SR 76, SR 94, SR 125, and I-5; additional HOV lanes and Managed Lanes along segments of I-805, I-5, I-15, SR 94, SR 125, and SR 54; and freeway and HOV connector improvements. Important transit improvements in place by 2050 would include the extension of Trolley lines and increased Trolley service frequency. The Trolley Green Line would be extended to Downtown-Bayside; a new Phase 2 of the line connecting San Diego State University to Downtown San Diego via El Cajon Boulevard/Mid-City would be constructed; extended to San Diego State University; and a line from University Town Center to San Ysidro Palomar Trolley Station in the South Bay via Kearny Mesa, Mission Valley, Mid-City, and National City, and Chula Vista would be established.
Additional improvements to the transportation network are anticipated by 2035. As discussed in the 2020 analysis, most transportation network improvements included in the 2050 RTP/SCS are focused in the highly urbanized western portion of the region. However, portions of this area remain susceptible to wildland fires due to climate, topography, and native vegetation as discussed above. Furthermore, climate change is likely to impact the severity and frequency of wildfires. The frequency and intensity are predicted to increase over time due to climate change. Any transportation network improvements constructed in fire hazard severity zones or the WUI would be obligated to conform to the statutory and regulatory requirements discussed in Section 4.9.2. However, the impact of wildfires on specific transportation network improvements is uncertain given the level of uncertainty regarding the location, frequency, and severity of wildfires as exacerbated by climate change and it is likely that some transportation infrastructure will be located in areas susceptible to fire hazards. Therefore, implementation of the transportation network improvements would increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires. This is considered a significant impact.

Conclusion

Given the relatively large amount of area within the San Diego region that is considered to be at high risk for wildland fires, additional growth and development forecasted by 2050 would expose additional people and structures to a significant risk of loss, injury, or death involving wildland; development would occur in closer proximity to WUI and Fire Hazard Severity zones. Adherence to the regulations described above and in Section 4.9.2 would reduce impacts associated with an increase the exposure of additional people and structures to a significant risk of loss, injury, or death involving wildland fires, but not to a level less than significant. Therefore, increased wildland fire hazards associated with the 2050 RTP/SCS would be significant.

4.9.5 MITIGATION MEASURES

The following mitigation measures aim to reduce impacts related to hazards and hazardous materials to less than significant levels. These mitigation measures are general and programmatic in nature, and would be refined in project-specific CEQA documents.

HM-8 WILDLAND FIRES

2020, 2035, 2050

Implementation of the 2050 RTP/SCS would result in significant impacts associated with wildland fire in 2020, 2035, and 2050 as development would be implemented in areas that are known to be at high risk for wildland fires. Implementation of Mitigation Measures HM-A and HM-B would reduce impacts, though not below a less than significant level.

HM-A SANDAG shall and other implementing agencies can and should require the implementation of bank stabilization improvements and erosion control measures near transportation infrastructure, such as major highways and transit centers, after wildfires.

HM-B SANDAG shall and other implementing agencies can and should consider additional wildfire risks caused by climate change and adaptation measures in the design and environmental review of development projects and transportation network improvements implemented as part of the 2050 RTP/SCS.
SANDAG shall and other implementing agencies can and should incorporate climate change adaptation measures into the project design, where feasible. Example adaptation measures could include, but are not limited to, such as designing buffer zones in areas within the WUI to reduce fuel adjacent to high population centers; ensuring sufficient emergency water supply for existing and new projects by working with water management agencies and plans; building and remodeling existing structures to be more fire resistant; minimizing exposure to and loss from fire hazards by avoiding, where feasible, development in high risk areas or designing developments in high-risk areas with ignition-resistant construction; and establishing fuel management strategies in high risk areas.

The following measures were also considered to reduce impacts associated with wildland fires to below a level of significance. However, it has been determined that these measures would be infeasible as described below; therefore, these mitigation measures would not be implemented.

- Local governments that have areas within the WUI could implement policies that would further limit the amount of future development or reduce densities of development in the areas of concern in order to reduce hazards associated with wildland fires.

  This action would conflict with areas identified for increased growth under the current 2050 RTP/SCS growth forecast and with land use plans governing the area. The measure would also conflict with goals of providing sufficient housing stock and would not achieve one of the primary objectives of the 2050 RTP/SCS, which is to accommodate growth within the region over the next 40 years. Therefore, this measure is considered infeasible.

- Local governments that have areas within the WUI could require extensive fuel modification around existing and future development in wildland areas beyond the standards already set forth in plans or ordinances of local jurisdictions and other agencies.

  This measure would be infeasible because it would substantially impact the environment by damaging biological resources, altering drainage patterns, causing erosion, and modifying the visual landscape. This would conflict with every jurisdiction’s local objectives to protect natural resources and habitat that uniquely define the character and ecological importance of an area. Therefore, this measure is considered infeasible.

- Local governments that have areas within the WUI could require the construction of a 30-foot-high fire-resistant barrier along WUI edges to act as a fire break.

  This measure would not be feasible because of substantial impacts to the existing aesthetic quality of natural open space areas character and division of existing communities, and it would impair wildlife movement. This action would require extensive property acquisition and be cost-prohibitive. Therefore, this measure is considered infeasible.

In the event of a wildland fire, damage would occur regardless of growth forecasted as part of the 2050 RTP/SCS. However, additional growth near and within WUI areas forecasted to occur by 2020, 2035, and 2050 as part of the 2050 RTP/SCS would place additional people and structures in areas at a significant risk. Because there are no feasible mitigation measures to reduce impacts to less than significant levels, impacts associated with wildland fires remain significant and unavoidable.
4.9.6 SIGNIFICANCE AFTER MITIGATION

HM-8 WILDLAND FIRES

2020, 2035, 2050

Implementation of the 2050 RTP/SCS would result in significant impacts associated with wildland fires in 2020, 2035, and 2050 as development would be implemented in areas that are known to be at high risk for wildland fires. Implementation of Mitigation Measures HM-A and HM-B would reduce impacts, though not below a less than significant level. There is no assurance that these mitigation measures would reduce impacts to a level less than significant for all projects forecasted in the 2050 RTP/SCS, due to the overall vulnerability of the region to fire hazards and the indirect impacts fire events have on other environmental resource areas, such as infrastructure and sensitive biological resources. In addition, other mitigation described in Section 4.9.5 would reduce risk associated with wildfires but would be infeasible as it would be cost-prohibitive or cause direct or indirect impacts to other issue areas such as aesthetics and biological resources. Therefore, implementation of the 2050 RTP/SCS is anticipated to result in significant and unavoidable impacts associated with wildland fires.