

4.7 Hazards and Hazardous Materials

This section analyzes potentially significant impacts related to hazards and hazardous materials that could result from implementation of the project. This analysis relies on secondary source information including but not limited to federal, regional, and City of Irvine (City) planning documents, and hazardous material databases.

4.7.1 Existing Conditions

Hazardous material sites can include any business or operation that has previously used, or currently uses, hazardous materials on a routine basis. It can also include any site where hazardous materials have been spilled. The State Water Resources Control Board (SWRCB) has a general database that indicates where hazardous materials are known to exist. Given Irvine's significant industrial activities and the presence of a decommissioned military base (Marine Corps Air Station [MCAS] El Toro), alongside its proximity to another military base (MCAS Tustin), the City has several identified hazardous waste sites throughout the City. As discussed further in this section, developers and builders are obligated to conduct thorough surveys, identification, and, if needed, remediation of their project sites in accordance with federal, state, and local regulations. Additionally, retail, commercial, and industrial sites involved in handling hazardous materials are also subject to regulation by local, state, and federal laws.

4.7.1.1 Emergency Response

The City's Office of Emergency Management (OEM) coordinates the City's preparedness efforts for hazards that could impact the community, including natural and human-caused disasters. The OEM works with all City departments, having primary responsibility for specific response functions, and ensures department-level plans and procedures are incorporated in the plan and its annexes. The OEM also maintains the Emergency Operations Center, trains emergency response staff and volunteers, and coordinates with Orange County Operational Area, California Office of Emergency Services, and Federal Emergency Management Agency (City of Irvine 2022).

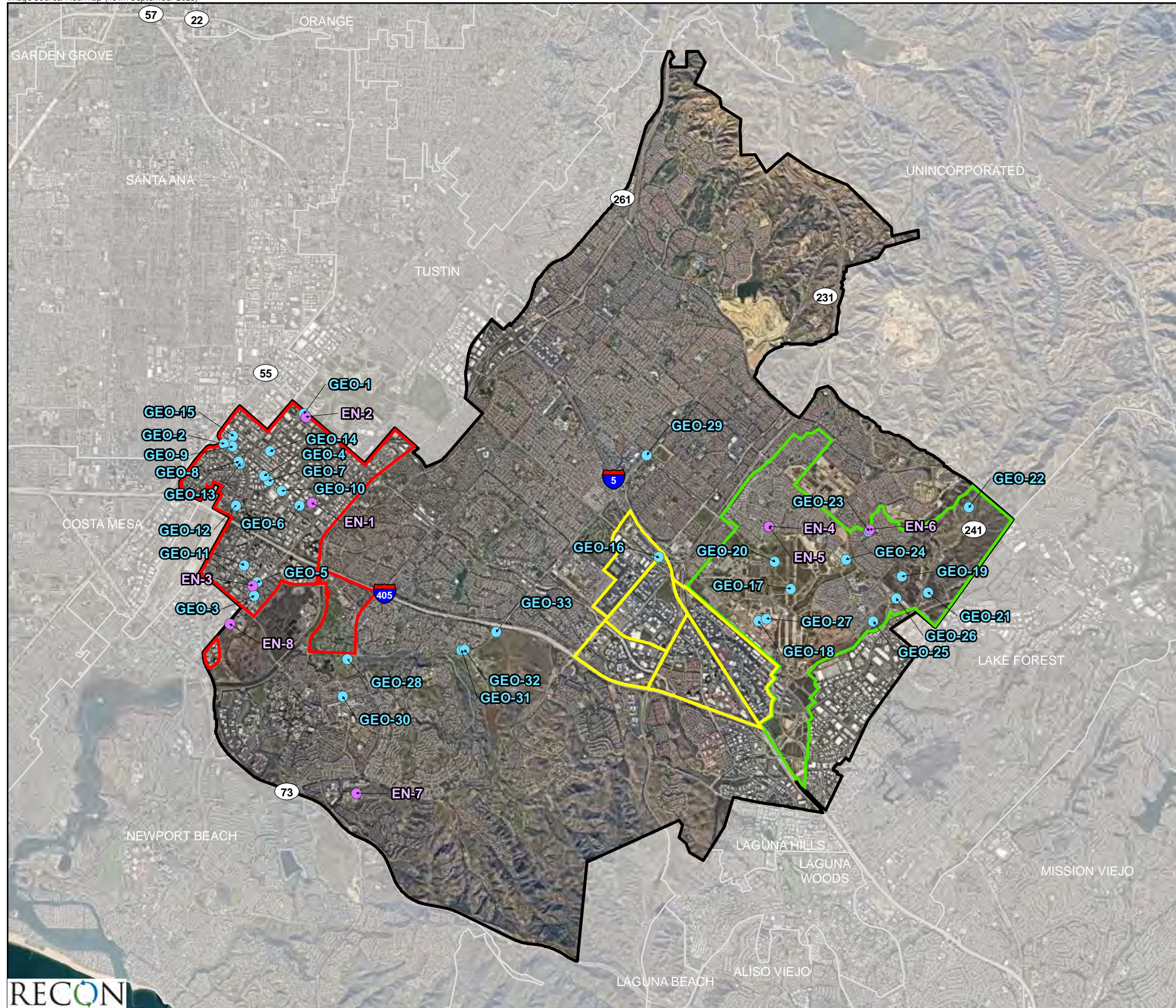
4.7.1.2 Hazardous Materials Sites

The Hazardous Waste and Substances Sites (Cortese) List is a planning document that provides information about the location of hazardous materials release sites in the state. Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop, at least annually, an updated Cortese List. The California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List that is contained in their Envirostor database.

The other main source of information for sites in the Cortese List is the SWRCB's Geotracker Database (Geotracker). "Geotracker" is the SWRCB's Internet-accessible database system used by the state board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from

underground storage tanks. This system consists of a relational database, online compliance reporting features, a geographical information system interface, and other features that are utilized by the state board, regional boards, local agencies, regulated industry and the public to input, manage, or access compliance and regulatory tracking data.

Figure 4.7-1 presents the location of active Envirostor and Geotracker hazardous materials sites. As shown on Figure 4.7-1, there are several active Envirostor and Geotracker hazardous materials sites within the City. Table 4.7-1 lists each site location and describes the site listing. Additionally, the Irvine Ranch Water District, the Orange County Water District, and the United States Department of the Navy jointly completed the El Toro Groundwater Remediation Project, which is designed to clean up a trichloroethylene (TCE) plume associated with the former Marine Corps Air Station El Toro. The project began full operation in January 2007 and pumps water from the plume for treatment to remove the TCE. The treated water is then used for non-drinking water purposes (Irvine Ranch Water District 2024).



- Irvine City Boundary
- Focus Area 1
- Focus Area 2
- Focus Area 3
- EnviroStor Active Cleanup Sites (ID)
- GeoTracker Active Cleanup Sites (ID)

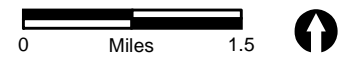


FIGURE 4.7-1
Hazardous Materials Sites

Table 4.7-1 Active Envirostor and Geotracker Hazardous Materials Sites			
Sites	Description	Location	Focus Area
Envirostor			
EN-1 Turner: Derian Ave Irvine	Site Type: Voluntary Cleanup Status: Active	17352 Derian Avenue Irvine, CA 92614	FA1
EN-2 Printronic, Inc.	Site Type: Corrective Action Status: Active	1700 Barranca Parkway Irvine, CA 92606	FA1
EN-3 Xerox Corporation Irvine CRC	Site Type: Corrective Action Status: Active	18691 Jamboree Blvd Irvine, CA 92715	FA1
EN-4 Heritage Fields (former MCAS El Toro)	Site Type: Voluntary Agreement Status: Active	9 Miles N/E of Newport Beach, CA Irvine, CA 92709	FA3
EN-5 El Toro MCAS	Site Type: Closed Base Status: Active	4,741 acres; 9mi NE of Newport Beach, CA Irvine CA 92709	FA3
EN-6 Heritage Hills Irvine (Former MCAS El Toro)	Site Type: Voluntary Agreement Status: Active	Anomaly Area 3 Irvine, CA 92618	FA3
EN-7 Turtle Ridge Elementary School	Site Type: School (The school is located on a site that was historically used for grazing cattle and dry farming). Status: Certified/Operation & Maintenance for methane gas.	6 Federation Way Irvine, CA 92603	City
EN-8 University of California, Irvine (UCI) – UCI Center for Child Health/Medical Office Building and Irvine Campus Medical Complex	Site Type: Voluntary Agreement Status: Active	19172, 19182 and 19262 Jamboree Road Irvine, CA 92612	City
Geotracker Sites			
GEO-1 Printronic	Cleanup Status: Open - Verification Monitoring Loc Case #: T0605900560	1700 Barranca Pkwy Irvine, CA 92714	FA1
GEO-2 Drake Engineering	Clean Up Status: Open - Verification Monitoring Loc Case#: T0605900612	17502 Daimler St Irvine, CA 92714	FA1
GEO-3 Prudential (Former Beckman)	Clean Up Status: Open - Verification Monitoring Loc Case#: T0605901027	19000 Jamboree Rd Irvine, CA 92715	FA1
GEO-4 Orange County South Basin - Baxter Healthcare	Clean Up Status: Open - Remediation Loc Case#: SL188053851	17511 Armstrong Ave Irvine, CA 92714	FA1
GEO-5 Xerox - Irvine	Clean Up Status: Open - Remediation Loc Case#: SL208033858	18691 Jamboree Blvd Irvine, CA	FA1
GEO-6 Former Great Lakes Chemical Corp.	Clean Up Status: Open - Remediation Loc Case#: T0605900416	17461 Derian Ave Irvine, CA 92714	FA1
GEO-7 Edwards Lifesciences LLC (Former Baxter Bentley)	Clean Up Status: Open - Assessment & Interim Remedial Action Loc Case#: SL208624048	17502 Armstrong Ave Irvine, CA	FA1

Table 4.7-1 Active Envirostor and Geotracker Hazardous Materials Sites			
Sites	Description	Location	Focus Area
GEO-8 Exxon #7-3515	Clean Up Status: Open - Remediation Loc Case#: T0605900112	17511 Macarthur Irvine, CA 92614	FA1
GEO-9 Unisys/Memorex	Clean Up Status: Open - Verification Monitoring Loc Case#: T0605901091	1352 Reynolds Ave Irvine, CA 92714	FA1
GEO-10 Deft Chemical Coating, Inc.	Clean Up Status: Open - Site Assessment Loc Case#: T0605900481	17451 Von Karman Ave Irvine, CA 92714	FA1
GEO-11 Sanmina Corp	Clean Up Status: Open - Assessment & Interim Remedial Action Loc Case#: SL208073862	18522 Von Karman Ave Irvine, CA 92612	FA1
GEO-12 Olen Properties	Clean Up Status: Open - Site Assessment Loc Case#: SLT8R1624089	2031 Main Street Irvine, CA	FA1
GEO-13 Chevron #9-6405	Clean Up Status: Open - Site Assessment Loc Case#: T0605901896	17561 Macarthur Irvine, CA 92614	FA1
GEO-14 Orange County South Basin - Former Standard Screw Products	Clean Up Status: Open - Site Assessment Loc Case#: T10000011346	1712 Langley Ave Irvine, CA 92614	FA1
GEO-15 Fidelity National Title Insurance Company	Clean Up Status: Open - Remediation Loc Case#: T10000008477	17352 Daimler Irvine, CA 92614	FA1
GEO-16 Unocal COP #4773	Clean Up Status: Open - Eligible for Closure Loc Case#: T0605901413	14886 Sand Canyon Irvine, CA 92618	FA2
GEO-17 El Toro MCAS - U S Marine Corps Air Station EL TORO, IRP program and some small Petroleum Sites	Clean Up Status: Open - Assessment & Interim Remedial Action Loc Case#: T0605964530	Trabuco and Sand Canyon Irvine, CA 92709	FA3
GEO-18 El Toro MCAS - U S Marine Corps Air Station El Toro OU-2A IRP-24/OU-1 IRP-18 VOC Groundwater Plume	Clean Up Status: Open - Remediation Loc Case#: SLT8R2654056	7040 Trabuco Road Irvine, CA 92618	FA3
GEO-19 El Toro MCAS - U S Marine Corps Air Station El Toro - OU-2B - IRP-17 Communications Station Landfill	Clean Up Status: Open - Verification Monitoring Loc Case#: DOD100139500	Irvine, CA 92709	FA3
GEO-20 El Toro MCAS - U S Marine Corps Air Station El Toro- OU-3 - IRP-16 Crash Crew Pit No. 2	Clean Up Status: Open - Remediation Loc Case#: DOD100168600	Irvine, CA 92709	FA3
GEO-21 El Toro MCAS - U S Marine Corps Air Station El Toro - OU-2B - IRP-2 Magazine Road Landfill	Clean Up Status: Open - Verification Monitoring Loc Case#: DOD100131200	Irvine, CA 92709	FA3
GEO-22	Clean Up Status: Open - Verification Monitoring	Irvine, CA 92709	FA3

Table 4.7-1 Active Envirostor and Geotracker Hazardous Materials Sites			
Sites	Description	Location	Focus Area
El Toro MCAS - Us Marine Corps Air Station El Toro- OU-3 - IRP-1 Explosive Ordinance Disposal Range	Loc Case#: DOD100136000		
GEO-23 El Toro MCAS - US Marine Corps Air Station El Toro - OU-2C - Anomaly Area 3 landfill	Clean Up Status: Open - Remediation Loc Case#: DOD100131500	Irvine, CA 92709	FA3
GEO-24 El Toro MCAS - U S Marine Corps Air Station El Toro - OU-2C - IRP-3 Original landfill	Clean Up Status: Open - Verification Monitoring Loc Case#: DOD100131300	Irvine, CA 92709	FA3
GEO-25 El Toro MCAS - U S Marine Corps Air Station El Toro - OU-2C - IRP-5 Perimeter Road Landfill	Clean Up Status: Open - Verification Monitoring Loc Case#: DOD100131400	Irvine, CA 92709	FA3
GEO-26 R&S Soil Products, Inc., Composting Fac	Clean Up Status: Open - Verification Monitoring Loc Case#: T10000009587	1 Magazine Road Irvine, CA 92618	FA3
GEO-27 TVI EcoCentre	Clean Up Status: Open - Operating Loc Case#: T10000017448	8065 Marine Way Irvine, CA 92650	FA3
GEO-28 Treasure Farm Windmachine 208	Clean Up Status: Open - Operating Loc Case#: T0605901750	15401 Culver Dr Irvine, CA 92715	City
GEO-29 Treasure Farm Windmachine 227	Clean Up Status: Open - Site Assessment Loc Case#: T0605901751	14503 Trabuco Rd Irvine, CA 92720	City
GEO-30 Campus Cleaners	Clean Up Status: Open - Site Assessment Loc Case#: SLT8R0703954	4515-A Campus Ave Irvine, CA	City
GEO-31 View Cleaners	Clean Up Status: Open - Site Assessment Loc Case#: SLT8R0753958	5313 University Ave Irvine, CA 92612	City
GEO-32 Mobil #18-824	Clean Up Status: Open - Remediation Loc Case#: T0605900193	5333 University Irvine, CA 92612	City
GEO-33 Michelson WWRF	Clean Up Status: Active Loc Case#: NPD100051948	3512 Michelson Dr Irvine, CA 92612	City
SOURCES: California Department of Toxic Substances Control 2024; California State Water Resources Control Board 2024			

4.7.1.3 Airport Hazards

There are no airports located within the City's jurisdictional boundaries; however, the following airports are located near the City:

- John Wayne Airport (SNA) is located immediately adjacent to the southwestern boundary of the City within unincorporated Orange County.
- Fullerton Municipal Airport (FMA) is located approximately 14.5 miles northwest of the City.
- Long Beach Airport (LGB) is located approximately 17.5 miles west by northwest of the City.
- Ontario International Airport (ONT) is located approximately 20.5 miles north by northeast of the City.
- Los Angeles International Airport (LAX) is located approximately 33.9 miles west by northwest of the City.
- In addition to the public airports that operate in the region, Joint Forces Training Base Los Alamitos is also located approximately 12.0 miles west by northwest of the City. This facility is actively used for military training purposes; however, the frequency of flights is anticipated to be less than the amount from airports like John Wayne.

There are numerous flight paths (commercial and general aviation) that cross over the City. The City's 2020 Local Hazard Mitigation Plan (LHMP), which is designed to identify the City's hazards (including aircraft hazards), estimates the probability of future occurrences, and sets goals to mitigate potential risks associated with aircraft accidents and incidents. Title 49 of the Code of Federal Regulations Part 830, §830.2 distinguishes between an aircraft accident and aircraft incident as follows:

An "accident" is an occurrence associated with the operation of an aircraft that:

- Occurs between when the first boarding person enters the aircraft – with intention of flight – and the last person disembarks.
- Results in death or serious injury, or
- Causes substantial damage to the aircraft.

An "incident" is an occurrence – other than an accident (no intention of flight) – associated with the operation of an aircraft that affects or could affect the safety of operations.

4.7.1.4 Hazardous Materials Release

Hazardous materials release refers to a hazard event whereby harmful concentrations of hazardous or toxic substances are released into the environment. This occurs when storage containers of hazardous materials leak or fail. This can happen due to industrial accidents, vehicle crashes, as a direct result of other disasters (e.g., a flood or earthquake), or as a deliberate act.

The threat that hazardous materials pose to human health depends on the type of material, frequency, and duration of exposure, and whether chemicals are inhaled, penetrate skin, or are ingested, among other factors. Exposure to hazardous materials can result in short- or long-term effects, including major damage to organs and systems in the body, or death. Hazardous waste is any material with properties that make it dangerous or potentially harmful to human health or the environment. Hazardous materials can also cause health risks if they contaminate soil, groundwater, and air, potentially posing a threat long after the initial release.

The City's 2020 LHMP identifies two key potential sources of hazardous materials release: The San Joaquin Landfill (closed) and Lane Hill Landfill (closed), both of which are in the northwest part of the City close to University of California, Irvine.

4.7.2 Applicable Regulatory Requirements

4.7.2.1 Federal Regulations

a. Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of the CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

b. Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) pertain primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting, material handling, and transporting data for use as a basis for planning. Chemical inventory data are made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

c. Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to the RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

d. Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, in the sky, or in pipelines. It includes provisions for materials classification, packaging, marking, labeling, placarding, and shipping documentation.

e. Rule 29 of the Code of Federal Regulations Part 1926

Federal law requires compliance with Rule 29 of the Code of Federal Regulations (CFR) Part 1926. Prior to site demolition activities, building materials shall be carefully assessed for the presence of lead-based paint, and its removal, where necessary, must comply with state and federal regulations, including Occupational Safety and Health Administration (OSHA) 29 CFR Part 1926. The OSHA rule establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation of monitoring. Furthermore, the requirements of California Code of Regulations (CCR), Title 17, Division 1, Chapter 8, identify procedures that must be followed for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.

f. Federal Air Regulations, Part 77

The Federal Aviation Administration (FAA) is charged with the review of construction activities that occur in the vicinity of airports. Their role in reviewing these activities is to ensure that new structures do not result in a hazard to navigation and thus derogate the safety of the National Airspace System. The regulations contained in Federal Air Regulations (FAR) Part 77 are designed to ensure that no hazards are allowed to exist that would endanger the public. The FAA, through FAR Part 77, established a method of identifying surfaces that should be free from obstructions in order to maintain sufficient airspace around airports. FAR Part 77, in effect, identifies the maximum height at which a structure would be considered an obstacle at any given point around an airport. In addition, Part 77 establishes standards for determining whether objects constructed near airports will be considered obstructions in navigable airspace, sets forth notice requirements of certain types of proposed construction or alterations, and provides for aeronautical studies to determine the potential impacts of a structure on the flight of aircraft through navigable airspace.

4.7.2.2 State Regulations

a. California Code of Regulations

Most state and federal regulations and requirements that apply to generators of hazardous waste are spelled out in CCR, Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, treatment, storage, and disposal facilities. Because California is a fully authorized state according to RCRA, most RCRA regulations (those contained in 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the U.S. Environmental Protection Agency (U.S. EPA), the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than do the RCRA regulations in 40 CFR 260. To aid the regulated community, California compiled the hazardous materials, waste and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19,

22, 23, 24, and 27 into one consolidated CCR, Title 26 "Toxics." However, the California hazardous waste regulations are still commonly referred to as Title 22. For the purposes of clarity, because of the extensive reach of Title 22 and Title 26, many common household products sold in grocery stores and home improvement warehouses qualify as hazardous materials. These items include household cleaners, detergents, paint, motor oil, lubricants, glues, pesticides, etc. The term "hazardous materials" is also defined to include many on-site materials as well, such as lubricants, fuel, etc.

b. Cortese List: Section 65962.5(a)

Government Code Section 65962.5 requires the CalEPA to develop, at least annually, an updated Hazardous Waste and Substances Sites list (Cortese List). The Cortese List is a planning document used by the state, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. Release sites include or hazardous materials release sites may include the following:

- All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
- All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
- All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
- All sites listed pursuant to Section 25356 of the Health and Safety Code.
- All sites included in the Abandoned Site Assessment Program.

The California 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.

c. The California Hazardous Material Management Act

The Hazardous Materials Management Act requires that businesses handling or storing certain amounts of hazardous materials prepare a Hazardous Materials Business Emergency Plan (HMBEP), which includes an inventory of hazardous materials stored on-site (above specified quantities), an emergency response plan, and an employee training program. An HMBEP is a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. The intent of the HMBEP is to satisfy federal and state community right-to-know laws and to provide detailed information for use by emergency responders.

Per the California Health and Safety Code, Chapter 6.95, Section 25500–25532, an HMBEP must be submitted by any business that handles a hazardous material or a mixture containing a hazardous material in quantities equal to, or greater than:

- A total weight of 500 pounds or a total volume of 55 gallons;
- 200 cubic feet of a compressed gas at standard temperature and pressure; and/or
- A radioactive material handled in quantities for which an emergency plan is required pursuant to Parts 30, 40, or 70 of Chapter 10, Title 10, CFR, or equal to or greater than the amounts specified above, whichever amount is less.

An HMBEP must be prepared prior to facility operation. Any business subject to HMBEP requirements shall submit an amendment of its HMBEP to the local implementing agency when there is:

- A 100 percent or more increase in the quantity of a previously disclosed hazardous material;
- Any handling of a previously undisclosed hazardous material subject to the inventory requirements;
- Change of business address;
- Change of ownership;
- Change of business name; and/or
- Change of contact information.

In addition, any business subject to HMBEP requirements is also required to certify the inventory of hazardous materials handled at the business every year. Businesses are also required to review their HMBEP at least once every three years to determine if a revision is necessary. Once the review has been conducted, the business must certify in writing to the local implementing agency that a review has been completed and necessary changes were made. For businesses within the City, HMBEPs are submitted to and approved by the Orange County Health Care Agency.

d. The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the state of California. The HWCL requires a hazardous waste generator, which stores or accumulates hazardous waste for periods greater than 90 days at an on-site facility or for periods greater than 144 hours at an off-site or transfer facility, which treats, or transports hazardous waste, to obtain a permit to conduct such activities. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the state of California. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates the number of types of wastes and waste management activities that are not covered by federal law with RCRA.

e. State Aeronautics Act (Public Utilities Code Section 21670, et seq.)

The Public Utilities Code establishes the requirement for the creation of airport land use commissions for every county in which there is located an airport that is served by a scheduled airline. Additionally, these sections of the Public Utilities Code mandate the preparation of Comprehensive Land Use

Plans to provide for the orderly growth of each public airport and the area surrounding the airport. The purpose of Comprehensive Land Use Plans includes the protection of the general welfare of inhabitants within the vicinity of the airport and the general public.

f. California Emergency Services Act

Government Code 8550–8692 provides for the assignment of functions to be performed by various agencies during an emergency so that the most effective use may be made of all manpower, resources, and facilities for dealing with any emergency that may occur. The coordination of all emergency services is recognized by the state to mitigate the effects of natural, humanmade, or war-caused emergencies which result in conditions of disaster or extreme peril to life, property, and the resources of the state, and generally, to protect the health and safety and preserve the lives and property of the people of the state.

g. State Fire Plan

The state Board of Forestry and the California Department of Forestry and Fire Protection have drafted a comprehensive update of the State Fire Plan for wildland fire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis.

h. Title 22, Division 4.5 of the California Code of Regulations

During site decommissioning and demolition activities, hazardous wastes must be managed in accordance with the requirements of Title 22, Division 4.5 of the California Code of Regulations. Title 22 sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste such as the requirements for transporting shipments of hazardous waste, manifesting, vehicle registration, and emergency accidental discharges during transportation.

i. Title 8 of the California Code of Regulations, Section 1529

During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the CCR, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

4.7.2.3 Regional Regulations

a. Certified Union Program Agency for Orange County

The Environmental Health Division was designated as the Certified Union Program Agency (CUPA) for the County of Orange in 1997 by the State Secretary for Environmental Protection. CUPA serves as an administrative agency that coordinates regulation of hazardous materials and waste in Orange County. The CUPA oversees the following six agencies: Hazardous Materials Disclosure, Business Emergency Plan, Hazardous Waste, Underground Storage Tank, Aboveground Petroleum Storage Tank, and California Accidental Release Prevention. These agencies have developed specific plans for identifying and managing different types of hazardous waste, described in more detail below.

Hazardous Materials Disclosure and Business Emergency Plan: The HMBEP program requires businesses that handle hazardous materials such as hazardous waste or substances at reportable quantities to submit an HMBEP to the California Environmental Reporting System. The CUPA then verifies this information and provides it to agencies that are responsible for the protection of public health and the environment.

Hazardous Waste: The Hazardous Waste Inspection Program is overseen by the Environmental Health Division throughout Orange County. This program aims to manage the proper handling, recycling, treatment, storage, and disposal of all hazardous wastes generated by Orange County businesses. Through this program, specialists inspect facilities that generate hazardous waste, evaluate industries that generate hazardous waste, investigate reports of illegal hazardous waste disposal, and respond to emergency spills of hazardous chemicals. Additionally, specialists engage in public education programs that inform industries and residents about regulations relating to proper hazardous waste disposal.

Underground Storage Tank: The Underground Storage Tank (UST) Inspection Program serves to ensure that hazardous materials stored in underground tanks are not released into the environment, causing potential pollution of ground or surface waters. The UST inspection program is overseen by the Orange County Health Care Agency (OCHCA), Environmental Health Division in most cities of Orange County, except Anaheim and Orange. Environmental Health is responsible for implementing and enforcing underground storage tank codes. Specialists from Environmental Health inspect and monitor equipment and compliance of UST systems to ensure that they comply with relevant laws and regulations. The Environmental Health Division also aims to educate and help tank owners and operators navigate regulatory requirements.

Aboveground Petroleum Storage Tank: The Aboveground Petroleum Storage Act (APSA) defines "petroleum" as crude oil, or any fraction thereof, which is liquid at 60 degrees Fahrenheit temperature and 14.7 pounds per square inch absolute pressure. The Act applies to businesses with a total storage capacity at one site of more than 1,320 gallons of petroleum products in tanks or containers larger than 55 gallons. The OCHCA is the CUPA responsible for inspections of these storage facilities in all of Orange County, except for Anaheim, which is regulated by the City of Anaheim Hazardous Materials Section. Tank facilities regulated under APSA are also regulated by the U.S. EPA Region 9 Oil Program Clean Water Act Compliance Office. A tank facility may be regulated and inspected by just the EPA or both the EPA and Orange County. Facilities regulated under the APSA or the federal

Spill Prevention, Control, and Countermeasure (SPCC) Rule must prepare and implement a SPCC Plan. Regulated facilities fall into three different categories with corresponding required plans depending on the storage capacity present at the facility.

b. California Accidental Release Program (CalARP)

The California Accidental Release Program (CalARP) is administered in the City by the Orange County Fire Authority (OCFA). OCFA monitors and regulates identified industries in the City that have a stationary source of hazardous materials. The potential hazardous threat of CalARP facilities is determined by completing a land use compatibility analysis. The regulatory responsibilities of CalARP, including the development and implementation of a Risk Management Plan, are found in Title 19, Division 2, Chapter 4.5 of the CCRs.

c. Orange County and Orange County Fire Authority Local Hazard Mitigation Plan

The federal Disaster Mitigation Act of 2000 requires all local governments to create a disaster plan in order to qualify for hazard mitigation funding. In 2010, Orange County partnered with the OCFA to produce a Multi-Jurisdiction Hazard Mitigation Plan. This plan outlines measures to mitigate natural hazards in County unincorporated areas, as well as fire hazards in the OCFA service area and County and OCFA facilities. The mission of the plan is to promote a policy that protects residents, facilities, infrastructure, key resources, property, and the environment from natural hazards, focusing on unincorporated areas of Orange County. Additionally, the plan aims to increase public awareness and outline resources for risk reduction and loss prevention.

d. South Coast Air Quality Management District Rule 1403

Prior to site demolition activities, building materials must be carefully assessed for the presence of asbestos-containing materials (ACM), and removal of this material, where necessary, must comply with state and federal regulations, including South Coast Air Quality Management District (SCAQMD) Rule 1403, which specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials.

e. Soil and/or Groundwater Contamination

Evidence of soil and/or groundwater contamination (e.g., chemical odors, staining) unrelated to above/underground storage tank releases may be encountered during site development. The appropriate agency (e.g., OCHCA, DTSC, or the Regional Water Quality Board) shall be notified if these conditions are encountered during construction or grading activities. With their oversight, an environmental site assessment would be completed and a determination shall be made as to whether a cleanup is required. Cleanup activities would be consistent with all applicable state and local rules, regulations, and laws. A cleanup would not be considered complete until confirmatory samples of soil and/or groundwater reveal levels of contamination below the standards established by the oversight agency. Alternatively, a risk assessment may be prepared for the site to determine that

there are no human or environmental risks associated with leaving contamination below specific levels in place. Construction in the impacted area shall not proceed until a “no further action” clearance letter or similar determination is issued by the oversight agency, or until a land use covenant is implemented.

4.7.2.4 Local Regulations

a. Existing General Plan (2000)

The current Safety Element provides guidelines for the protection of the community from hazards. Subsequent guidelines from the Board and Office of Planning and Research General Plan Guidelines will necessitate revisions to the Irvine General Plan Safety Element, which will be reflected in the General Plan Update.

The existing General Plan Safety Element includes the following objectives and policies related to hazards:

Safety Element

Objective J-1: Hazard Occurrence. Identify actions that the City, in concert with other jurisdictions, must take to reduce the probability of hazard occurrence.

- Policy (a): Regulate the type and intensity of development in areas associated with potential land use and air operational hazards through land use controls.
- Policy (c): Establish criteria for land development in hillside areas with emphasis on fire retardant materials, minimization of exposure risk to wildfire and adjacent structure fires, provision of access for fire fighting personnel and equipment, and removal of combustible vegetation.
- Policy (d): Use the most current available Airport Environs Land Use Plan (AELUP) as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity.
- Policy (e): Require development proposals to be reviewed by the Orange County Fire Authority to ensure adequate fire protection and precautions occur.

Objective J-2: Disaster Response. Identify actions that the City, in conjunction with other jurisdictions, must take to reduce the severity of disasters.

- Policy (a): Ensure that developments will be properly served by police and fire service.
- Policy (b): Ensure that each development will have adequate emergency ingress and egress.
- Policy (c): Phase the timing of development in relation to the City's ability to provide police and fire service.
- Policy (d): Continue to maintain and implement the City of Irvine's Emergency Plan.

Seismic Element

Objective D-1: Potential Hazards. Take potential environmental hazards into account in the General Plan.

- Policy (a): Identify the locations of potential seismic hazards to minimize the effects of the potential hazard through special development constraints. Conduct a research program to develop more refined boundaries for seismic response areas, particularly for Seismic Response Area 1.

Objective D-2: Response to Hazards. Require appropriate measures to protect public health and safety and to respond to seismic hazards in all public and private developments.

- Policy (g): Require a detailed geological and soils study as needed, in accordance with the requirements of the City's Subdivision Ordinance, before approving development.
- Policy (h): Continue to require structures to conform to the seismic design requirements found in the Uniform Building Code.
- Policy (i): Ensure that the most recent adopted seismic standards are used for new construction.

b. Local Hazard Mitigation Plan

The City's LHMP (2020) is designed to identify the City's hazards, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term natural or man-made hazard risks to human life and property for the City and its residents. The 2020 LHMP is an update to the City's 2011 LHMP.

c. Emergency Operations Plan

The purpose of the City's Emergency Operations Plan (2020) is to establish a strategic response plan if an emergency occurs. The plan provides an overview of concepts and components of the City's emergency management organization within the Standardized Emergency Management System and describes responsibility of federal, state, and county entities to protect life and property.

d. Municipal Code

Title 4 (Public Safety), Division 9 (Emergency Services)

Title 4 (Public Safety), Division 9 (Emergency Services) of the Municipal Code provides guidance for the preparation and carrying out of plans for the protection of persons and property within this City in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of this City with all other public agencies, corporations, organizations, and affected private persons.

Title 4 (Public Safety), Division 17 (Hazardous Materials)

Title 4 (Public Safety), Division 17 (Hazardous Materials) of the Municipal Code outlines the system of disclosure that is required to provide that information essential to firefighters, health officials, planners, elected officials, and other emergency service personnel in meeting their responsibilities for the health and welfare of the community in such a fashion that trade secrecy is not abridged. This division also implements the community's right and need for basic information on the use and disposal of hazardous materials in the City and provides for an orderly system for the provision of such information.

Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)

As outlined in Section 5.10-114 (Hazardous Conditions), of the Grading Code, hazardous conditions exist when the state of any natural ground, natural slopes, excavation, fill or drainage device, any of which exist on public or private property, is a menace to life or limb, or a danger to public safety, or endangers or adversely affects the safety, usability or stability of adjacent property, structures, or public or private facilities. This section of the City's Municipal Code outlines the authority given to the Chief Building Official for examining or causing to be examined every condition reported as hazardous as set forth in subsection A of this section. This section also outlines the provisions that may be undertaken in case of any such hazard.

Title 5 (Planning), Division 9 (Building Regulations) Chapter 1 (Adoption of Building and Fire Code)

Adoption of Building Regulations of the City's Municipal Code contains Section 5.9.102 Adoption of Fire Code, which states that the provisions of the California Fire code as amended by the provisions of this Division of the Municipal Code shall constitute the Fire Code Regulations of the City.

e. Zoning Ordinance***Chapter 2-13 (Hazardous Waste Facility Procedure)***

This chapter of the Zoning Ordinance establishes uniform standards, land use regulations and a permit process for controlling the location, design, maintenance and safety of off-site hazardous waste facilities. This chapter also outlines the environmental review process for such facilities, including the requirement for an analysis of all anticipated air quality impacts associated with the project and proposed mitigation to ensure no degradation of air quality in the area.

Chapter 5-8 (Irvine Business Complex Residential Mixed-Use Overlay District)

Section 5-8-4.A.2 (Compatibility with Surrounding Land Uses) of Chapter 5-8 states that applicants for new residential and/or residential mixed use are required to submit data as determined by the Director of Community Development to evaluate compatibility uses with respect to issues including but not limited to noise, odors, truck traffic and deliveries, hazardous materials handling/storage, air emissions, soil/groundwater contamination, and John Wayne Airport compatibility.

Section 5-8-4.A.4 (Air Quality Standards) of Chapter 5-8 outlines the required standards for residential and residential mixed-use projects, including:

- Use, service and maintenance of construction equipment, including the use of Tier 3 or higher emissions standards for off-road construction equipment and restrictions on non-essential idling.
- Preparation of a dust control plan for ground-disturbing activities, which would include measures for fugitive dust control under Rule 403 of the South Coast Air Quality Management District.
- Limitations and restrictions on coatings and solvents that contain volatile organic compounds.
- Requirement for the installation of Minimum Efficiency Reporting Value (MERV) filters of MERV 14 or better in the intake of residential ventilation systems for residences located within 500 feet of Interstate 405.
- Requirement for the submittal of a Health Risk Assessment (HRA) for residential or residential mixed-use projects located within the distances to industrial uses outlined in Section 5-8-4.A.4.
- Requirement for the submittal of a HRA for residential or residential mixed-use projects located within 1,000 feet of an industrial facility that emits toxic air contaminants.
- Requirement for the submittal of an odor assessment for all residential projects located within 1,000 feet of an industrial facility that emits substantial odors.

Section 5-8-4.C (Airport Restrictions) of Chapter 5-8 outlines the provisions for development within the jurisdiction of the Airport Land Use Commission, including: building height limitations in accordance with the Orange County Environs Land Use Plan standards and Federal Aviation Administration Part 77 Imaginary Surfaces for John Wayne Airport; the prohibition of residential land uses within Safety Zone 3; and sound attenuation standards for residential and park uses.

f. Planning Commission Resolution No. 09.-2968

Standard Conditions are adopted by Planning Commission Resolution No. 09-2968. These conditions assist staff in applying standardized wording for frequently used conditions of approval for discretionary and subdivision applications. Standard conditions are applied on a case-by-case basis depending upon the specifics of the application. Companion conditions are cross-referenced and are required to be used together. The following standard conditions related to hazards and hazardous materials apply:

Standard Condition 2.19 (Open Space Fuel Modification)

Prior to issuance of precise grading permits for any lots adjacent to open space, the applicant shall submit a fuel modification plan prepared to the satisfaction of the Director of Community Development for review and approval, in consultation with the Director of Community Services. The fuel modification plan shall be approved by the OCFA. The requirements set forth in this condition

do not apply to developed, irrigated park land required or provided as part of the project design for this project.

Standard Condition 3.8 (Used Motor Oil Collection)

Prior to the issuance of building permits for a project that incorporates vehicle service bays, the applicant shall submit, and the Director of Community Development shall have approved, a plan to implement an on-site used oil (motor oil) collection program in accordance with state/local statutes and regulations.

Standard Condition 3.14 (HOA/Fuel Modification)

Prior to the issuance of building permits for any dwelling units on lots located adjacent to or within fuel modification zones, the applicant shall provide evidence that there is a requirement included in the Covenant, Condition and Restrictions that any changes to plant materials located within fuel modification zones must be approved by the Director of Community Development and be consistent with applicable OCFA requirements. For fuel modification zones adjacent to lands designated as Open Space, changes in plant materials shall also be reviewed by the Director of Community Services.

Standard Condition 3.17 (Emergency Access Plan)

Prior to the issuance of the first building permit, the applicant shall submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers per the Irvine Uniform Security Code requirements. Said plan shall be incorporated into the plan set approved for building permits.

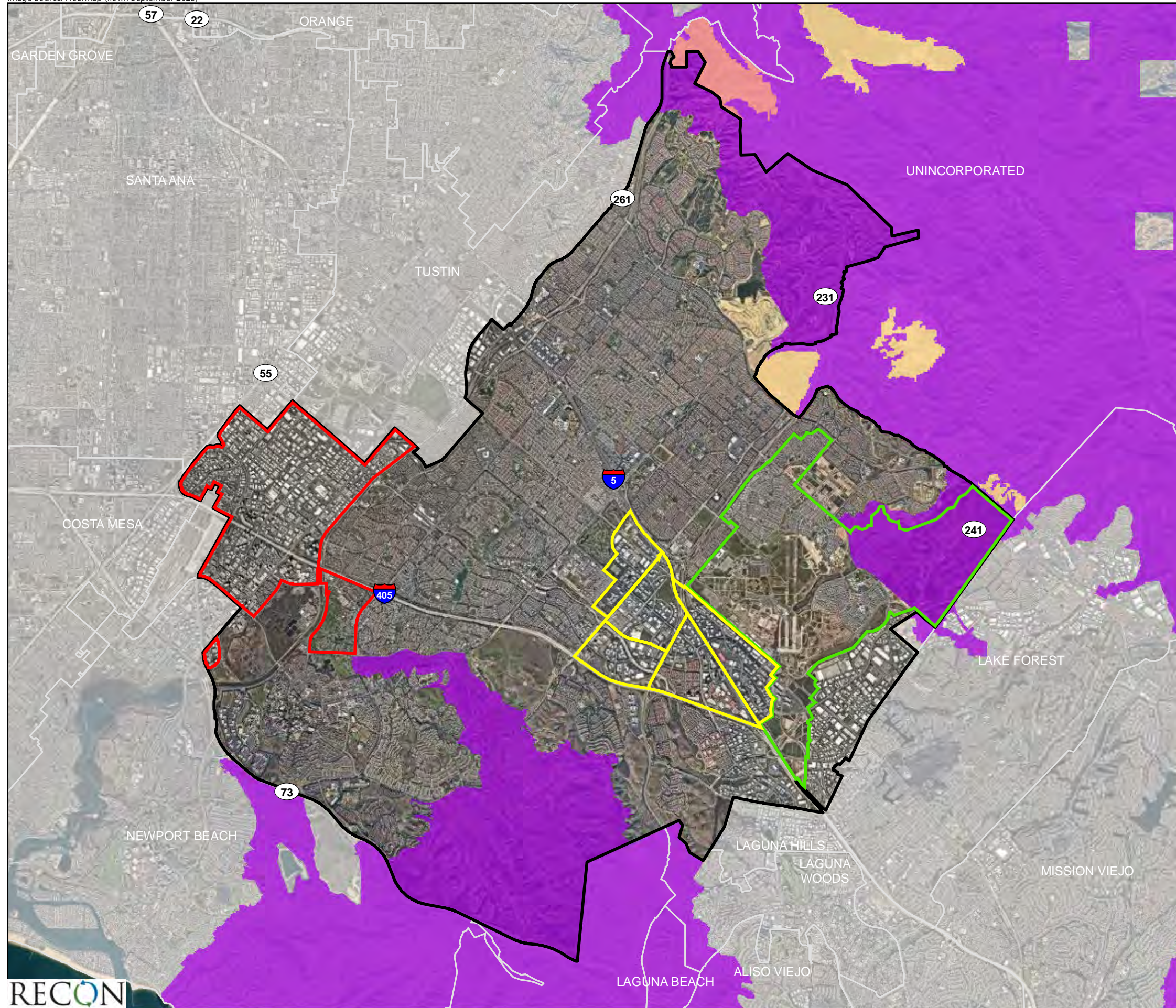
Standard Condition 3.18 (Wayfinding (Directional) Plan)

Prior to the issuance of the first building permit, a Wayfinding (directional) Plan including exterior building numbers, unit numbers, directional building/unit signs, vehicle directional signage, parking structure identification/directional signage, trail signage, and other signage as required by the Irvine Uniform Security Code, shall be approved by the Chief of Police. Said plan shall be incorporated into the plan set approved for building permits.

g. Fire Hazard Severity Zones

To assist each fire agency in addressing its responsibility area, the California Department of Forestry and Fire Prevention (CAL FIRE) uses a severity classification system to identify areas or zones of severity for fire hazards within the state. CAL FIRE is required to map these zones, which include moderate, high, and very high fire hazard severity zones (FHSZs).

As shown in Figure 4.7-2, most of the City consists of urban areas that are not designated as a FHSZ, although some areas adjacent to the City's borders are designated as moderate, high, and very high FHSZs. Approximately 11,915 acres (approximately 28.22 percent) of the City are mapped as Very High FHSZ. The topography of the foothills of the Santa Ana Mountains and San Joaquin Hills in the City is extremely conducive to wildfires. The community is bordered by natural, undeveloped hillsides



- Irvine City Boundary
- Focus Area 1
- Focus Area 2
- Focus Area 3
- Fire Hazard Severity Zone**
- Very High
- High
- Moderate

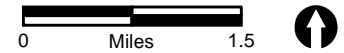


FIGURE 4.7-2
Fire Hazard Severity Zones

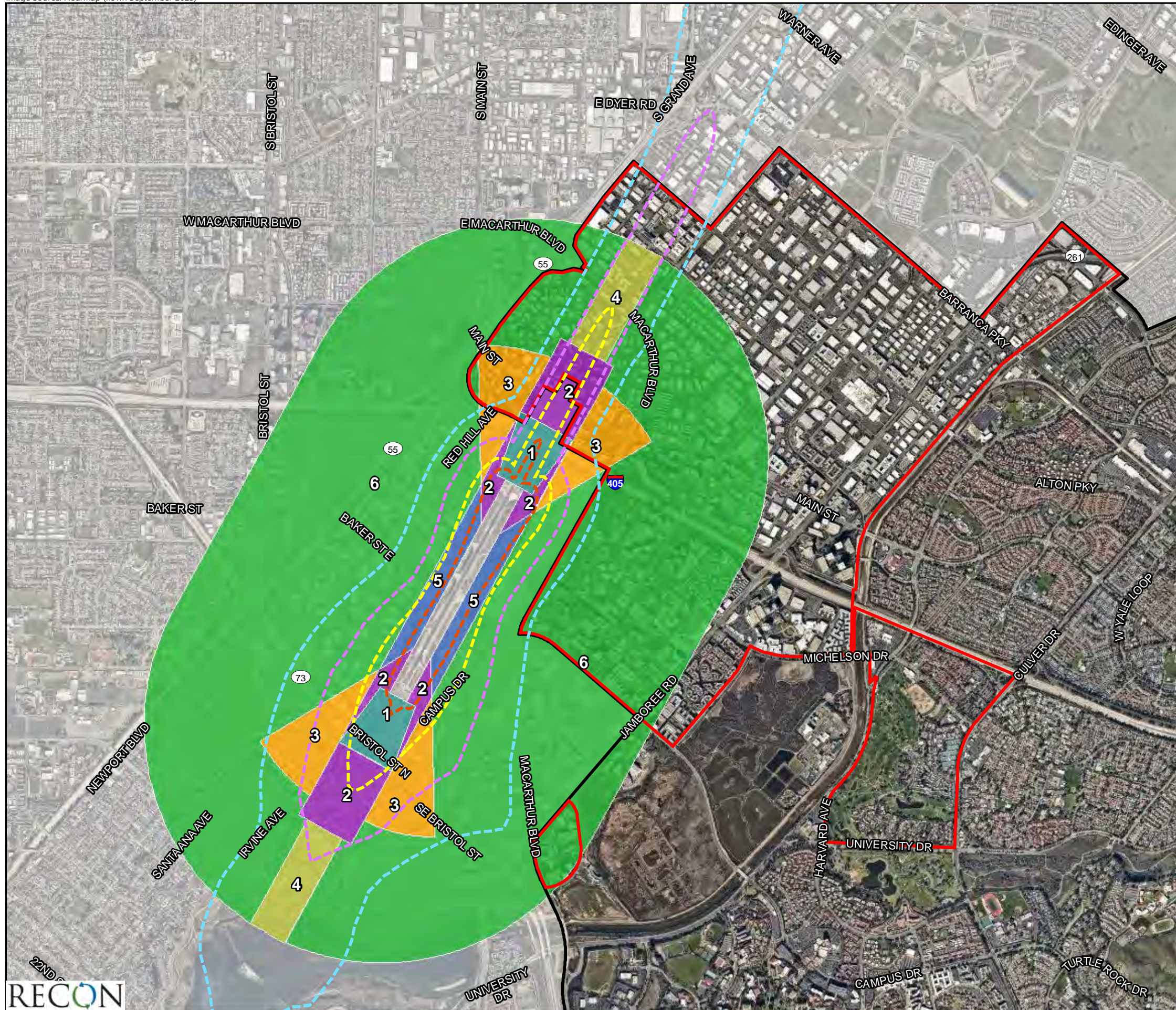
and mountains to the northeast and open space areas to the southwest. Most of the development within the City is located between these two areas. Approximately 11,915 acres of these natural, undeveloped areas are classified as Very High FHSZ by Cal FIRE. In the northeastern portion of the City, this zone extends throughout the Santa Ana Mountain range, which extends into Riverside County to the east. Additionally, approximately 1,875 acres of land located in Focus Area 3 are classified as Very High FHSZ by Cal FIRE.

h. John Wayne Airport Land Use Plan

The Airport Environ Land Use Plan (AELUP) for John Wayne Airport, described in Appendix F of the City CEQA Guidelines, Regulatory Information, contains land use restrictions that are meant to reduce the hazards associated with airport land use plans (Figure 4.7-3).

John Wayne Airport is in unincorporated Orange County along the western border of the City, adjacent to the Irvine Business Complex. A portion of Focus Area 1 is located within the Airport Environs Land Use Plan Airport Planning Areas. Structures in this area are required to abide by land use regulations within the Airport Land Use Plan such as safety and noise compatibility zones, and height restrictions.

Each local agency having jurisdiction over any area within the planning areas is required to submit its general plans for that area to the Commission for a determination in accordance with the Government Code for the State of California, Section 65302.3 and Public Utilities Code Section 21676. The submittals should highlight those areas which address the AELUP noise impact, safety compatibility, and height restriction zones. The only requirement is that the submittals illustrate how local agencies will incorporate the performance standards outlined in the airport land use plan into their planning, zoning, and development processes. Any amendments to a General Plan must be submitted to the Commission for a determination prior to its adoption by the local agency.



- Irvine City Boundary
- Focus Area 1
- Airport Noise**
 - 60 CNEL
 - 65 CNEL
 - 70 CNEL
 - 75 CNEL
- Airport Safety Zone**
 - 1: Runway Protection Zone
 - 2: Inner Approach / Departure Zone
 - 3: Inner Turning Zone
 - 4: Outer Approach / Departure Zone
 - 5: Sideline Zone
 - 6: Traffic Pattern Zone

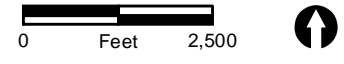


FIGURE 4.7-3
John Wayne Airport Safety Zones

i. Existing Plans, Programs, and Policies

Compliance measures are regulations imposed uniformly by the approving agency based on the proposed action taken and are required of the project to reduce its potential environmental effects. Because these features are standard requirements, they do not constitute mitigation measures. The following measures are existing plans, programs, or policies (PPP) that apply to the project and will help to reduce and avoid potential impacts related to hazards and hazardous materials:

- PPP HAZ-1: Compliance with the Certified Union Program Agency for Orange County (hazardous materials)
- PPP HAZ-2: Compliance with the City's LHMP
- PPP HAZ-3: Compliance with the City's Emergency Operations Plan (EOP)
- PPP HAZ-4: Compliance with Municipal Code Title 4 (Public Safety), Division 9 (Emergency Services)
- PPP HAZ-5: Compliance with Orange County Airport Land Use Compatibility Plan (ALUCP) safety and noise compatibility standards for John Wayne Airport.
- PPP HAZ-6: Compliance with Orange County and Orange County Fire Authority Local Hazard Mitigation Plan
- PPP HAZ-7: Compliance with Standard Condition 2.19 (Open Space Fuel Modification)
- PPP HAZ-8: Compliance with Standard Condition 3.14 (HOA/Fuel Modification)
- PPP HAZ-9: Compliance with Standard Condition 3.17 (Emergency Access Plan)
- PPP HAZ-10: Compliance with Standard Condition 3.18 (Wayfinding (Directional) Plan)

Proposed General Plan Strategies and Policies

In addition to the above-listed PPPs, the following proposed goals, objectives, policies, and implementation actions are applicable to the analysis of hazards and hazardous materials and would replace existing goals, strategies, and policies outlined in the City's existing General Plan following project approval:

Land Use Element

Goal 6: Achieve Harmonious Land Use Patterns Throughout the City

Objective LU-6. To establish cohesive and harmonious land use patterns throughout the City by implementing integrated planning strategies that promote connectivity, sustainability, and community well-being while respecting the unique character and identity of different neighborhoods.

- **Policy (a):** Safeguard the public health, safety, and welfare of sensitive receptors/land uses when placing them near the following land uses: those dealing with hazardous substances, those causing excessive noise or dust, and those creating other conflicts. Simultaneously, ensure that proposed sensitive receptors/land uses do not impede the ongoing operation or expansion of airports, surface utilities, off-site hazardous waste facilities, solid waste facilities, manufacturing, research and development, mining and processing, or any land use involving hazardous substances as defined by federal and state regulations.

- **Policy (c):** Ensure that the siting of any land use which handles, generates, and/or transports hazardous substances, as defined by federal and state regulations, will not hurt existing sensitive receptors/land uses.

Noise Element

Goal 1: Noise Control Through Land Use Planning and Design

Objective N-1. Maintain healthy and safe noise environments consistent with City Standards through site design and location.

- **Policy (a):** Require all plans submitted for development review to demonstrate whether the plan area is located within an existing or future Noise Element noise contour, including vehicle, rail, and aircraft noise contours.
- **Policy (b):** Avoid new residential development within the 65 dBA CNEL contour for aircraft, roadway, or rail noise unless “normally compatible” exterior noise standards can be maintained in private open spaces, and interior noise standards can be achieved through building design.

Goal 3: Noise Abatement

Objective N-3. Achieve maximum efficiency in noise abatement efforts through establishing minimum standards, intergovernmental coordination, and public information programs.

- **Policy (a):** Coordinate efforts to reduce noise impacts with appropriate public and government agencies, such as aircraft and transit regulatory agencies.
- **Policy (e):** Seek the cooperation of aircraft regulatory agencies in the modification and selection of flight paths that will reduce noise impacts on residential and other noise-sensitive areas.
- **Policy (f):** Ensure that any proposal to update aircraft noise contours used by the City of Irvine for planning analysis is submitted, before adoption by the City, to the Airport Land Use Commission.

Safety Element

Goal 1: Protect and prepare the community for natural and human-caused hazards.

Objective S-1. Hazard Preparedness and Occurrence

- **Policy (a):** Expand participation in the Irvine Community Emergency Response Team (CERT) program for residents and businesses, including offering training in a variety of languages.
- **Policy (b):** Coordinate with Caltrans and Orange County Transit Authority for inspection and maintenance of primary evacuation routes.
- **Policy (c):** Coordinate with regional transit providers to identify alternative routes, stops, and modes of transit if normal infrastructure is damaged or closed as a result of extreme events.
- **Policy (d):** Encourage collaboration with local and regional partners to support business resiliency through preparedness education, trainings, and resources.

- **Policy (e):** Update the City's Local Hazard Mitigation Plan every five years, to ensure consistency and relevancy of hazards and issues within the City, and to maintain consistency with State and/or federal legislation.
- **Policy (f):** Update the Irvine Power Outage Response Plan (annex to the Emergency Operations Plan) to identify back-up energy technologies that are more resilient to climate impacts and communications locations for critical facilities, critical infrastructure (e.g., traffic signals), sensitive uses, and community lifelines (including water, sewer, telecommunications).
- **Policy (g):** Continuously update response procedures for first responder departments to properly address new hazard events as they emerge.
- **Policy (h):** Encourage community members to sign-up for disaster alerts.
- **Policy (i):** Identify opportunities to expand access to emergency and evacuation notices via multiple sources, including voice, text, siren, radio, and outdoor broadcasts.
- **Policy (j):** Increase understanding of all energy storage technologies including critical features such as storage capacity, efficiency, duration of power, lifestyle impacts, and realistic function to provide long-term, reliable sources of power during grid outages.

Goal 4: Safeguard the community from the threat of urban and wildfire hazards.

Objective S-4. Wildfire Hazards

- **Policy (a):** Coordinate with regional partners to explore and deploy fire detection cameras as part of a wildfire monitoring network.
- **Policy (b):** Coordinate with surrounding municipalities and Orange County to enhance evacuation and emergency management protocols, agreements, and processes.
- **Policy (c):** Coordinate with City of Irvine and Orange County Fire Authority first responders to create a rapid response plan to secure hospital, nursing, and assisted living facilities, especially those located within fire hazard severity zones.
- **Policy (d):** Work with the Irvine Ranch Water District to ensure the long-term integrity of water supplies for the City.
- **Policy (e):** Continue to work with the Orange County Health Care Agency Department of Public Health and other applicable health care agencies to convey notifications to the public regarding recommendations for outdoor activities, cancelled sporting events, and other recommendations for public health and safety during periods of poor air quality.
- **Policy (f):** Encourage public and private landowners to minimize the risk of wildfire moving from wildland areas to developed properties or from property-to-property by increasing structural hardening measures (e.g., fire-rated roofing and fire-resistant construction materials and techniques), maintaining and improving defensible space on site, and supporting vegetation management in adjacent undeveloped areas.
- **Policy (g):** Encourage existing non-conforming development to update to contemporary fire safe standards (e.g., road standards, vegetative hazards).
- **Policy (h):** Encourage removal of highly flammable vegetation with little to no biological value in Very High, High, and Moderate Fire Hazard Severity Zones and replant with fire-adapted specimens.
- **Policy (i):** Promote the proper maintenance and separation of power lines and efficient response to fallen power lines in accordance with Title 14 CCR Division 1.5 Chapter 7 Article 4 (Fire Prevention Standards for Electric Utilities).

- **Policy (j):** Encourage the use of underground power lines for replacement power lines, where feasible.
- **Policy (k):** Ensure that all new development and redevelopment in the Very High Fire Hazard Severity Zone is developed in compliance with minimum structural fire protection standards in the adopted edition of the California Fire and Building Codes, applicable state or local fire safety and defensible space regulations or standards, and any applicable fire protection or risk reduction measures identified in locally adopted plans.
- **Policy (l):** Ensure future neighborhoods are designed with adequate fire access and evacuation egress in the event of an emergency.
- **Policy (m):** Avoid expanding new residential development, essential public facilities, and critical infrastructure in areas subject to extreme threat or high risk, such as Very High Fire Hazard Severity Zones, or areas classified by the California Department of Forestry and Fire Protection as having an Extreme Threat classification on Fire Threat Maps, unless all feasible risk reduction measures have been incorporated into project designs or conditions of approval. Example risk reduction measures include, but are not limited to, fuel modification zones or defensible space, structure hardening, enclosed foundations, and highly visible street signs and property addresses.
- **Policy (n):** Ensure adequate water supply for fire suppression and ensure that the water supply is protected from wildfire impacts, including providing back-up power, with priority for solar and battery storage back-up supplies.
- **Policy (o):** Ensure future neighborhoods are designed with sufficient water pressure to maintain fire flow.
- **Policy (p):** Encourage the use of underground power lines for new developments.
- **Policy (q):** Ensure that private development subject to the California Environmental Quality Act evaluate hazard impacts to ensure adequate evacuation in the event of an emergency, and if required, develop standards for the protection of the community.
- **Policy (r):** Review development proposals and coordinate with regional transportation agencies to ensure that multiple evacuation routes are available under a range of scenarios and identify alternative routes that are accessible to people without life-supporting resources.
- **Policy (s):** Coordinate with fire protection, emergency service, and water providers to reassess fire hazards and future availability of water supplies after wildfire events to adjust fire prevention and suppression needs, as necessary, for both short- and long-term fire prevention.
- **Policy (t):** Coordinate evaluations for redevelopment of areas that have been burned after a large fire.
- **Policy (u):** Continue the long-term maintenance of fire reduction projects; including but not limited to, a roadside fuel reduction plan, defensible space clearances (including fuel beaks) around structures, subdivisions, and other development in the Very High Fire Hazard Severity Zone.
- **Policy (v):** Maintain established response time standards for fire and life safety service.
- **Policy (w):** Encourage the continued development, implementation, and public awareness of fire prevention programs.

4.7.3 Significance Determination Thresholds

The City has adopted Appendix G of the State CEQA Guidelines as the significance thresholds for hazards and hazardous materials. A project would normally have a significant effect on the environment if the project would:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- 5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would result in a safety hazard for people residing or working in the project area;
- 6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- 7) 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.

4.7.4 Methodology

The potential for significant hazards and hazardous materials impacts associated with the project has been evaluated based upon review of existing secondary source information and data relative to hazardous or potentially hazardous materials.

4.7.5 Topics 1, 2, and 3: Transport, Use, or Disposal of Hazardous Materials/Accidental Release/Emissions Near a School

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Would the project 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?

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

4.7.5.1 Impact Analysis

Project buildout would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the continued development of nonresidential uses that are currently permitted under the existing General Plan, nonresidential uses associated with the Great Park area, and the extension of Ada roadway. Construction activities associated with this development would likely require the transport, temporary storage, and use of asphalt fuels, oils, paints, and solvents during construction. However, these materials are not acutely hazardous, and use of these common hazardous materials in small quantities would not represent a significant hazard to the public or environment. Project construction would adhere to typical Best Management Practices regarding the use of hazardous materials, such as proper labeling and storage, removal of materials once completed, and offsite vehicle maintenance. Operation of the future project would likely include the use and storage of cleaning supplies, motor oil, building maintenance supplies, paints and solvents, pesticides, or other similar materials. However, these materials are not acutely hazardous, and the limited quantities and use of such products would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. As such, the project does not propose any development that is likely to generate or use acutely hazardous materials.

In the case of redevelopment projects, sites to be demolished would be subject to the inspection requirements of the SCAQMD Rule 1403, which would require an assessment for the ACM, and provides proper guidance for the removal of this material, when necessary. Similarly, Title 22, Division 4.5 of the CCRs provides guidance regarding the removal of hazardous materials during demolition activities, and Title 8 of the CCRs, Section 1529 provides guidance regarding limits, exposure monitoring, respiratory protection, and good working practices during demolition, grading, and excavation that may result in exposure to ACM. Title 8 of the CCRs, Section 1529 also provides guidance on how ACM and other wastes shall be managed and disposed of in accordance with the applicable provision of the California Health and Safety Code.

Furthermore, the project would not allow for development of any uses that would generate or store substantial amounts of hazardous materials. Existing uses that handle hazardous materials independent of the project would continue to be subject to the requirements of CCR, Title 22, Division 4.5 regarding hazardous waste generators, transporters, treatment, storage, and disposal facilities, requirements of the California Hazardous Materials Management Act to prepare a HMBEP for management of hazardous materials and written procedures for response to an accidental release, as well as requirements of the California HWCL for the proper management of hazardous materials. For example, polices aim to safeguard the public health, safety, and welfare of sensitive receptors/land uses when placing them near uses dealing with hazardous substances, those causing excessive noise or dust, and those creating other conflicts. Additionally, the Land Use Element includes policies that aim to ensure that proposed sensitive receptors/land uses do not impede the ongoing operation or expansion of airports, surface utilities, off-site hazardous waste facilities, solid waste facilities, manufacturing, research and development, mining and processing, or any land use involving hazardous substances as defined by federal and state regulations. Additionally, compliance

with the Certified Union Program Agency for Orange County (PPP HAZ-1) would ensure proper handling of hazardous materials.

Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, create foreseeable upset and accident conditions involving the release of hazardous materials, or emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and impacts would be less than significant. Furthermore, compliance with Land Use Element Update policies regarding handling of hazardous materials would further support the City's goal of minimizing land use conflicts and safety hazards associated with hazardous materials and/or emissions.

4.7.5.2 Significance of Impacts before Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.5.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.6 Topic 4: Hazardous Materials Sites

Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

4.7.6.1 Impact Analysis

Project buildout would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the continued development of nonresidential uses that are currently permitted under the existing General Plan, nonresidential uses associated with the Great Park area, and the extension of Ada roadway. While the project would allow for development citywide, future development is likely to be concentrated within the three focus areas.

As shown in Figure 4.7-1 and Table 4.7-1, there are a total of 41 hazardous materials sites located throughout the City. Specifically, 18 sites are in Focus Area 1, one site is in Focus Area 2, 14 sites are located in Focus Area 3, and the remaining 8 are located outside of the Focus Areas. In accordance with federal, state, regional, and local requirements, any new development or redevelopment that involves contaminated property would necessitate the clean-up and/or remediation of the property in accordance with applicable requirements and regulations. Compliance with the Certified Union Program Agency for Orange County (PPP HAZ-1) would ensure that projects would identify and remediate hazardous materials. Therefore, adherence to applicable clean-up and/or remediation requirements and regulations, would ensure that the project would not create a significant hazard associated with known hazardous materials sites, and impacts would be less than significant. Furthermore, compliance with Land Use Element Update policies regarding handling of hazardous

materials would further support the City's goal of minimizing land use conflicts and safety hazards associated with hazardous sites.

4.7.6.2 Significance of Impacts before Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.6.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.7 Topic 5: Airport Hazards

Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?

4.7.7.1 Impact Analysis

The project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the continued development of nonresidential uses that are currently permitted under the existing General Plan, nonresidential uses associated with the Great Park area, and the extension of Ada roadway.

All areas slated for future development as part of the project are outside of the area regulated by the John Wayne AELUP, with the exception of portions of Planning Areas 29 (University of California, Irvine- North Campus) and 36 (Irvine Business Complex), which are located within the John Wayne Airport safety zones, as well as the 70 community noise equivalent level (CNEL), 65 CNEL, and 60 CNEL John Wayne Airport noise contours (see Figure 4.7-3). However, future development within these planning areas would be subject to the land use restrictions for each of the compatibility zones, which provide development limitations to minimize potential incidents of off-airport accidents to persons and property on the ground. Proposed land use maps and zoning within these planning areas were developed with consideration to airport safety and Federal Aviation Regulation height limitations, and the residential and residential mixed-use overlay zones developed under the project would adhere to the same requirements. Additionally, future development under the project would be subject to applicable notification requirements under FAR Part 77, which also identifies the maximum height at which a structure would be allowed to reach in areas subject to aircraft overflight restrictions. Compliance with the Orange County Airport Land Use Compatibility Plan (ALUCP) safety and noise compatibility standards for John Wayne Airport (PPP HAZ-5) would avoid safety hazards for future development near John Wayne Airport. The Noise Element Update includes objectives and policies to further address aircraft noise. For example, Goal 1, Objective N-1 aims to maintain healthy and safe noise environments consistent with City Standards through site design and location and Goal 3, Objective N-3 aims to achieve maximum efficiency in noise abatement efforts through establishing minimum standards, intergovernmental coordination, and public information programs. Supporting policies outline regulations for new noise-sensitive uses within areas susceptible to high noise levels. Compliance with the updated Noise Element would support the City's goal of minimizing

hazards associated with the airport. Through compliance with the regulatory requirements described above, the project would not result in a safety hazard or excessive noise for people residing or working in the project area, and impacts would be less than significant.

4.7.7.2 Significance of Impacts

Impacts would be less than significant. No mitigation is required.

4.7.7.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.8 Topic 6: Emergency Response

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

4.7.8.1 Impact Analysis

Disaster preparedness throughout the City is managed by the City's OEM, who coordinates the City's preparedness efforts for hazards that could impact the community, including natural and human-caused disasters. The OEM works with all City departments, having primary responsibility for specific response functions, and ensures department-level plans and procedures are in place in the event of an emergency. Although the project could increase demand on emergency response and evacuation, future development would be located within existing developed areas and along major transportation corridors in the City that would allow for evacuation and response. Additionally, the City's LHMP (2020) provides a comprehensive assessment of the threats posed by natural and human caused hazard events and includes coordinated strategy to reduce those threats.

The project would allow for the future development of new residential uses associated with the proposed General Plan Update (57,656 residential units), the continued development of nonresidential uses that are currently permitted under the existing General Plan, nonresidential uses associated with the Great Park area, and the extension of Ada roadway.

The extension of Ada roadway is not anticipated to interfere with emergency response activities or plans, but rather would likely improve emergency responses by improving connectivity within this area of the City. Future development facilitated by the project, including new residential uses, the continuation of nonresidential uses at the same intensities permitted by the current General Plan, and nonresidential development within the Great Park area would be designed consistent with the requirements of the City's LHMP (PPP HAZ-2), the City's EOP (PPP HAZ-3), Municipal Code Title 4 (Public Safety), Division 9 (Emergency Services) (PPP HAZ-4), and Standard Condition 3.17 (Emergency Access Plan) (PPP HAZ-9). Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant. Furthermore, the updated Safety Element includes goals and objectives related to emergency access (see Goal 1, Objective S-1 and supporting policies related to improved emergency response operations in the City). Compliance with the updated Safety Element

would further bolster and limit impacts of future development on emergency response and evacuation plans.

4.7.8.2 Significance of Impacts before Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.8.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.9 Topic 7: Wildland Fires

Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

4.7.9.1 Impact Analysis

As shown in Figure 4.7-2, most of the City consists of urban areas that are not designated as a FHSZ. Although approximately 1,875 acres of land located in Focus Area 3 is designated as Very High FHSZ, future housing development and proposed improvements to the Great Park are not likely to be located within the segment of Focus Area 3 designated as Very High FHSZ, and any development near this area would be designed consistent with all applicable fire safety requirements. Future development and redevelopment could also occur outside of the proposed focus areas, which may be located along the City boundaries adjacent to land identified as having Moderate, High, or Very High FHSZ designations. For instance, areas within the northeastern portion of the City, which extends into Riverside County to the east are designated as Very High FHSZ. However, all new development and redevelopment in these areas would be required to prepare a fuel modification plan before approval of tentative maps and grading permits, per City Standard Condition 2.19 Open Space Fuel Modification (PPP HAZ-7) and Standard Condition 3.14 HOA/Fuel Modification (PPP HAZ-8) Adherence to these requirements would ensure that the project would not expose project occupants to significant risks involving wildfires or the uncontrolled spread of a wildfire, and impacts would be less than significant. Furthermore, the updated Safety Element includes Goal 4 which aims to safeguard the community from the threat of urban and wildfire hazards, and supporting policies aimed at improving emergency response during fire hazards and design standards to preventatively minimize potential wildfire risks. Compliance with the updated Safety Element would further support the City's goal of minimizing risks associated with wildfires.

4.7.9.2 Significance of Impacts before Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.9.3 Mitigation

Impacts would be less than significant. No mitigation is required.

4.7.10 Cumulative Analysis

As defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for hazards and hazardous materials. The study area for the assessment of cumulative impacts related to hazards and hazardous materials is the City. As population growth increases, the number of people potentially exposed to hazards and hazardous materials would increase. Potential impacts associated with the release of hazardous materials are site-specific in nature and does not compound or increase in combination with impacts elsewhere. Asphalt, fuels, oils, paints, and solvents used during construction are not acutely hazardous, and use of these common hazardous materials in small quantities would not represent a significant hazard to the public or environment. Use and storage of cleaning supplies, motor oil, building maintenance supplies, paints and solvents, pesticides, or other similar materials during operation are not acutely hazardous, and the limited quantities and use of such products would not create a significant hazard to the public. Future development would be required to comply with existing regulatory requirements, which would ensure projects would remediate existing hazardous contamination before construction can commence. Compliance with the Certified Union Program Agency for Orange County (PPP HAZ-1) would ensure that projects would identify and remediate hazardous materials listed on the EnviroStor and Geotracker databases. Future residential development within the John Wayne Airport safety zones, as well as the 70 CNEL, 65 CNEL, and 60 CNEL John Wayne Airport noise contours would be subject to the land use restrictions for each of the compatibility zones, which provide development limitations to minimize potential incidents of off-airport accidents to persons and property on the ground. Future development would be located within existing developed areas and along major transportation corridors in the City that would allow for evacuation and response. Future development would also be designed consistent with all applicable safety requirements and would not physically interfere with any emergency response or evacuation plans, including the LHMP. Future development would also implement an Emergency Access Plan that would maintain emergency access to all properties within the project limits and the surrounding vicinity. All new development and redevelopment adjacent to a CAL FIRE designated FHSZ would be required to prepare a fuel modification plan and adhere to other fire protection requirements before approval of tentative maps and grading permits, per City Standard Condition 2.19 Open Space Fuel Modification (PPP HAZ-7) and Standard Condition 3.14 HOA/Fuel Modification (PPP HAZ-8). Furthermore, compliance with the updated Safety Element would further support the City's goal of minimizing land use conflicts and hazards associated with hazardous materials, emergencies, and hazardous sites. Therefore, the project would not contribute to a cumulative impact related to hazards and hazardous materials.