8. SAFETY

Overview

The City of Palm Desert strives to maintain a high level of safety and to respect the natural setting of the community, while meeting the needs of residents, a thriving economy, and critical government functions. This element identifies priority public safety issues in Palm Desert and addresses potential hazards to people and property. Issues in this element include both natural and human-caused hazards. Goals, policies and actions in the Safety Element seek to enhance the safety of the community and foster long-term resilience to potential hazards.

Palm Desert is known for high quality emergency services

Statutory Requirements

California law (Government Code Section 65302(a)) requires that a city's general plan include:

"a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence… and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes …peak load water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards."

As required by state law, the Safety Element identifies forces of nature and events resulting from human action that have the potential to cause harm to life and property in the city. Identifying the source of such threats allows decision-makers to take preemptory action to minimize the damage, particularly as it relates to new development projects. In addition to State-mandated components, the Safety Element builds on the previous General Plan to emphasize the importance of police services and personal safety. This element presents existing conditions relative to public safety in Palm Desert and is organized to address the following six priority safety issues required by state law and identified by the City's (2017) Local Hazard Mitigation Plan:

- Seismic and geologic hazards
- Flooding
- Extreme weather
- Fire

- Emergency preparedness
- Human-caused and other hazards

The Safety Element is consistent with and supports the other General Plan elements. The elements of the General Plan that most closely correlate to the Safety Element are the Land Use and Community Character Element, Public Utilities Element, Mobility Element, Housing Element, and Environmental Resources Element. While the Safety Element has a less direct relationship with the remaining General Plan elements, each element is important and collectively supports a comprehensive framework for Palm Desert's future.

Context

Protecting community well-being and health remains a high priority for Palm Desert

The Safety Element addresses a broad range of issues and hazards that affect the community and residents of Palm Desert. Hazards and strategies from the Local Hazard Mitigation Plan (LHMP)[1], Multi-Jurisdictional Hazard Mitigation Plan (MJHMP)[2], Riverside County Unit Fire Plan, and Emergency Operations Plan (EOP) provide a foundation for policy development in this element. The Safety Element also reflects technical information on the extent and scope of hazards, as described in the City of Palm Desert Existing Conditions Report (2015). Relevant sections in the report include Section 7 (Geology and Soils), Section 8 (Hazards and Hazardous Materials), Section 9 (Hydrology and Water Quality), and Section 15 (Public Services, Utilities, and Recreation). These sections provide technical information on hazards, in addition to context regarding the local, state and federal regulatory framework.

Related Plans

The Safety Element supports and integrates several key plans that identify the City's approach to assess and reduce risks from hazards. In addition to local plans and ordinances, several state and federal policies and programs shape the City's approach to hazard mitigation.

Two key local plans present programs and implementation strategies to assess and respond to hazards. The Local Hazard Mitigation Plan (LHMP) analyzes potential hazards in Palm Desert. Included in the LHMP is a comprehensive risk assessment that meets the requirements of the Disaster Mitigation Act (DMA) of 2000. The DMA requires local governments to prepare plans that identify hazards and risks in a community and to create appropriate mitigation. Additionally, the City maintains an Emergency Operations Plan (EOP) as a framework for implementation of the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). The EOP facilitates multi-agency and multi-jurisdictional coordination for emergency operations across the region and state.

The City of Palm Desert is also a participant in the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) (Riverside County 2018). The County LHMP identifies the hazards, reviews and assesses past disaster occurrences, estimates the probability of future occurrences, and sets goals to

[1] 2017 Local Hazard Mitigation Plan, prepared by Eric Cadden, City of Palm Desert, 5/1/2017 https://www.cityofpalmdesert.org/our-city/departments/risk-management/emergency-services-/disaster-preparedness/local-hazard-mitigation-plan

[2] County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan, July 2018 https://www.rivcoemd.org/LHMP

mitigate, reduce or eliminate long-term risk to people and property from natural and man-made hazards in the county and participating jurisdictions, including Palm Desert.

As a contract city that receives fire services from Riverside County, which contracts with the California Department of Forestry and Fire Protection (Cal FIRE). The City's fire response and preparedness planning is contained in the Riverside County Fire Department Strategic Plan[3] prepared by the County and Cal FIRE. This plan outlines the activities necessary to reduce total government costs and citizen losses from wildland fires. A key component of this protection of assets at risk through focused pre-fire management prescriptions and increasing initial attack success. In addition, the City has adopted the California Fire Code with some adoptions within Chapter 15.26[4] of the Palm Desert Municipal Code. The adoptions within this Chapter are associated with local climatic, geologic, and topographical conditions within the City.

Natural Hazards

Seismic and Geologic Hazards

Palm Desert is in a region bordered by mountain ranges on three sides. According to the state mapping of fault zones, pursuant to the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Public Resources Code Sections 2621–2630), the city and the sphere of influence (SOI) are not located in an active fault zone. Nonetheless, the area is bordered by three active faults. The closest fault to the community is the San Andreas Fault, located approximately four miles to the north. Other nearby faults include the San Jacinto Fault, located approximately 10 miles to the southwest, and the Elsinore Fault, located approximately 30 miles to the southwest. Figure 8.1 presents fault lines near Palm Desert and the sphere of influence.

The San Andreas Fault located in close proximity to Palm Desert

Terrain and steep slopes within Palm Desert

Fault rupture is a primary seismic hazard that describes the sudden release of energy which results from the sliding of one part of the earth's crust past another. An earthquake, or ground shaking, is another type of primary seismic hazard. Thousands of earthquakes occur frequently in Southern California each year, although most do not cause significant damage or affect communities. The most recent earthquake in the Coachella Valley occurred on October 16, 1999, and registered as a magnitude (M) of 7.1. Relatively negligible damage was reported from the earthquake because of the epicenter's remote location. Six major seismic events (magnitude 5.9 or greater) have been recorded in the Coachella Valley region in the past 100 years, with none occurring in Palm Desert (SCEC 2014).

Although no active faults run through the community, Palm Desert's soils and geologic characteristics result in other potential secondary seismic hazards. Due to a combination of steep slopes, unstable terrain, and proximity to earthquake faults, the southwestern portions of the city and the SOI are susceptible to landslide risks ranging from moderate to very high. Areas susceptible to landslide are shown in Figure 8.2. Susceptible areas include those identified in the Land Use and Community

[3] California Department of Forestry and Fire Protection, Riverside County Fire Department Strategic Plan 2009-2029, http://rvcfire.org/stationsAndFunctions/AdminSppt/StrategicPlanning/Documents/StrategicPlan2009.pdf

[4] Palm Desert Municipal Code, http://www.qcode.us/codes/palmdesert/view.php?topic=0&frames=off

Character Element for development of new buildings and structures. As of 2015, no recent landslides had been reported in Palm Desert or the SOI.

Local soil and fault characteristics also result in the potential for liquefaction. Liquefaction is the loss of soil strength caused by a sudden increase in pore water pressure during shaking and is one of the most destructive secondary effects of seismic shaking. The California Geological Survey does not identify liquefaction-susceptible areas for Palm Desert. However, the Riverside County Land Information System (Riverside County 2014) identifies that the majority of the city and the entire northern portion of the SOI are susceptible to moderate liquefaction potential.

Figure 8.1 Faults and Fault Zones in Palm Desert

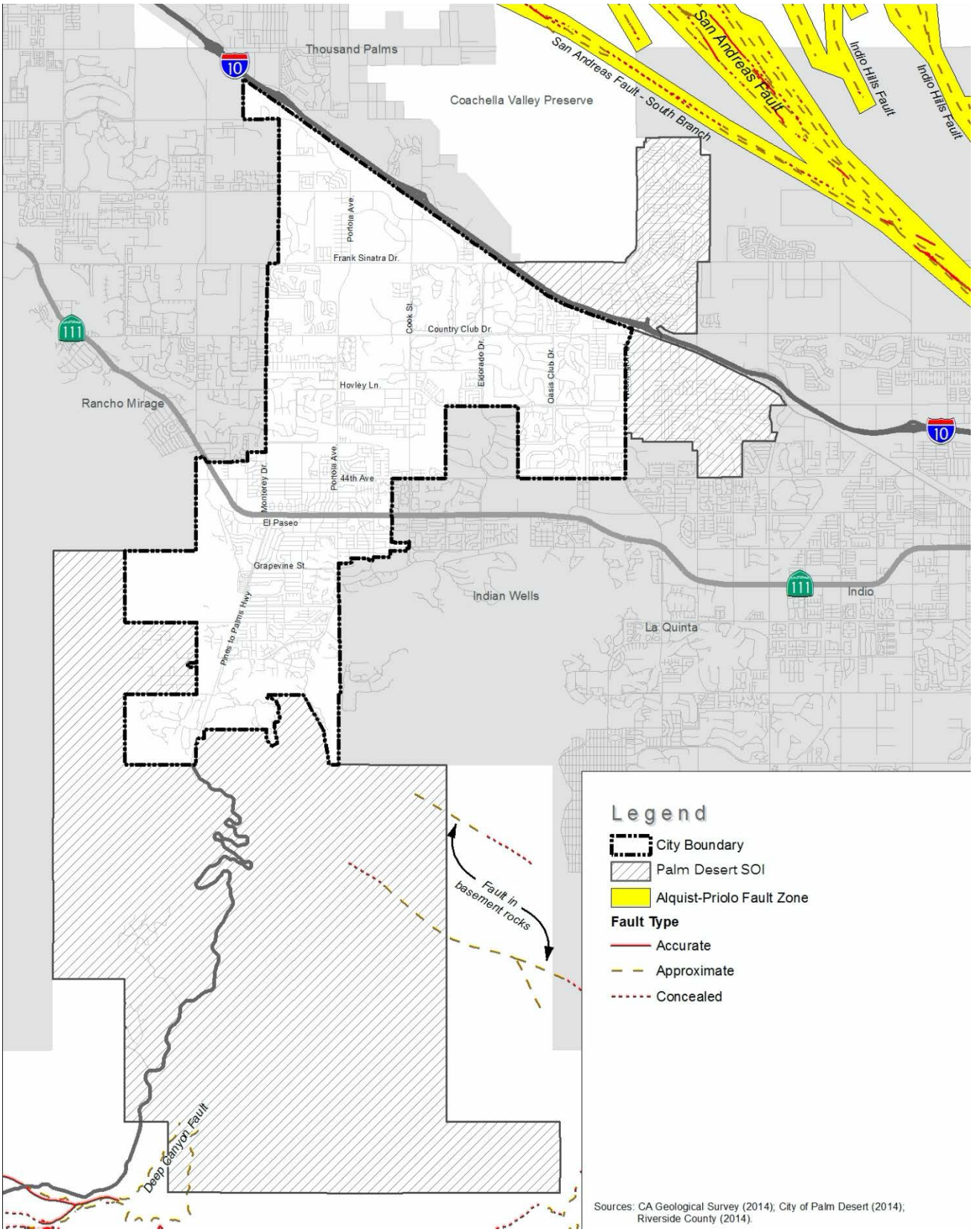
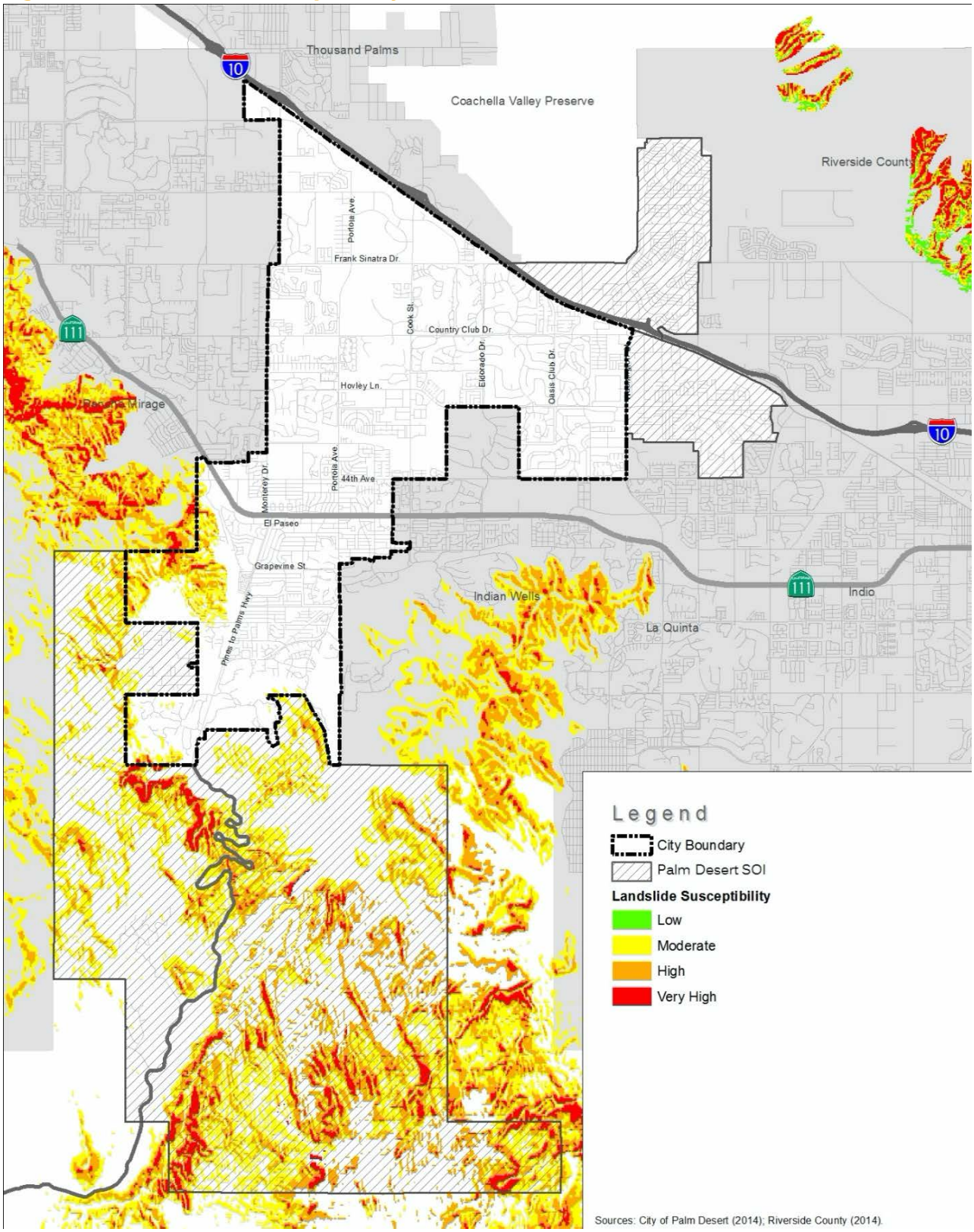


Figure 8.2 Landslide Susceptibility



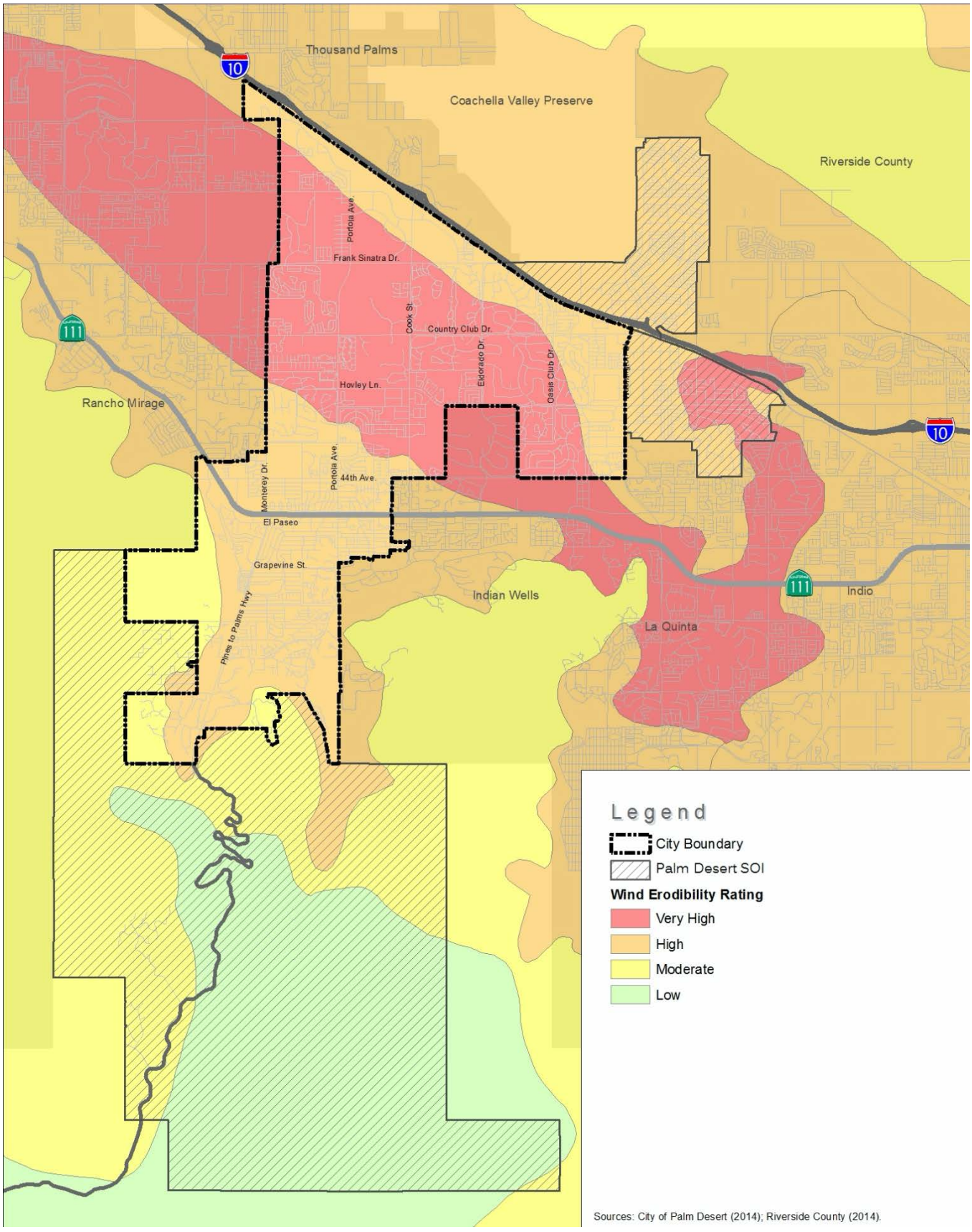
Wind Erosion

Erosion is a normal geologic process whereby earth materials are loosened, worn away, decomposed, or dissolved and are removed from one place and transported to another. The City of Palm Desert and the SOI face exposure to potential erosion hazards due to wind. The geologic orientation of the hills and mountain ranges throughout the community provide little resistance to air flow down the Coachella Valley, resulting in increased rates of erosion. For example, the narrow San Gorgonio Pass actually accelerates the wind speed and further increases erosion rates.

Other factors in the community exacerbate the potential for wind-blown sand hazards. Local bedrock is characterized by granite and metamorphic rock types, which are easily transported by the wind. Wind-blown hazards also follow slope and floodplains. Due to sparse desert vegetation, little groundcover exists to hold materials in place (County of Riverside 2000).

As shown in Figure 8.3, the greatest areas of potential wind-blown hazards are located alongside the sand dunes on Highway I-10 and the Whitewater River.

Figure 8.3 Wind Erosion Hazard



Flooding

Flooding hazards in Palm Desert can result from stormwater flows and flash runoff from the Indio Hills and the foothills of the San Jacinto and San Bernardino Mountains. The threat of localized flash flooding is especially high during summer storms due to the high intensity and shorter duration of rainfall.

Palm Desert has a history of flood events. Recent regional occurrences include the Riverside County floods in 1998 that resulted in reported damage of over $12 million. Locally, smaller flood incidents have also occurred in Palm Desert. Previous local events in Palm Desert include flash floods that occurred in 1998, in addition to flooding from Tropical Storms Kathleen and Doreen in 1976 and 1977 that caused extensive flood damage throughout the city (Riverside County 2012, City of Palm Desert 2017). In 2015, the Palm Desert Country Club neighborhood in the City experienced temporary flooding from an isolated high wind/storm event, with damages mainly from high winds and falling trees. Nonetheless, reported damages from these flood events in Palm Desert are low and far less extensive than the reported damages from the countywide floods of 1998.

Areas of Palm Desert and the SOI are subject to inundation from flooding. The Federal Emergency Management Agency's (FEMA's) Digital Flood Insurance Rate Map (2017) identifies the following flood hazard zones:

Zone A/AE/AO—100-year floodplain, designating a 1 percent or greater chance of flooding in a given year, with base flood elevations undetermined, determined, or 1-3 feet average depth and

Zone X—500-year floodplain, designating a 0.2 percent or greater chance of flooding in a given year; areas of average depths of less than 1 feet or with drainage areas less than 1 square miles; and areas protected by levees from 1 percent annual chance flood.

North of Interstate 10, the majority of the northern portion of the SOI is within the 100- or 500-year flood zone. Additional 100- and 500-year flood zones are present throughout the southern City along the Whitewater River and its tributaries such as the Palm Valley System. The majority of the community south of the Whitewater River, however, are areas with reduced risk due to levee or not within any flood hazard zones. Figure 8.4 depicts the flood hazard zones in the City and SOI.

Existing development in the 100-year flood zones are mainly located between Interstate 10 and Washington Street in the northern SOI. Part of the Palm Springs RV Resort and some commercial uses are located in the 100-year flood plain. There are existing residential and commercial development within the 500-year flood zones. The majority of Sun City Palm Desert, a retirement community in the northern SOI, are located in the 500-year flood zone. Several commercial plazas and single-family residences near Highway 111 in the western City are also located in the 500-year flood zone.

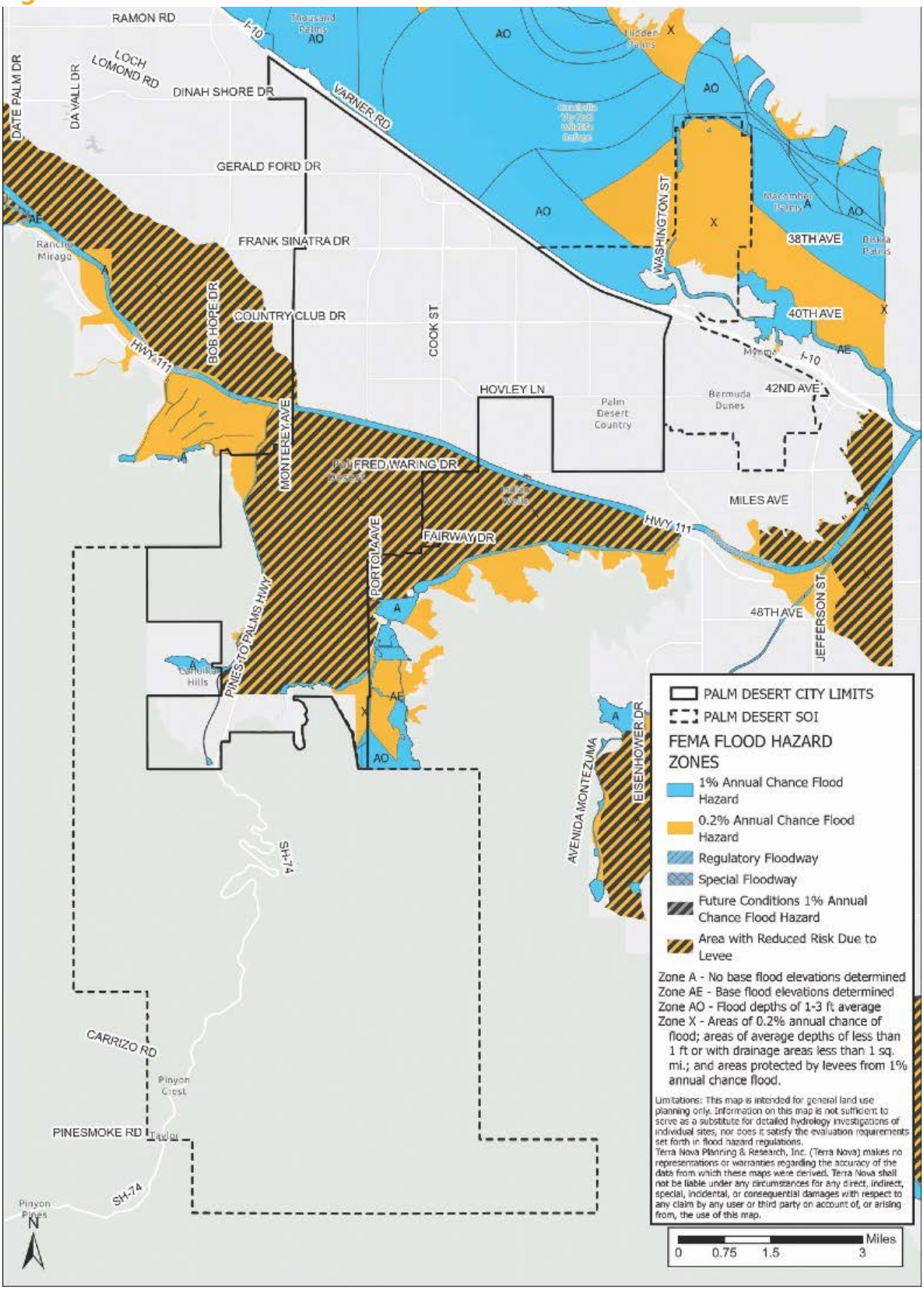
Applications for development in Special Flood Hazard Areas (SFHAs) are subject to Palm Desert Municipal Code Title 28, Flood Damage Prevention. Title 28 defines SFHAs as an area in the floodplain subject to a one percent or greater chance of flooding in any given year, which corresponds to Zone A/AE/AO in figure 8.4. This title requires an applicant to obtain a development permit before construction or other development begins in any area of special flood hazard. Chapter 28.10 sets

provisions for flood hazard reduction, including standards of construction, for utilities, subdivisions, manufactured homes and recreational vehicles.

While areas of community flood exposure are indicated by designated flood zones, other areas of Palm Desert are also susceptible to other types of localized flood risks. Stormwater runoff or the failure of infrastructure can result in additional flood events, both within and outside of designated flood zones. Stormwater drainage in Palm Desert is approaching the end of its useful life. Existing stormwater infrastructure throughout the Coachella Valley is more than 100 years old, requiring replacement to control groundwater levels and safely facilitate percolation of stormwater. As the community continues to urbanize, the need for improved stormwater infrastructure will increase.

The possibility of dam failure poses additional potential flood hazards to Palm Desert. Although no dams or reservoirs are located in the community or SOI, the city is within the potential inundation area of the Wide Canyon Flood Control Dam. While the city is not expected to be impacted directly by a seiche, or wave, from the dam, Palm Desert is subject to potential flood hazards if the dam were to fail. Constructed in 1968 and located in Fun Valley, the dam has the potential to inundate not just Palm Desert but also other portions of the Coachella Valley.

Figure 8.4 FEMA Flood Zones



Fire

Palm Desert and the SOI are exposed to fire-related hazards from two potential sources: wildfires and fires that occur in urban settings. Fire hazards are highest in areas of the community near the wildland-urban interface (WUI). The WUI refers to areas where development abuts areas of wilderness or landscapes with higher fuel loads.

Although Palm Desert does not have record of any reported fire incidents, the Riverside County LHMP indicates that from 2001 to 2017, at least 88 large fires (300 acres or greater in size) were reported in the county.

Figure 8-5 presents the fire hazard severity zones in the City of Palm Desert and SOI. The California Department of Forestry and Fire Protection (Cal Fire) classified fire hazard severity zones based on fuel load, terrain, weather, and other relevant factors. The mapping also involved an extensive local review process, including by the Riverside County Fire Department based on an assessment of vegetation, slope, fire history, weather patterns, and the effects of flames, heat and flying fire embers.

Collectively, areas designated in the fire hazard severity zones on Figure 8.5 face the highest risk of wildfires. Areas of local and state responsibility in these fire hazard severity zones are shown in Figure 8.5. All areas of the community in Very High Fire Hazard Severity Zone (VHFHSZ) and High Fire Hazard Severity Zone (HFHSZ) are located in the southern areas of the city and the SOI, with very limited VHFHSZ and HFHSZ in SRAs along the city's urban edge (Cal Fire 2020). Within the city limits, the VHFHSZ overlaps minimally with some single-family residences on Canyon View Drive and Desert Vista Drive; however, there is no developable land in the VHFHSZ as it contains marginal hillside area behind single family residences and does not have any development potential. The small area of HFHSZ within the city limits covers undeveloped desert land and an aboveground water tank and has no development potential. Currently, the main evacuation route in the area is via Canyon View Drive, which will lead to Portola Avenue and Highway 74. A secondary evacuation route is available at the eastern end of Ridge View Way, via an access road along the eastern boundary of the Ironwood Country Club, to continue north or east into the roadway network. These areas that encroach into SRA/VHFHSZ within the city meet the minimum standard of two emergency evacuation routes as established in Government Code Section 65302.g. In the SOI, some single-family homes in Cahuilla Hills west of Highway 74 are located within the VHFHSZ, and some are limited to one local street leading to Highway 74 as an evacuation route.

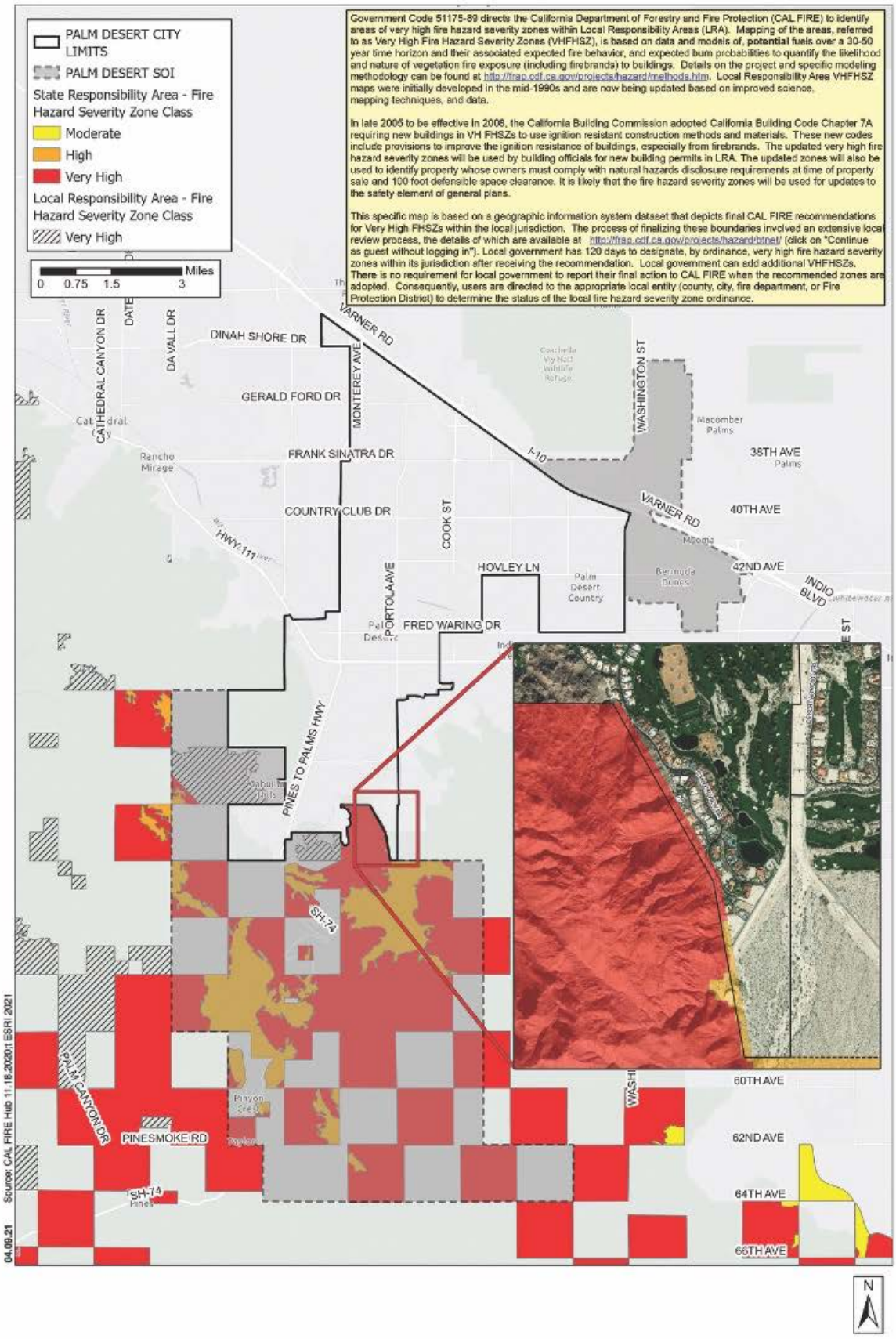
As urbanization expands south of Highway 111 in the southern portion of the SOI, the community will face heightened exposure to areas vulnerable to wildfire hazards. Increased infill and nonresidential development in the city can also increase the probability of urban fires due to increased potential for hazardous materials accidents, arson or other hazard events.

Five federal agencies are responsible for wildland fire management—U.S. Forest Service, the Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service. Both state and local codes regulate the abatement of fire-related hazards. The California Health and Safety Code includes requirements for local jurisdictions to adopt and enforce the Uniform Building Code, including fire-related construction methods and exterior design measures. Special standards apply to structures in the state's designated fire hazard severity zones.

California Government Code Section 51182 further requires maintenance of defensible space of 100 feet from each side of a structure.

The City of Palm Desert has incorporated state requirements with adoption of the 2019 edition of the California Building Standards Code, including the California Fire Code by reference in Municipal Code Title 15, Building and Construction. The state's fire hazard severity zones shown in Figure 8.5 are incorporated and established in Palm Desert Municipal Code Section 15.26.010, supporting the City's ability to enforce state standards applicable to areas of higher risk.

Figure 8.5 Fire Hazard Severity Zones



Extreme Heat

The climate in Palm Desert is hot and arid. Exposure to extreme heat or extended periods of high temperatures results in a variety of health effects, including increased heat-related mortality (Chestnut et al. 1998; Medina-Ramon et al. 2006).

Because of a changing climate, Palm Desert is anticipated to experience increasing levels of heat. By 2100, the Riverside County region is anticipated to experience an increase ranging from 4.3°F to 8.7°F (Scripps Institution of Oceanography 2018). Similarly, Palm Desert is anticipated to experience an increase in the number of days when temperature exceeds 112.1°F, the local threshold for extreme heat. While Palm Desert's historic number of extreme heat days through 2011 was four occurrences per year, by 2050 the number of extreme heat days could increase to 56 per year, on an average of 21 to 25 (Scripps Institution of Oceanography 2009 & 2018). Increased heat, when combined with drought and high winds, can exacerbate wildfire risk in and around Palm Desert.

Climate Change Impacts and Adaptation

As described in Chapter 6 Environmental Resources and above, climate change can have widespread impacts at different levels on the community. Climate change impacts temperature, precipitation and other natural processes, thus potentially affecting natural hazards including wildfire, flood, and extreme weather.

Similar to the state trend, the projections show little variation in total annual precipitation in Palm Desert throughout this century. Palm Desert had an average annual rainfall of 3.8 inches during 1961 to 1990, which is almost 79 percent less than the average in California. Average rainfall in Palm Desert is predicted to increase up to 0.1 inches, with a 0.051 inches to 0.099 inches increase in maximum one-day precipitation throughout the century. These projected changes in precipitation are not expected to have a significant impact on Palm Desert compared to the current conditions. However, the maximum length of dry spell (days with precipitation < 1 mm) is projected to increase by 8 to 13 days in mid-century (2035-2064), which can further drought and related hazards including wildfire.

Human-Caused and Other Hazards

Hazardous Materials

A hazardous material is any material that, due to 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. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or local implementing agency has a reasonable basis to believe would be injurious to the health and safety of persons or would be harmful to the environment if released.

While Palm Desert has nonresidential land uses, it has very few generators of hazardous or toxic materials. Potential uses associated with possible hazardous materials production may include commercial, quasi-industrial or medical operations. The city and SOI have one abandoned hazardous waste site that is designated by the US Environmental Protection Agency (EPA) as a Superfund site (EPA 2014). The site, Enfield Chemical, is located at 77539 Enfield Court, just south of

I-10 in Palm Desert. Although listed as a Superfund site, this site is not on the EPA National Priority List for cleanup, and only requires site cleanup and material removal.

The potential for exposure to potentially hazardous materials in Palm Desert results primarily from the transport of hazardous materials. As of 2015, one registered transporter of hazardous materials is located in the community. In addition, major transportation corridors such as I-10 may be used to transport hazardous materials; accidents could result in release of hazardous materials. Major natural gas transmission lines provide another potential source of hazardous materials exposure. As of 2012, transmission lines for natural gas run parallel approximately two miles north of I-10 and transmission lines for hazardous liquid are located along the I-10 corridor (PHMSA 2012).

The City jointly participated with Riverside County and other jurisdictions to adopt the Riverside County Hazardous Waste Management Plan. The plan supports the safe management of hazardous materials and waste products with identification of types of wastes and programs to manage them.

Airport Operations Hazards

Hazards from airports can result from accidents during takeoff and landing. Airports can also pose issues associated with land use incompatibilities. Bermuda Dunes Airport is the closest airport to the city and is located within the SOI. This privately owned public use airport encompasses over 90 acres. For the 12-month period ending April 30, 2014, the airport had approximately 27,000 aircraft flights at an average of 74 per day.

Terrorism and Civil Disturbances

Numerous targets and locations for potential terrorist and civil disturbances are present throughout California and Riverside County. Areas that may serve as targets include government facilities, schools, religious institutions, gathering places (for example, shopping centers, entertainment venues), medical clinics, utility infrastructure, transportation infrastructure, water storage facilities, locations of high-profile individuals, and financial institutions. Palm Desert contains potential target locations such as these and is regionally located near others. The Riverside County Emergency Management Office is actively involved with planning for terrorism and other human-caused events. Due to the sensitive nature of these threats, they are not addressed in extensive detail in this public document.

Critical Facilities

Critical facilities provide essential community functions that the City has prioritized as meriting additional attention for emergency preparation. These can include both public and private assets. Critical facilities identified in the City's LHMP include City Hall, local fire stations, the Sheriff's Station, the Palm Desert Corporation Yard, local schools, the waste water treatment plant, and the Joslyn Center.

Emergency Preparedness and Coordination

The City of Palm Desert actively prepares to safeguard the community from the numerous potential hazards that could occur. The City undertakes several emergency preparedness activities, establishing procedures and responsibilities for

emergency response. Land use rules and service providers also play a role in achieving readiness for hazards and emergencies. Additionally, the City is supported by several other external entities to provide response services.

Emergency Preparation

The City of Palm Desert has established a framework for emergency preparation and response. Key preparation tasks and tools are outlined below, including an overview of roles identified in the EOP.

Emergency Operations Center

The City's Desert Emergency Operations Center (EOC) is the central management entity responsible for directing and coordinating the various City departments and other agencies in their emergency response activities. The EOC also serves as the physical location from which information and resources are coordinated. The City's Emergency Operations Plan establishes City Hall as the primary EOC, with an alternate center located at the City Corporation Yard. The EOP provides guidance for activation and deactivation of an Emergency Operations Center, including an action plan for the EOC in event of an emergency.

Emergency Notification Program

The City of Palm Desert is a member of Riverside County's Emergency Alert System (EAS). The EAS is a statewide network of commercial broadcasting stations and interconnecting facilities authorized by the Federal Communications Commission (FCC) to operate during national disasters or emergencies. The EAS provides immediate warnings for hazards such as flash floods, child abductions, or needs for evacuation.

Emergency Services – Peak-Load Water Supplies

The availability of water greatly affects the City's ability to effectively respond to any occurrences of fire. Water services in the Coachella Valley come from the Coachella Valley Water District (CVWD). The CVWD provides domestic water services to Palm Desert using wells to extract groundwater from the Whitewater River subbasin. The groundwater supply consists of a combination of natural runoff, inflows from adjacent basins, returns from groundwater, recycled water, and imported water use. Drinking water is met primarily from groundwater sources, while irrigation water is supplied primarily from recycled wastewater and imported water.

Annual demand for groundwater has exceeded the ability of the subbasin to recharge, resulting in overdraft conditions. The CVWD, recognizing the need for other sources of water to reduce demand on groundwater, initiated water reclamation in 1967 and currently operates six water reclamation plants (WRPs) in the valley. Recycled water from two of these facilities has served golf course and greenbelt irrigation in the Palm Desert area for many years, reducing demand on the groundwater basin. A third facility (WRP 7), located north of Indio, began providing recycled water for golf course and greenbelt irrigation in Palm Desert in 1997.

The CVWD continues to expand recycled water services to golf courses and other nonpotable needs to reduce peak-load supply. Typically, demand is highest during summer months because of water needs for landscaping. Demand for recycled water exceeds the CVWD's current supply and would require additional infrastructure for recycled water connections. The district has plans to expand pipeline connections to the Mid-Valley Pipeline (MVP) recycled water system, with the potential to connect

at least 10 additional golf courses. Completion of the MVP project would further reduce demands on groundwater and enhance the City's ability to meet peak-load water supplies during an emergency.

Emergency Access and Response

Evacuation Routes

Key evacuation routes in the city consist primarily of the north–south connections between Palm Desert and I-10 and Highway 111, including Monterey Avenue, Portola Avenue (following the planned construction of the interchange), Cook Street, and Washington Street. Both Monterey Avenue and Washington Street provide all-weather bridges to the highways. Cook Street and Portola Avenue also provide connections across the Whitewater River.

Coordination with Riverside County will be critical to support connections to unincorporated SOI areas. Areas of the SOI north of Interstate 10 have higher potential for isolation in case of a hazard. In the southern SOI, areas along State Route 74 such as Royal Carrizo could face similar challenges of isolation in case of a hazardous event.

A process to identify evacuation routes appropriate to given hazards is established in the City's EOP. City departments are responsible for development of department-specific Standard Operating Procedures and Response Plans with evacuation routes, with varied priorities based on hazard.

Emergency Access – Roadway Widths

To ensure the community is accessible to emergency response personnel, the City establishes minimum roadway widths and access requirements. Section 26.40.040 of the Palm Desert Municipal Code establishes minimum roadway widths for subdivision development. Minimum widths range from 24 to 106 feet, with standards that vary based on street parking characteristics. To date, roadway widths or parked vehicles have not hindered emergency response access.

Emergency Services Agencies and Organizations

The City's Risk Management Department coordinates and manages Palm Desert's emergency services and providers. The City's Risk Manager serves as the community's emergency manager. Fire protection, first response emergency medical services, and natural disaster preparedness services in Palm Desert are provided by the Riverside County Fire Department (RCFD), in cooperation with the California Department of Forestry and Fire Protection (Cal Fire). As of 2015, Palm Desert had a total Fire Department staffing of 44 positions.

Emergency Dispatch Services

Regional communications and dispatch services are provided by the RCFD, which serves approximately 1,360,000 residents in an area spanning 7,200 square miles. RCFD is an all risk, full-service fire department with three fire stations located strategically throughout the City of Palm Desert to provide highly effective protection: Station 71 serving North Palm Desert at 73995 Country Club Drive, Station 33 serving Central Palm Desert at 44400 Town Center Way, and Station 67 serving South Palm Desert at 73200 Mesa View Drive. The city participates in a regional cooperative agreement and benefits from resources responding from other nearby stations, ensuring that peak loads and major incidents are handled promptly.

In 2013, the RCFD responded to 133,536 total incidents and 8,172 calls for service in Palm Desert. The average en-route-to-on-scene response time was 3.6 minutes, with 86.2 percent of call response under 5 minutes. There are no service gaps in the city. All areas within the city, including those in SRAs/VHFHSZ, receive adequate emergency services.

Flood Services

Countywide, flood control services are provided by the Riverside County Flood Control and Water Conservation District. The district has the responsibility of protecting people, property and watersheds in the county from flood damage. District tasks include regulation of drainage and development in the floodplain, the construction of channels and flood facilities, and flood warning and early detection.

Both the Coachella Valley Water District and the Riverside County Flood Control and Water Conservation District are responsible for the management of regional drainage within and in the vicinity of Palm Desert, including rivers, major streams and their tributaries, and areas of significant sheet flooding. The City participates in stormwater management related to the National Pollutant Discharge Elimination System (NPDES). For purposes of NPDES permits, the City serves as a co-permittee with the County of Riverside, CVWD, Riverside County Flood Control and Water Conservation District, and municipalities in the Whitewater River subbasin.

Police Services

The Riverside County Sheriff's Department provides contract services in Palm Desert and the SOI as the Palm Desert Police Department (PDPD). Services include general law enforcement and police protection services. As of early 2015, the PDPD operated with 81 staff members.

Regional Services and Coordination

The City of Palm Desert participates in regional forums to monitor and coordinate emergency preparation tasks. The City participates in the Coachella Valley Emergency Managers Association, in addition to the Coachella Valley Association of Governments' (CVAG) Public Safety Group. Both forums provide an opportunity to identify and prepare regional evacuation routes and other key emergency response tasks.

In coordination with the RCFD Office of Emergency Services, the City of Palm Desert also plans for extreme heat conditions. Together with the County, the City operates two local cooling stations during extreme heat occurrences: the Joslyn Center located at 73750 Catalina Way, and the Palm Desert Community Center located at 43900 San Pablo Avenue. These cooling centers offer a safe, air-conditioned space in times of extreme heat.

Goals and Policies

Goal 1. Leadership. City leadership that promotes collaboration within the region that sustains maximum resilience to emergencies and disasters.

Policies

1.1 **Hazards Information.** Establish and maintain a database containing maps and other information that identifies and describes the community's hazards.

1.2 **Local Hazard Mitigation Plan.** Maintain and regularly update the City's Local Hazard Mitigation Plan (LHMP) as an integrated component of the General Plan, in coordination with Riverside County and other participating jurisdictions, to maintain eligibility for maximum grant funding.

1.3 **Hazards Education.** Consult with agencies and partners to provide public education materials on safe locations and evacuation routes in case of emergency or hazardous event.

1.4 **Critical Facilities.** Prepare existing critical facilities for resilience to hazards and develop new facilities outside of hazard-prone areas.

1.5 **Emergency Plans and Processes.** Consult with the Coachella Valley Emergency Managers Association and CVAG to maintain and update the City's Emergency Operations Plan, and maintain SEMS compliant disaster preparedness plans for evacuation and supply routes, communications networks, and critical facilities' capabilities.

1.6 **Utility Reliability.** Coordinate with providers and agencies including the CVWD and Southern California Edison for access to reliable utilities and water supply to minimize potential impacts of hazards and emergencies to pipelines and infrastructure.

1.7 **Citizen Preparedness.** Continue to promote citizen-based disaster preparedness and emergency response through Riverside County's Community Emergency Response Team (CERT) training and certifications.

Goal 2. Geologic hazards. A built environment that minimizes risks from seismic and geologic hazards, including hazards due to wind erosion.

Policies

2.1 **Seismic Standards.** Consider exceeding minimum seismic safety standards for critical facilities that ensure building function and support continuity of critical services and emergency response after a seismic event.

2.2 **Structural Stability.** Maintain development code standards to prohibit siting of new septic tanks, seepage pits, drainage facilities, and heavily irrigated areas away from structure foundations to reduce potential soil collapse.

2.3 **Seismic Retrofits to the Existing Building Stock.** Create a phased program for seismic retrofits to existing public and private unreinforced buildings to meet current requirements.

2.4 **Wind Hazards.** Support integrated land management for site design and improvements that protect the natural and built environment, including both public and private structures, from hazardous wind events.

Goal 3. Flood hazards. A community where flooding and inundation hazards are contained within areas reserved for open space.

Policies

3.1 **Flood Risk in New Development.** Require all new development to minimize flood risk with siting and design measures, such as grading that prevents adverse drainage impacts to adjacent properties, on-site retention of runoff, and minimization of structures located in floodplains.

3.2 **Flood Infrastructure.** Require new development to contribute to funding regional flood control infrastructure improvements.

3.3 **Stormwater Management.** Monitor, update, and enforce stormwater management plans in coordination with regional agencies, utilities, and other jurisdictions.

3.4 **Open Space for Flood Control.** Prioritize open space or uses that serve recreational purposes as a preferred land use within areas of high flood risk.

3.5 **Dam Failure.** Disseminate information on dam inundation areas subject to potential risks of flooding in the event of dam failure or seismic hazard, including preparation for seiche events, which can be caused by seismic events and consist of the occurrence

of a standing wave that oscillates in a body of water, such as a dam.

3.6 **Special Flood Hazard Areas.** Locate new essential public facilities out of the Special Flood Hazard Areas (SFHAs) as identified in Municipal Code Title 28. Assess the conditions of existing utilities, roads, and other structures within the SFHAs, and implement risk reduction measures, where necessary.

Goal 4. Fire hazards. Existing and future development is protected from wildfire hazards, with decreased frequency and intensity of wildfire incidents despite increased density and urbanization within the community.

Policies

4.1 **Fire Preparation.** Maintain optimal fire readiness and response service in coordination with Riverside County and other agencies. Review inter-jurisdictional fire response agreements and ensure that the agreements and firefighting resources, including water supply, can meet current and future needs, including increased demand from new development and changing fire regimes.

4.2 **Fire Hazard Severity Zones.** Adopt and implement fire mitigation standards for areas designated as High and Very High Fire Hazard Severity Zones per CalFire, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.

4.3 **Brush Clearance.** Require new development and homeowners associations to maintain brush clearance criteria that meets 120% of the current state requirement for fire hazard severity zones in the city.

4.4 **Inventory of Structures for Fire Risk.** Prepare an inventory of all structures and ownership information for structures in each fire hazard severity zone in the city and the SOI.

4.5 **Fire Education.** Disseminate information on fire risks and minimum standards, including guidance for new development in the wildland-urban interface and fire hazard severity zones.

4.6 **Future Emergency Service Needs.** Require new developments and homeowners associations along the wildland urban interface to house the proper equipment and infrastructure to respond to wildland fire incidents.

4.7 **Open Space Preservation.** Consult with neighboring jurisdictions, private property owners, and other agencies to identify resource management activities that can both enhance open space areas and reduce wildland fire.

4.8 **New Essential Public Facilities.** When planning new essential public facilities for the SOI, avoid locations within any state responsibility area or very high fire hazard severity zone. If not possible, mandate construction methods or other measures to ensure minimal damage to the facilities.

4.9 **Existing development in Fire Hazard Zones.** Direct the Planning Department Code Compliance Division to identify and track properties that are not in conformance with contemporary fire safe standards adopted by the City, especially of road standards and vegetative hazard. Reach out to these property owners during redevelopment or other permitting processes to work out a mitigation plan to achieve conformance.

4.10 **Redevelopment in Fire Hazard Zones.** Require all redevelopment in Very High Fire Hazard Severity Zones (VHFHSZ) to comply with the latest California Building Standards Code (Title 24), including the California Fire Code (Part 9). Coordinate with the Fire Department on evaluation of rebuilding after a large fire and require implementation of fire safe design and additional measures where necessary.

4.11 **Long Term Fire Hazard Reduction.** Coordinate with the Fire Department and consult with private property owners, homeowner associations and other organizations to identify roadside fuel reduction plan, otherwise provide for the long-term maintenance of defensible space clearances around structures, and include fire breaks in the VHFHSZ where appropriate.

Goal 5. Extreme weather. Improved quality of life for residents, workers, and visitors during extreme heat events.

Policies

5.1 **Extreme Heat Vulnerabilities.** Analyze and address groups with vulnerabilities to extreme heat, including youth, the elderly, nursing homes, or communities with older structures that lack adequate air conditioning.

5.2 **Education on Extreme Heat.** Educate visitors and residents on the risks of extreme heat using brochures, public service announcements, and other methods.

5.3 **Backup energy sources.** Obtain and install backup power equipment for critical public facilities to ensure they are functional during a power failure that might result from extreme weather.

5.4 **Below ground utilities.** Provide information and education to encourage private stakeholders with formation of assessment districts that would finance and replace overhead electric lines with subsurface lines that will not be affected by fallen trees and branches during windstorms.

5.5 **Tree trimming.** Support utility companies in their enforcement of the national guidelines on tree trimming and vegetation management

around electric transmission and communication lines to prevent or reduce the potential for felled branches or trees to cause power outages and disrupted communications.

5.6 **Wind barriers.** Encourage the preservation and establishment of additional wind barriers in the form of hedges and tree lines to reduce the effects of dust and sand.

Goal 6. Human-caused hazards and hazardous materials. A safe community with minimal risk from hazardous materials and human-caused hazards.

Policies

6.1 **Site Remediation.** Encourage and facilitate the adequate and timely cleanup of existing and future contaminated sites and the compatibility of future land uses.

6.2 **Airport Hazards.** Upon annexation of areas within the Bermuda Dunes Airport Land Use Compatibility Plan Area, adopt and implement airport compatibility zones for protection of people and property.

6.3 **Airport compatibility.** Require new development in the vicinity of Bermuda Dunes Airport to conform to the County's airport land use and safety plans. Notwithstanding the allowable land use intensities and densities set forth by the Land Use and Community Character Element, there may be more restrictive density and intensity limitations on land use and development parameters, as set forth by the Airport Land Use and Compatibility Plan. Additionally, per the Airport Land Use Plan, there may be additional limits, restrictions, and requirements, such as aviation easements, height limits, occupancy limits, and deed restrictions, required of new developments within the vicinity of the airport.

6.4 **Wildlife Hazards Study.** New developments proposing golf course or significant open space and/or water features shall prepare a wildlife hazard study if the site is within the Airport Influence Area.

6.5 Airport Land Use Commission Review. Before the adoption or amendment of this General Plan, any specific plan, the adoption or amendment of a zoning ordinance or building regulation within the planning boundary of the airport land use compatibility plan, refer proposed actions for review, determination and processing by the Riverside County Airport Land Use Commission as provided by the Airport Land Use Law. Notify the Airport Land Use Commission office and send a Request for Agency Comments for all new projects, and projects proposing

added floor area or change in building occupancy type located within the Bermuda Dunes Airport Influence Area.

6.6 **Federal Aviation Administration Review.** Projects that require an FAA notice and review will be conditioned accordingly by the City to obtain an FAA Determination of No Hazard to Air Navigation prior to issuance of any building permits.

6.7 **Residential Development near airport.** New residential development within Airport Compatibility Zone D shall have a net density of at least five dwelling units per acre. New dwelling units should not be permitted as secondary uses of the Urban Employment Center General Plan Designation within Airport Compatibility Zone C.

6.8 **Nonresidential Development near airport.** The land use intensity of nonresidential structures within Airport Compatibility Zones B1, C, and D shall be limited as set forth by Table 2A of the Airport Land Use Compatibility Plan.

6.9 **Hospitals near airport.** Prohibit hospitals within Airport Compatibility Zones B1 and C and discouraged in Airport Compatibility Zone D.

6.10 **Stadiums and gathering spaces.** Major spectator-oriented sports stadiums, amphitheaters, concert halls shall be discouraged beneath principal flight tracks.

6.11 **Regional coordination.** Promote coordinated long-range planning between the City, airport authorities, businesses and the public to meet the region's aviation needs.

6.12 **Railroad Safety.** When considering development adjacent to the railroad right-of-way, work to minimize potential safety issues and land use conflicts associated with railroad adjacency.