RESOLUTION NO. 2024-037

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALM DESERT, CALIFORNIA, ADOPTING THE PALM DESERT LOCAL HAZARD MITIGATION PLAN ANNEX FROM THE RIVERSIDE COUNTY OPERATIONAL AREA MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN, AS REQUIRED BY THE FEDERAL DISASTER MITIGATION AND COST RECOVERY ACT OF 2000.

WHEREAS, President William J. Clinton signed H.R.707, the Disaster Mitigation and Cost Reduction Act of 2000, into law on October 30, 2000; and

WHEREAS, the Disaster Mitigation Act of 2000 requires all jurisdictions to be covered by a Local Hazard Mitigation Plan to be eligible for Federal Emergency Management Agency post-disaster funds; and

WHEREAS, the City of Palm Desert has committed to participate in the development of the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan; and

WHEREAS, the City of Palm Desert coordinated the development of the City's Local Hazard Mitigation Plan Annex; and

WHEREAS, the City of Palm Desert is concerned about mitigating potential losses from natural disasters before they occur; and

WHEREAS, the plan identifies potential hazards, potential losses, and potential mitigation measures to limit losses; and

WHEREAS, the California Governor's Office of Emergency Services and the Federal Emergency Management Agency have reviewed the plan; and

WHEREAS, formal adoption of the plan by the Palm Desert City Council is required before final approval of the plan can be obtained from the Federal Emergency Management Agency; and

WHEREAS, The City of Palm Desert has determined that it would be in the best interest of the City to adopt the Local Hazard Mitigation Plan Annex.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Palm Desert, California, as follows:

SECTION 1. Incorporation of Recitals. The City Council finds and determines that the recitals of this Resolution are true and correct and are hereby incorporated into this Resolution as though fully set forth herein.

SECTION 2. That the City of Palm Desert hereby adopts the Local Hazard Mitigation Plan annex to meet the requirements of the Disaster Mitigation and Cost Reduction Act of 2000; and directs the City Manager to forward the Local Hazard Mitigation Plan Annex to the Riverside County Emergency Management Department, the

California Governor's Office of Emergency Services, and to the Federal Emergency Management Agency on behalf of the City of Palm Desert for final approval.

SECTION 3. Severability. If any section or provision of this Resolution is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, or contravened by reason of any preemptive legislation, the remaining sections and/or provisions of this Resolution shall remain valid. The City Council hereby declares that it would have adopted this Resolution, and each section or provision thereof, regardless of the fact that any one or more section(s) or provision(s) may be declared invalid or unconstitutional or contravened via legislation.

SECTION 4. Effective Date. This Resolution shall take effect immediately upon its adoption.

ADOPTED ON JUNE 27, 2024

DocuSigned by:
Karina Quintanilla
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KARINA QUINTANILLA, MAYOR

ATTEST:

DocuSigned by:
Anthony J. Mejia
8063A180723D437...
ANTHONY J. MEJIA, CITY CLERK

I, Anthony J. Mejia, City Clerk of the City of Palm Desert, hereby certify that Resolution No. 2024-037 is a full, true, and correct copy, and was duly adopted at a regular meeting of the City Council of the City of Palm Desert on June 27, 2024, by the following vote:

AYES: HARNIK, KELLY, NESTANDE, TRUBEE, AND QUINTANILLA
NOES: NONE
ABSENT: NONE
ABSTAIN: NONE
RECUSED: NONE

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Palm Desert, California, on 6/28/2024.

DocuSigned by:
Anthony J. Mejia
8063A180723D437...
ANTHONY J. MEJIA
CITY CLERK

Exhibit “A”

City of Palm Desert Local Hazard Mitigation Plan

PALM DESERT

CITY OF PALM DESERT LOCAL HAZARD MITIGATION PLAN 2023 - 2027

CONTACT INFORMATION

CITY OF Palm Desert

Name: Daniel Hurtado
Title: Public Safety Analyst
Address: 73-510 Fred Waring Drive
City, State, and Zip: Palm Desert, CA 92260

Direct Contact: Daniel Hurtado
Phone: 760-776-6414
Email: dhurtado@palmdesert.gov

PLAN ADOPTION/RESOLUTION

The City of Palm Desert will submit plans to the Riverside County Emergency Management Department, which will forward to the California Governor's Office of Emergency Services (CAL OES) for review before being submitted to the Federal Emergency Management Agency (FEMA). In addition, we will wait to receive an "Approval Pending Adoption" letter from FEMA before taking the plan to our local governing bodies for adoption. Upon approval, the City of Palm Desert will insert the signed resolution.

EXECUTIVE SUMMARY

This local hazard mitigation plan aims to identify the County's hazards, review, and assess past disaster occurrences, estimate the probability of future events, and set goals to mitigate potential risks to reduce or eliminate long-term risks to people and property from natural and man-made hazards.

The plan was prepared pursuant to the Disaster Mitigation Act of 2000 requirements to achieve eligibility and potentially secure mitigation funding through Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

The City of Palm Desert's continual efforts to maintain a disaster-mitigation strategy are ongoing. Our goal is to develop and maintain an all-inclusive plan to include all jurisdictions, special districts, businesses, and community organizations to promote consistency, continuity, and unification.

The City's planning process followed a methodology presented by FEMA and CAL-OES which included conducting meetings with the Operational Area Planning Committee (OAPC) coordinated by Riverside County Emergency Management Department (EMD) comprised of participating Federal, State, and local jurisdictions agencies, special districts, school districts, non-profit communities, universities, businesses, tribes, and the general public.

The plan identifies vulnerabilities, provides recommendations for prioritized mitigation actions, evaluates resources, identifies mitigation shortcomings, and provides future mitigation planning and maintenance of existing plan.

The plan will be implemented upon FEMA approval.

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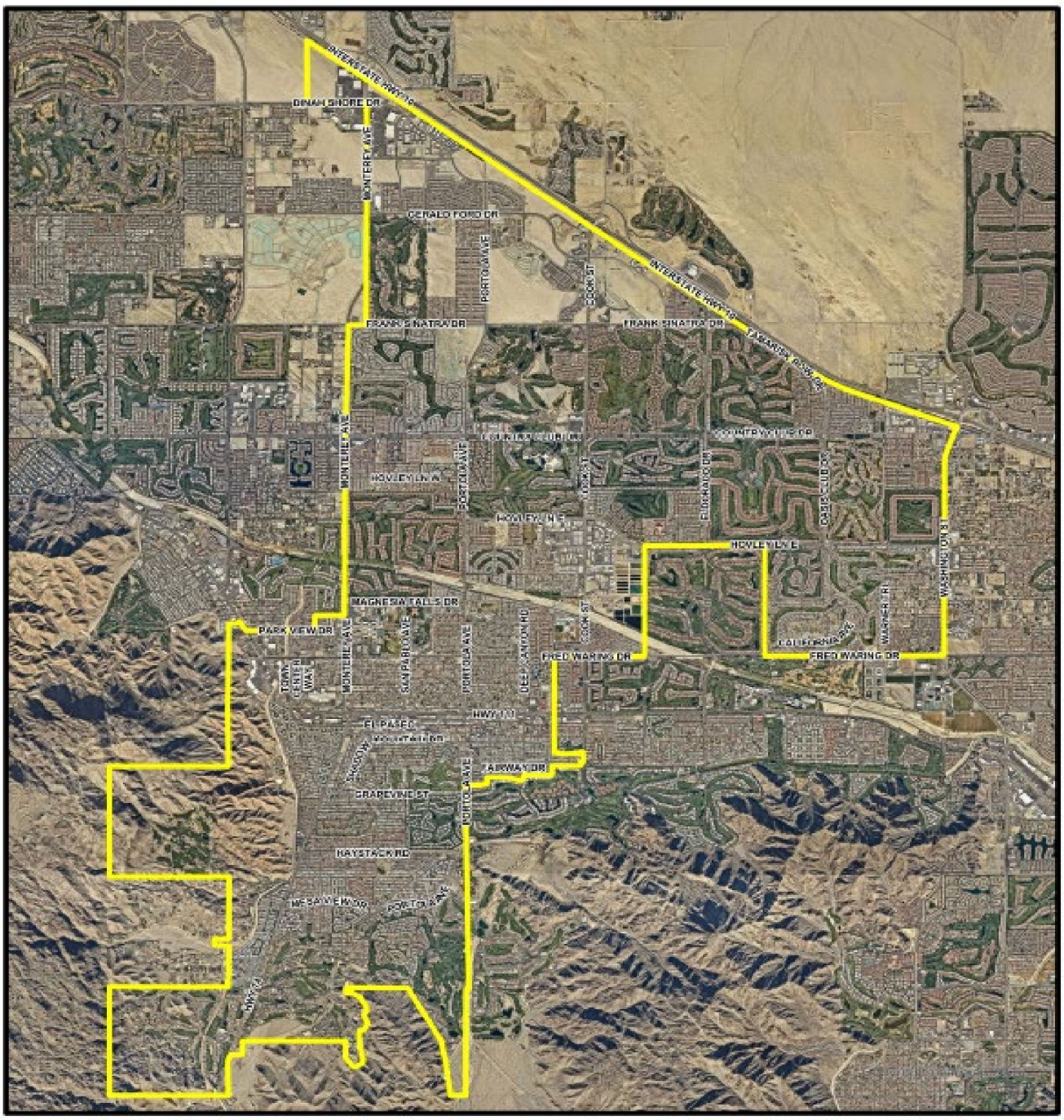
SECTION 1.0 - COMMUNITY PROFILE

Figure 1- Palm Desert City Map 2024



PALM DESERT, CA

FEBRUARY 2024

1.1 GEOGRAPHY AND CLIMATE DESCRIPTION

The City of Palm Desert is a charter city in Riverside County. The City of Palm Desert is a business, resort, and residential community centrally located in the heart of the Coachella Valley, in southeastern Riverside County, California. The City is located 125 miles east of Los Angeles and just 15 miles east of Palm Springs. The valley is flanked on three sides by the Little San Bernardino, Santa Rosa, and San Jacinto Mountains. The protection afforded by the mountains contributes to the arid climate. The average rainfall per year is less than four inches in total. Low temperatures rarely drop below freezing, while highs during the summer are usually in the triple digits and can reach 108-120 degrees Fahrenheit; with occasional periods of high humidity in the late summer months. Visitors from colder climates flock to the Palm Desert and surrounding cities in the Coachella Valley from November to May because of our extremely mild winters. Palm Desert's climate can be described as a lower California desert.

Figure 1.1 - Climate Data Chart for the City of Palm Desert (2019)

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	12.1 °C (53.9) °F	12.8 °C (55.1) °F	16 °C (60.9) °F	18.5 °C (65.4) °F	22.6 °C (72.7) °F	27.9 °C (82.3) °F	31.1 °C (88) °F	30.8 °C (87.5) °F	27.9 °C (82.2) °F	22 °C (71.6) °F	16.2 °C (61.2) °F	11.4 °C (52.5) °F
Min. Temperature °C (°F)	7.5 °C (45.5) °F	7.5 °C (45.5) °F	9.8 °C (49.6) °F	11.6 °C (52.8) °F	14.8 °C (58.7) °F	19 °C (66.2) °F	23.2 °C (73.8) °F	23.3 °C (73.9) °F	20.9 °C (69.7) °F	15.8 °C (60.4) °F	11 °C (51.8) °F	6.9 °C (44.4) °F
Max. Temperature °C (°F)	17.8 °C (64) °F	19.1 °C (66.4) °F	23.3 °C (74) °F	26.6 °C (79.8) °F	31 °C (87.7) °F	36.5 °C (97.7) °F	38.8 °C (101.8) °F	38.2 °C (100.7) °F	35 °C (95) °F	28.7 °C (83.7) °F	22.2 °C (71.9) °F	16.9 °C (62.4) °F
Precipitation / Rainfall mm (in)	43 (1)	49 (1)	25 (0)	10 (0)	5 (0)	1 (0)	8 (0)	11 (0)	9 (0)	9 (0)	12 (0)	35 (1)
Humidity(%)	36%	39%	36%	32%	30%	25%	28%	28%	28%	30%	32%	40%
Rainy days (d)	4	4	3	2	1	0	2	2	2	1	2	3
avg. Sun hours (hours)	8.1	8.3	9.7	10.7	11.7	12.7	12.6	11.9	10.9	9.7	8.7	7.8

Data: 1991 - 2021 Min. Temperature °C (°F), Max. Temperature °C (°F), Precipitation / Rainfall mm (in), Humidity, Rainy days. Data: 1999 - 2019: avg. Sun hours

Source: National Centers for Environmental Information (NOAA)

1.2 BRIEF HISTORY

The City of Palm Desert was incorporated as a charter city on November 26, 1973. It has a "Council-Manager" charter city form of government where the City Manager is appointed by the City Council and is the Chief Executive Officer of the Municipal Corporation. The Council acts as the board of directors of the municipal corporation and meets in a public forum where citizens

may participate in the governmental process. The City Council consists of five members elected at large, on a non-partisan basis.

1.3 ECONOMY DESCRIPTION

The City of Palm Desert is located near the center of the Coachella Valley, a geographical and economic area comprised of nine cities. Palm Desert relies heavily on sales tax and transient occupancy taxes to support most of its financial needs, and tourism is vital in supporting the local economy and government services. Sales tax is assessed on all purchases of merchandise (tangible personal property) and the City receives one percent of the sales tax collected. A collection of retail centers as well as the upscale shopping destination, El Paseo, bolster sales tax collection and help support City services. Transient occupancy taxes are collected from visitors staying in local accommodations, such as hotels, short-term rentals, or other lodging for less than 28 days. An abundance of premium golf courses, along with regional festivals and events, draw visitors to Palm Desert to shop, stay, and explore.

Palm Desert also supports the arts and education as valuable economic drivers and sources of community vibrancy. Throughout the City is a robust public art program, as well as the McCallum Theatre for the Performing Arts and the Living Desert Zoo and Gardens. Additionally, the Palm Desert is home to the main campus of the Coachella Valley's local community college, College of the Desert, and satellite campuses for California State University, San Bernardino, and University of California, Riverside.

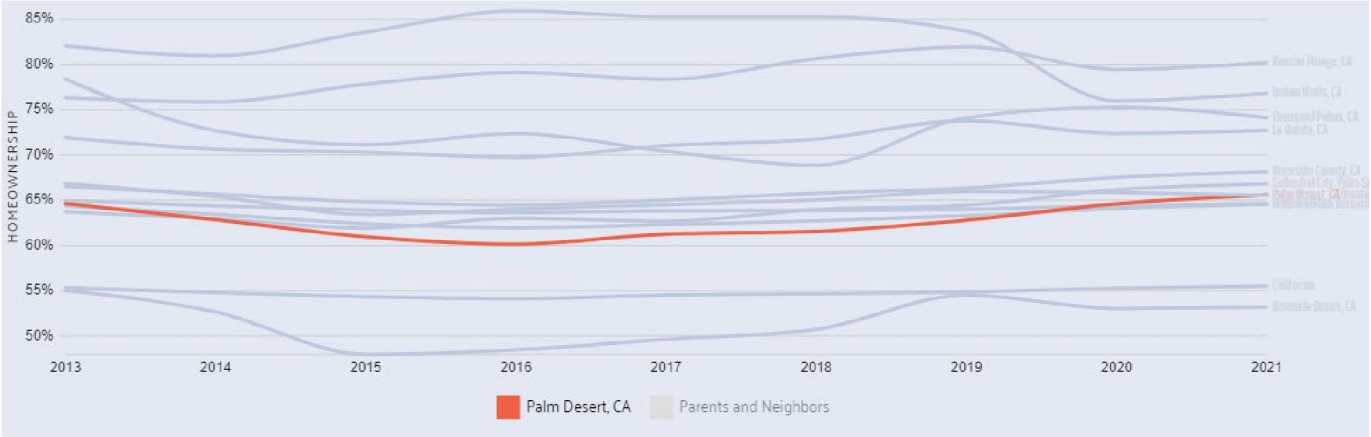
1.4 POPULATION AND HOUSING

Population: 51,163 (2020 United Census Bureau)

The 2020 Census showed that the total population of Palm Desert increased by 2,718 people since its last 2010 survey.

Population, Census, April 1, 2020	**51,163**
PEOPLE	
Population	
Population estimates, July 1, 2023, (V2023)	NA
Population Estimates, July 1, 2022, (V2022)	51,583
Population estimates base, April 1, 2020, (V2023)	NA
Population estimates base, April 1, 2020, (V2022)	51,167
Population, percent change - April 1, 2020 (estimates base) to July 1, 2023, (V2023)	NA
Population, percent change - April 1, 2020 (estimates base) to July 1, 2022, (V2022)	0.8%
Population, Census, April 1, 2020	**51,163**
Population, Census, April 1, 2010	48,445

Housing: In 2021, 65.6% of the housing units in Palm Desert, CA were occupied by their owner. This percentage grew from the previous year's rate of 64.6%.



1.5 DEVELOPMENT TRENDS AND LAND USE

The City of Palm Desert is in the center of the Coachella Valley, which is in the geographic center of Riverside County. The city is bordered by Rancho Mirage to the west and Indian Wells to the south and east, and the unincorporated community of Bermuda Dunes to the east. The existing city limits generally extend southward from Interstate 10, past Highway 111 and along Highway 74 to the foot of the Santa Rosa Mountains between Monterey Avenue and Washington Street. The City's Sphere of Influence (SOI) encompasses areas to the north and south of the city, including portions of the Santa Rosa Mountains south of the city limits and the unincorporated communities of Bermuda Dunes to the east, and Sun City Palm Desert north of Interstate 10. Figure 2.1 depicts the Palm Desert City Limits, SOI, and location relative to other nearby cities or communities.

The General Plan area covers 44,533 acres, or 69.9 square miles. The City's corporate boundaries include 17,256 acres, while 27,277 acres, or 42.6 square miles, constitute the City's sphere of influence. Within the city, there are approximately 2,700 acres of undeveloped land, much of which is in the northern portion of the city.

The City currently offers a wide range of housing opportunities, from rental apartments to multi-million-dollar estates. Like many California communities, much of Palm Desert's housing was constructed in a suburban context in which value is in part derived from the separation and isolation of neighborhoods from the rest of the city. This trend is most striking when viewing a map of the city's gated communities and has likely contributed to Palm Desert's success at attracting seasonal residents.

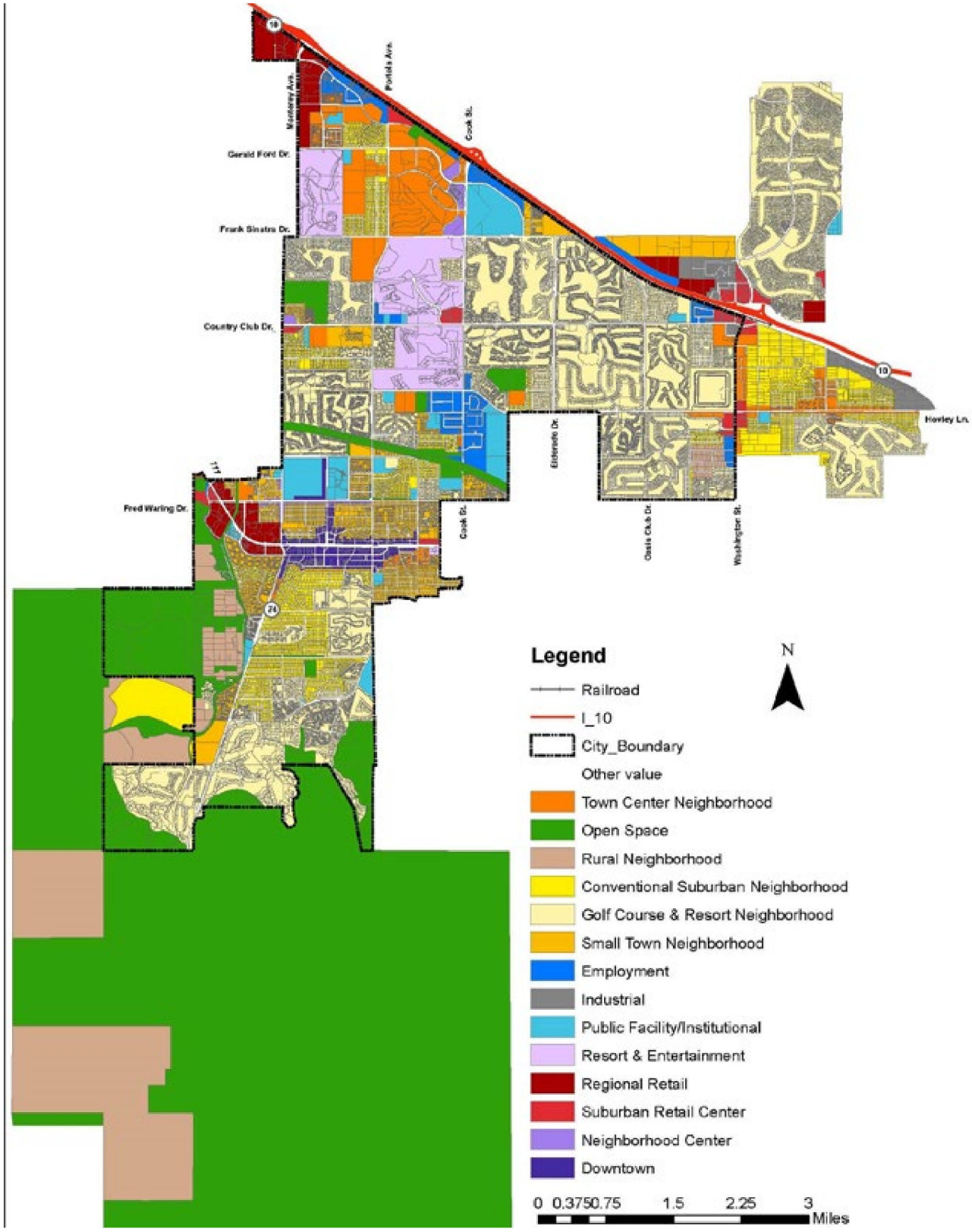
During the last General Plan cycle, the city initiated the development of the California State University and University of California campuses, expanding the city's educational opportunities. This move presents great educational, economic, and overall quality of life offerings. However, to fully capitalize on the opportunity, the city will need to make sure it appropriately plans for enough

land in the vicinity of the universities to accommodate new students, faculty, and university supportive businesses. Additionally, it will be very important for the city to ensure that all new development in the area is interconnected to form a cohesive university area.

Palm Desert has also concluded that the development of the Highway 111 corridor area into a downtown presents an important opportunity for maintaining and improving the City's position as a premier destination for tourists, visitors, and shoppers. The City's strategy is to focus on retail business retention and the redevelopment of underutilized commercial areas to protect and grow Palm Desert's market position. The City's strategy also includes transitioning the Highway 111 corridor into a walkable City Center district where visitors and residents alike can employ a "park once" approach. In part, this approach is based on leveraging the success of the walkable "Main Street" form and character of El Paseo. The city is also responding to strong market and demographic trends, driven by the Baby Boomer and Millennial generations, exhibiting strong demand for walkable, connected places over isolated, automobile-oriented places. As such, this General Plan contains strategies that emphasize the connectivity between housing, jobs, and services as well as the City's desire to enhance resident mobility through high-quality transit and transit-supportive development. In sum, this strategy aims to create a true downtown, enhancing the city's identity, quality of life, and economic competitiveness.

As the city continues to grow, infill development will be a critical land use strategy. This strategy will allow the city to continue to grow and allow the city to continue to protect and preserve its hillsides and natural environment. These amenities create the striking natural beauty that is at the heart of Palm Desert's identity. All development that took place in the past few years was in compliance with local land use, building codes, zoning, and environmental requirements, as well as applicable state and federal regulations. There have been no changes to the community's vulnerability.

Figure 1.3- Land Use Designations from General Plan (2019)



SECTION 2.0 - PLANNING PROCESS

2.1 LOCAL PLANNING PROCESS

Representatives from various City departments were contacted to determine if any projects or activities were necessary in mitigating the identified hazards to Palm Desert. Each representative was invited to participate in the planning process and to attend meetings via email. The City of Palm Desert General Plan also contains an Environmental Hazards Chapter that outlines various hazards and mitigation steps, which includes a goal, policies, and programs regarding the identified environmental hazards. The General Plan also includes a Safety Element which addresses a broad range of issues and hazards that affect the community.

The following members from these departments formed the LHMP planning team for the City of Palm Desert: Planning Department (Planning Director), Rosie Lua Human Resources (Human Resources Manager), Andrea Staehle, Building and Safety (Building Inspector), Jeremy Frey Sr. Public Works (Director), Martin Alvarez

The city planning team met and worked collectively to ensure the necessary components of the plan were reviewed and updated accordingly. Below is a list of meeting dates the planning team met:

September 20th, 2022

November 2nd, 2022

2.2 PARTICIPATION IN REGIONAL (OA) PLANNING PROCESS

The City of Palm Desert participated in the MJLHMP planning process with the Riverside County Operational Area by attending LHMP meetings and public hearings.

The City of Palm Desert participated in various Riverside County conferences, and meetings, including:

April 13th, 2022, MJLHMP/LHMP Steering Committee

June 15th, 2022, Multi-Jurisdictional Local Hazard Mitigation Plan Kick-Off Meeting

July 3rd, 2022, MJLHMP/LHMP Steering Committee

August 17th, 2022, LHMP Jurisdiction Workshop

October 5th, 2022, MJLHMP/LHMP Steering Committee

October 20th, 2022, Local Hazard Mitigation Planning Risk Assessment

November 2nd, 2022, LHMP Planning Meeting with cooperating agencies Riverside County Fire and Riverside County Sheriff's Department

January 4th, 2023, MJLHMP/LHMP Steering Committee

2.3 DATES AVAILABLE FOR PUBLIC COMMENT

September 7th, 2022 - Public comment during National Preparedness Month community outreach. Sign-in sheet is included in Appendix A.

Posted on City Website between December 28, 2023 – January 18, 2023, for public input. No comments were made during this opportunity. A screenshot of the website is included in Appendix A.

2.4 PLANS ADOPTED BY RESOLUTION

The City of Palm Desert will present the LHMP Annex to the City Council to adopt at a public meeting, via an official Resolution upon FEMA approval.

SECTION 3.0 – MITIGATION ACTIONS/UPDATES

3.1 NEW HAZARDS OR CHANGES FROM 2017

The City of Palm Desert planning team has reviewed the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Palm Desert and has concluded that there are no changes to the hazard priority or hazard profile or additional hazards.

3.2 BRIEF STATEMENT OF UNIQUE HAZARDS

The most prominent hazards faced by residents of Palm Desert are Earthquakes, Drought, Flooding, Wildland- Urban Interface Fires, and Extreme Heat A long-term power outage in summer could produce life-threatening extreme heat conditions for residents without access to air conditioning. In addition, the proximity of Interstate 10 and the Union Pacific Railroad increases the risk of hazardous materials transportation spills or releases during any of these natural disasters listed. The City of Palm Desert could also be impacted by terrorism or bioterrorism.

3.3 IDENTIFICATION OF RISKS AND VULNERABILITIES

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. The city conducted a safety element plan incorporated into the general plan. This element identifies priority public safety element issues in Palm Desert and addresses

potential hazards to people and property. Issues in this element include both natural and human-caused 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.

Hazard Screening and Prioritization

Following the identification of hazards, the Planning Team went through a process to prioritize (screen) the hazards to determine which hazards created the most significant concern in the community. The Planning Team utilized a ranking implemented during this update to the City of Palm Desert LHMP. This process consists of generating a qualitative scale, Very High, High, Medium, or Low rating for 1) Probability and 2) Severity from each hazard. As part of this process, the following criteria (definitions) were applied:

❖ **Geographic Extent**

o Extreme: 50-100 percent of the planning area

o Extensive: 25-5 percent of the Planning area

o Significant: 10-25 percent of the planning area

o Limited: less than 10 percent of the planning area

❖ **Probability**

o Very Likely: Near 100% chance of it happening. There have been Historic Occurrences of the Hazard in the community or region, and experts concluded it is highly likely that the hazard will occur in the community. Citizens feel that there is a likelihood of occurrence.

o Likely: Between 10 and 100 percent chance of happening in the next year. There may or may not have been historical occurrences of the hazard in the community or region, but experts concluded that it is likely that the hazard will occur in the community. Citizens feel that there is a likelihood of occurrence.

o Occasional: Between 1 and 10 percent chance of happening within the next year or has a recurrence interval of 11 to 100 years. There may or may not have been a historical occurrence of the hazard in the community or region, but experts concluded that it is possible that the hazard could occur in the community. Citizens may feel that there is a likelihood of occurrence.

o Unlikely: Less than 1 percent chance of happening or having a recurrence interval of greater than every 100 years. There have been no historical occurrences of the hazard in the community or region and both experts and citizens agree that it is highly unlikely that the hazard will occur in the community.

❖ **Severity**

o Catastrophic: Both experts and citizens have concluded that the consequences will be significant in terms of building damage and loss of life. More than 50 percent of Property severely damaged, shutdown of facilities for more than 30 days; and/or multiple deaths.

o Critical: Consequences are thought to be significant in terms of building damage and loss of life. 25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries/illnesses result in permanent disability.

o Limited, but not insignificant: Consequences are thought to be modest in terms of building damage and loss of life, limited either in geographic extent or magnitude. 10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent damage.

o Negligible: Consequences are thought to be minimal in terms of building damage and loss of life, limited either in geographic extent or magnitude. Less than 10 percent of the property Severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid.

❖ **Risk**

o High: Widespread potential impact

o Medium: Moderate potential impact

o Low: minimal potential impact

Figure 3.1- City of Palm Desert Hazard Risk Matrix

Hazard Risk Matrix		Minor (1)	Moderate (2)	Major (3)	Severe (4)
Probability	Almost Certain (4)	High	Very High	**Extreme Heat**	**Drought**
	Likely (3)	**Wildfire**	**Earthquake**	**Flood**	**Wind**
	Possible (2)	Medium	High	High	Very High
	Unlikely (1)	Low	Medium	Medium	High

The top hazards were identified for inclusion in the City of Palm Desert's LHMP Update:

- *Drought*
- *Wind*
- *Flooding*
- *Extreme Heat*
- *Earthquake*
- *Wildfire*
- *Human-Caused & Other Hazards*

1. Drought

Probability – Medium

Impact- High

All of the City of Palm Desert is subject to moderate to severe drought conditions as the Coachella Valley is considered to be an extension of the Sonoran Desert. The Coachella Valley Water District is the water purveyor for the City. CVWD will be contacted in the event of a water line break. The City is prohibited from touching the water distribution system for liability reasons.

The City of Palm Desert is at **Very High Risk** for Drought. In the Coachella Valley, the water comes from a vast underground aquifer that has been in a state of overdraft since the 1980s. Over time, the Drought risk has significantly decreased due to rain and the mitigation actions taken by the Coachella Valley Water District (CVWD) and the Coachella Valley. However, because drought is difficult to define, predict, and monitor, the entire planning area's population is at risk for Drought.

Likelihood of occurrence: Occasional

Between 1 and 10 percent chance of happening within the next year or has a recurrence interval of 11 to 100 years. With higher air temperatures, water losses could increase across the Coachella Valley Region, leading to increased evaporation in water bodies that would typically allow groundwater recharge. On average, Coachella Valley water users pump nearly three times more water out of the aquifer than is returned by natural and artificial replenishment.

In an effort to conserve water, the City has adopted the CVWD Model Water Efficient Landscape Ordinance (as amended) which establishes a water budget that requires native and drought-tolerant species for all new and substantial remodel projects. The City Council intends to promote water conservation through the planning, design, installation, and maintenance of landscapes by the use of climate-appropriate plant material and efficient irrigation as well as to create a Palm Desert landscape theme by enhancing and improving the physical and natural environment.

Figure 3.2 - Palm Desert Drought Hazard (2023)

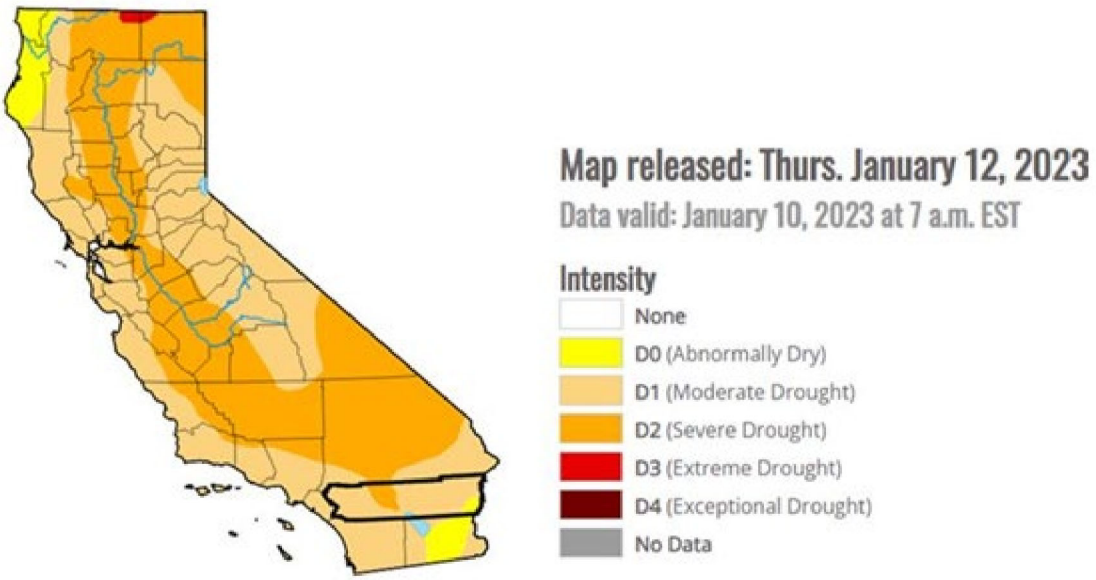
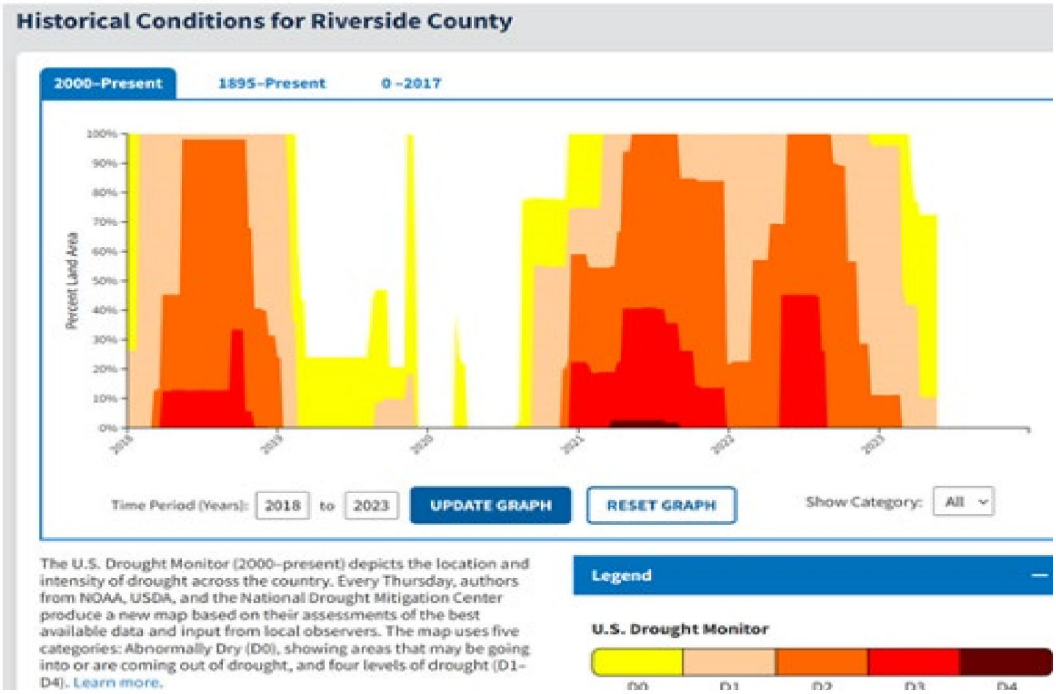


Figure 3.3 History of Drought in Riverside County (2023)



❖ Vulnerability

Nearly all the water that is used in the Coachella Valley comes from a groundwater basin, or aquifer under the ground's surface. This aquifer is estimated to have a capacity of about 39 million acre-feet of water. Drought can have far-reaching impacts on public health, including decreased water quality and quantity, increased incidence of illness and disease, increased mortality rates, and adverse mental health outcomes.

Other possible impacts include recreational risks; effects on air quality; diminished living conditions related to energy, air quality, and hygiene; compromised food and nutrition; and increased incidence of illness and disease (Centers for Disease Control and Prevention). Droughts can also lead to reduced local firefighting capabilities. Fire services for the City of Palm Desert are provided through a cooperative agreement with the State of California (Cal-Fire) and the County of Riverside. Cal-Fire/Riverside County Fire Department is an all-risk, full-service fire department and has three fire stations located strategically throughout the City of Palm Desert which provide highly effective protection.

The economic impact will be largely associated with industries that use water or depend on water for their business. For example, landscaping businesses were affected by the droughts of the past, as the demand for service significantly declined because landscaping was not watered. There are 37 golf courses in Palm Desert, California, including 13 public, 3 municipal, and 21 private courses. Closures of these facilities will have a huge impact on the economy since golf generates nearly $1.1 billion in overall economic activity, thousands of jobs, and roughly $83.3 million in state and local taxes. The golf industry's direct employment amounts to 7.3% of total employment in the Coachella Valley, or about half the share of leisure and

hospitality (15.0%) and nearly double that of financial activities (4.0%). Total business sales generated directly by golf account for 11.4% of all taxable sales in the Coachella Valley, while direct golf-related retail sales represent 3.0% of taxable retail sales in the region. Further, state and local tax revenues generated by golf in the Coachella Valley make up about 9.7% of the total state and local tax impact of travel in California's Riverside and San Bernardino Counties.

No structures will be directly affected by drought conditions, though some structures may become vulnerable to fires, which are more likely following years of drought. Droughts can also have significant impacts on landscapes, which could cause a financial burden to property owners. However, these impacts are not considered critical in planning for impacts from the drought hazard.

Critical facilities as defined for this plan will continue to be operational during a drought. Critical facility elements such as landscaping may not be maintained due to limited resources, but the risk to the planning area's critical facilities inventory will be largely aesthetic. For example, when water conservation measures are in place, landscaped areas will not be watered and may die. These aesthetic impacts are not considered significant.

2. Earthquake

Probability – Medium

Impact – High

Palm Desert is in a region bordered by mountain ranges on three sides. According to the state mapping of fault zones, under 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.

Fault rupture is a primary seismic hazard that describes the sudden release of energy that 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.

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 landslides are shown. Susceptible areas include those identified in the Land Use

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

Palm Desert shares many of the hazards associated with earthquake faults in Southern California. There are three major faults and several minor faults that could impact the City of Palm Desert. The major faults include the San Andreas near San Gorgonio Pass, the Palm Desert Fault, and the Elsinore Fault. Each of these has the potential of generating a significant earthquake which would impact the City of Palm Desert.

Likelihood of occurrence: Very Likely

Near 100% chance of it happening every year. Third Uniform California Earthquake Rupture Forecast (UCERF3) concurs with previous studies that consider the Southern San Andreas Fault the most likely to host a large earthquake. Compared to UCERF2, the likelihood of M≥6.7 earthquakes on the San Jacinto Fault decreases three-fold in UCERF3 but is balanced by an equivalent increase in the likelihood of M≥8 earthquakes on that fault.

Table 1 - Average time between earthquakes in the various regions together with the likelihood of having one or more such earthquakes in the next 30 years (starting from 2014).

Southern California region					
Magnitude (greater than or equal to)	**Average repeat time (years)**		**30-year likelihood of one or more events**		**Readiness**
5	0.24	(0.7)	100%	(1.0)	1.0
6	2.3	(0.9)	100%	(1.0)	1.0
6.7	12	(1.5)	93%	(1.0)	1.0
7	25	(1.4)	75%	(0.9)	1.1
7.5	87	(1.2)	36%	(0.9)	1.2
8	522	(0.4)	7%	(2.5)	1.3

Values listed in parentheses indicate the factor by which the rates and likelihoods have increased, or decreased, since the previous model (UCERF2). “Readiness” indicates the factor by which likelihoods are currently elevated, or lower, because of the length of time since the most recent large earthquakes. These values include aftershocks. It is important to note that actual repeat times will exhibit a high degree of variability and will almost never exactly equal the average listed here. (USGS)

The Risk Index rating is Very High for Riverside County, CA when compared to the rest of the U.S.

Figure 3.4 – Palm Desert Risk Index

❖ History

Table 2 History of San Jacinto Fault Zone Earthquakes:

Date:	Event:
2016	M5.2 Borrego Springs
2005	M_w5.2 Anza
1987	M6.6 Superstition Hills
1968	M6.5 Borrego Mountain
1954	M6.4 San Jacinto
1942	M6.5 Fish Creek Mountains
1937	M6.0 Terwilliger Valley
1923	M6.3 North San Jacinto fault
1918	M6.8 San Jacinto
1899	M6.5 San Jacinto

❖ Vulnerability

The impact of earthquakes can potentially affect the entire population directly or indirectly. The degree of exposure depends on various factors such as the type and age of the building people reside in, the intensity of the earthquake, etc. Such impacts could lead to business closures, road closures, which may isolate the population, and critical facilities and utilities may also lose their function. During an earthquake, hazardous materials carried by trains or trucks might spill or release due to crashes or derailments, which can negatively impact public health.

Earthquakes can have devastating impacts on the economy at both the local and regional levels. Palm Desert has consistently had the highest amount of annual retail sales within the nine cities of the Coachella Valley, achieving an average of 25% of the Valley's sales with $1.7 billion in sales in 2012. Palm Desert retail sales have increased by $248.9 million, or 17%, during the last five years. The losses incurred can include structural and non-structural damage to buildings, loss of business function, damage to inventory, relocation costs, wage loss, and rental loss caused by the repair and replacement of buildings. Infrastructure such as roads and freeways that run through earthquake-prone soils are also at risk of significant damage, which can impact commodity flows. Access to major roads is essential for response and recovery operations as well

as for ensuring the safety of people after a disaster event. Average Daily Traffic Count at sample intersections I-10 and Monterey Avenue was 41,000 cars, I-10 and Cook Street having 107,000 westbound; and 105,000 eastbound. Downtown Highway 111 sees 31,000 westbound; and 35,000 eastbound. Additionally, the water and sewer infrastructure are likely to suffer significant damage in the event of an earthquake.

Our higher educational institutions of UC Riverside at Palm Desert, California State University San Bernardino Palm Desert Campus, and College of the Desert would be at risk during an earthquake. The number of students can vary at any time, but recent statistics show that the College of the Desert has an enrollment of 10,229 students with California State University San Bernardino Palm Desert Campus having 12% of the 18,510 students taking at least 1 unit at the Palm Desert Campus.

Earthquakes can cause severe and far-reaching environmental damage. One of the potential hazards is the release of hazardous materials from fixed facilities or during transportation incidents. Such materials could leak from ruptured structures and contaminate the surrounding area or nearby waterways, leading to catastrophic consequences for the environment.

3. **Flood**

Probability – Medium

Impact – High

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. The arid landscape has low absorption rates, causing water to rapidly accumulate and result in sudden and destructive flash floods, endangering lives, property, and infrastructure. The City's Floodplain Management Ordinance specifies construction standards for all areas of flood hazards. All new construction and improvements must be constructed using methods and practices that minimize flood damage and provide adequate drainage. City development permits are required for all new construction and improvements within areas of flood hazard. Applications for development in Special Flood Hazard Areas (SFHAs) are subject to Palm Desert Municipal Code Title 28, Flood Damage Prevention.

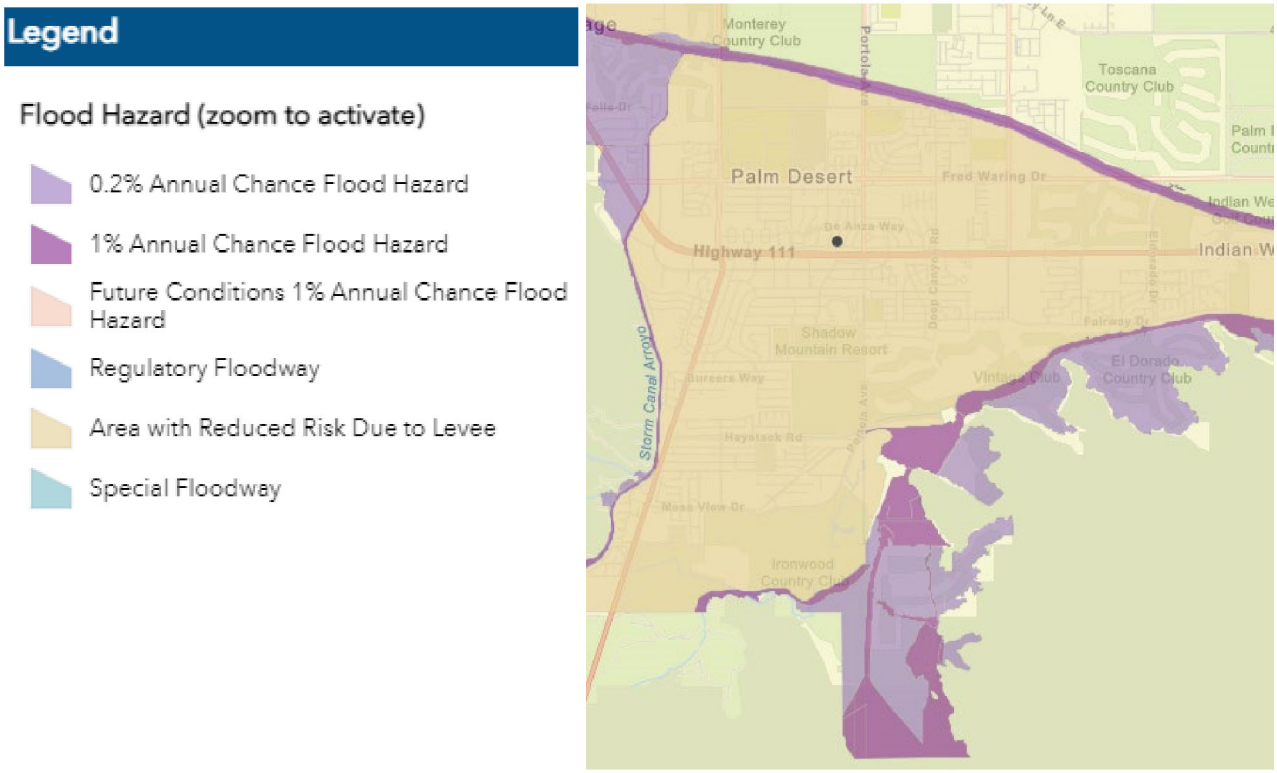
The standard measure for flooding is the "100-year flood", a benchmark used by the FEMA to establish a standard of flood control in communities throughout the country. The 100-year flood is also referred to as the "regulatory" or "base" flood. The term 100-year flood is often incorrectly used and can be misleading. The correct designation is “the 1% annual chance flood”, meaning there is a 1% chance that a flood of that intensity and elevation will occur in any given year, not that the flood will occur once every hundred years.

Likelihood of occurrence: Very Likely

Near a 100% chance of it happening every year. The 100-year Flood map of the City of Palm Desert is shown in Below. As defined by FEMA, the darker shades of purple indicate a 1% annual chance of flooding, while lighter shades of purple indicate a 0.2% annual chance of flooding.

Climate change acts as an amplifier to flood hazards. Extreme weather events have become more frequent over the past 40 to 50 years, and this trend is projected to continue. Rising sea levels and shifting weather patterns (temperate, winds) are expected to have a significant impact on rainfall frequency, intensity, and distribution, which in turn will have a significant impact on the frequency of flood occurrences. Additionally, warmer weather patterns increase snowmelt, producing more runoff to the lower elevations.

Figure 3.5 - Palm Desert Flood Zone Hazard Map (2024)



❖ History

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 Storm Kathleen in 1976 that caused extensive flood damage throughout the city (Riverside County 2012, City of Palm Desert 2012). 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.

❖ Vulnerability

Floodwater can contain harmful substances like bacteria and chemicals. When there's a flood, the sewer systems can overflow, which leads to sewage in the floodwater. People who walk or play in floodwater can get sick, injured, or infected. The floodwater can also contaminate drinking water sources, which can cause waterborne diseases. Stagnant pools of water and wet

soil can increase the number of mosquito-borne diseases, such as malaria, dengue, and West Nile fever. Mold can grow in flooded buildings within 24 to 48 hours, which can affect people with asthma, allergies, or breathing problems. During floods, trains or trucks carrying hazardous materials can crash or derail and release hazardous substances, which can harm people's health. Buildings like factories or industrial facilities can also release hazardous materials when they're flooded.

Structures that are exposed to flooding, including critical facilities, can suffer severe damage. Floodwater can lead to the loss, damage, or destruction of building contents, and can also compromise the structures themselves. The pressure from floodwater, particularly as it seeps through soil, can cause harm to building foundations. During floods, water may batter structures or erode soil, which can undermine building foundations. After a flood, wooden structures may begin to rot. Mold is a common issue in structures that have been inundated by floodwaters, and it can grow within 24 to 48 hours after a flood. Mold can be expensive to treat safely and properly, and it presents serious public health risks if left untreated.

Flooding can cause significant damage to infrastructure, including bridges, roads, stormwater systems, water/sewer/gas lines, and electrical systems. During the most recent tropical storm Hilary we experienced our major streets being affected by road closures. This affected the thousands of drivers needing access to homes, work, and especially all of our first responder personnel.

The Palm Desert Police Department Station is key to the City which handles over 47,600 calls for service each year. The Palm Desert Police Contract consists of 80 sworn deputy sheriff's positions. The current sworn officer per 1,000 resident’s ratio is 1.56. 36 of the 80 positions are dedicated to the patrol division with the remaining deputies dedicated to special assignments such as the Traffic Division, Special Enforcement Team, Motorcycle Enforcement Unit, K-9 Officer, Business District Team, School Resource Officers, the Coachella Valley Violent Crime Gang Task Force and Narcotics Enforcement. During a hazardous event, this will have a severe impact on the Cities response time with an average of 6 minutes for priority one calls.

Levees can lower the risk of flooding incidents, but they cannot completely eliminate it. Even if the levee is constructed and maintained perfectly, there is always a chance that a flood may surpass its ability to hold back the water. Moreover, if a levee is not adequately maintained or if it is overwhelmed by a flood that goes beyond its engineering capacity, it can fail, resulting in floodwater flowing underneath or directly through the levee. When levees are overrun or fail, the resulting floods can be catastrophic.

4. Extreme Heat

Probability – High

Impact – High

The City of Palm Desert is known for its desert climate, and extreme heat is a significant hazard. 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). Due to 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 the 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, especially for vulnerable populations such as the unhoused, elderly, and those with chronic health conditions. Heatwaves can also lead to increased demand for energy and strain on the power grid. Palm Desert's summer temperatures reach over 120°F for four months of the year and have an average temperature of over 100°F.

Heat waves do not strike victims immediately, but rather their cumulative effects slowly take the lives of vulnerable populations. Heat waves do not generally cause damage or elicit an immediate response to floods, fires, earthquakes, or other more "typical" disaster scenarios. While heat waves are less dramatic, they are potentially deadlier.

Likelihood of occurrence: Very Likely

Near a 100% chance of it happening every year. In any given year, Palm Desert could experience extreme heat events. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. According to information provided by FEMA, extreme heat is defined as temperatures that hover 100 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. In the 40 years from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the heat wave of 1980, more than 1,250 people died.

❖ History

The City of Palm Desert experiences extreme temperatures on an annual basis. Some of the events require the City to act, including disseminating Public Service Announcements, checking in with vulnerable populations (elderly, homeless), and opening and/or coordinating with others to open cooling centers.

The heat index is a measure of how hot it feels when relative humidity is factored in with the actual air temperature.

Figure 3.6 – Heat Index

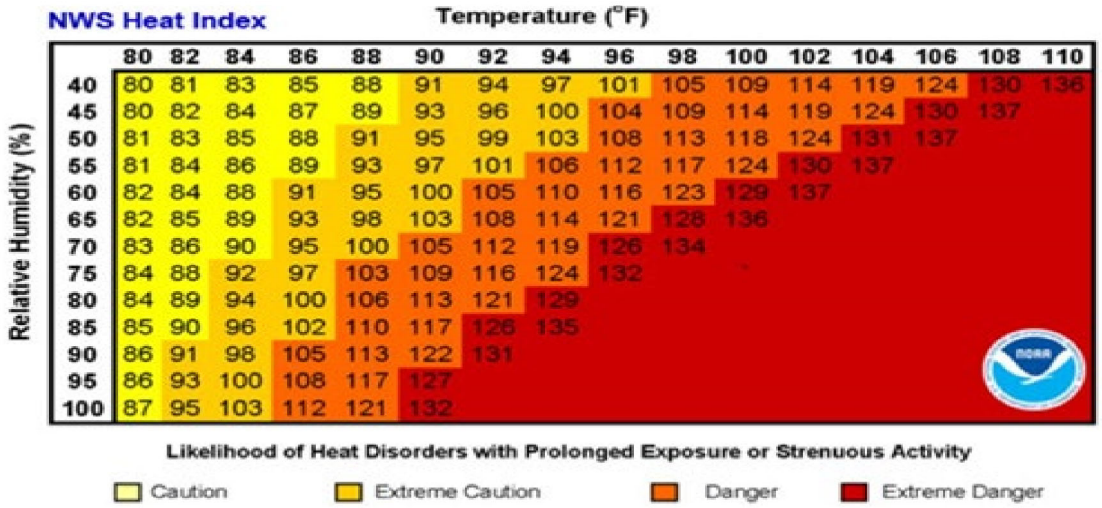


Figure 3.7 - NWS Monthly Summarized Data for Max Temperature 2018-2023

Monthly Highest Max Temperature for Palm Springs Area, CA (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2018	86	91	97	101	108	116	121	116	116	97	96	79	121
2019	79	80	88	104	100	116	118	121	114	102	95	75	121
2020	82	89	87	106	111	115	122	120	122	113	98	84	122
2021	90	86	96	109	102	123	120	122	113	101	94	91	123
2022	81	93	96	101	108	114	116	116	114	103	81	83	116
2023	74	79	84	106	105	M	M	M	M	M	M	M	106
Mean	82	86	91	105	106	117	119	119	116	103	93	82	118
Max	90 2021	93 2022	97 2018	109 2021	111 2020	123 2021	122 2020	122 2021	122 2020	113 2020	98 2020	91 2021	123 2021
Min	74 2023	79 2023	84 2023	101 2022	100 2019	114 2022	116 2022	116 2022	113 2021	97 2018	81 2022	75 2019	106 2023

❖ Vulnerability

It's crucial to understand that certain groups of people are at a higher risk of experiencing the negative effects of extreme heat events. These groups include individuals with physical or mobility constraints, cognitive impairments, economic constraints, and social isolation. Among these groups, the elderly, young children, low-income individuals, people with life-threatening illnesses, and those who are overweight are particularly vulnerable.

Additionally, power outages can be life-threatening for those who rely on electricity for life support. Moreover, outdoor enthusiasts and recreational users may also be more susceptible to adverse weather conditions. It is essential to take extra precautions and stay informed to protect these populations during times of excessive heat and strong wind events.

Power outages will disrupt communications. Our key utilities like water will be affected as well as transportation. This will disrupt our economy due to closed retail businesses, grocery stores, gas stations, ATMs, banks, and other services. A percentage of the population will have food spoilage and water contamination with no power for an extended period.

5. **Strong Wind Events**

Probability – High

Impact – High

Palm Desert experiences strong winds, particularly during the spring months. High winds can cause damage to buildings, infrastructure, and utilities, leading to power outages and potential safety hazards. Additionally, gusty winds can exacerbate wildfires and increase their speed and intensity.

The Coachella Valley is also susceptible to Microbursts; strong, damaging winds strike the ground and often give the impression that a tornado has struck. They frequently occur during intense thunderstorms. An intense microburst can result in damaging winds near 170 miles per hour and often lasts for less than five minutes. There are two (2) types of microburst windstorms: dry and wet. The most significant hazard associated with winds is an increased fire danger, but winds can also cause downed trees and power lines and property damage, as well as potentially hazardous conditions for travelers, RV's, semi-trailers, and aircraft

Dust Storms: The City's desert environment makes it prone to dust storms, especially during periods of dryness and when high winds coincide. Dust storms can significantly reduce visibility, posing risks for motorists and outdoor activities. In addition to the immediate safety concerns, dust storms can also have negative impacts on air quality and public health. The combination of high winds and sandy, sparsely vegetated soils characteristic of desert areas can create blow sand hazards. The City's Municipal Code (Chapter 24.12) requires that an applicant for a grading or demolition permit must first obtain an approved Fugitive Dust Mitigation Plan. This plan must include all reasonably available control measures so that fugitive dust emissions comply with South Coast Air Quality Management District Rule 403. Control measures at a construction or demolition site can include the use of soil stabilizers or watering. Erection of wind fences, covering soil stockpiles, and revegetation of disturbed surfaces.

Likelihood of occurrence: Very Likely

Near 100% chance of wind events occurring every year in the City of Palm Desert. These events can happen at any time during the year, but they are more common during the autumn and winter months. Wind can suddenly pick up speed, making it unpredictable and potentially dangerous.

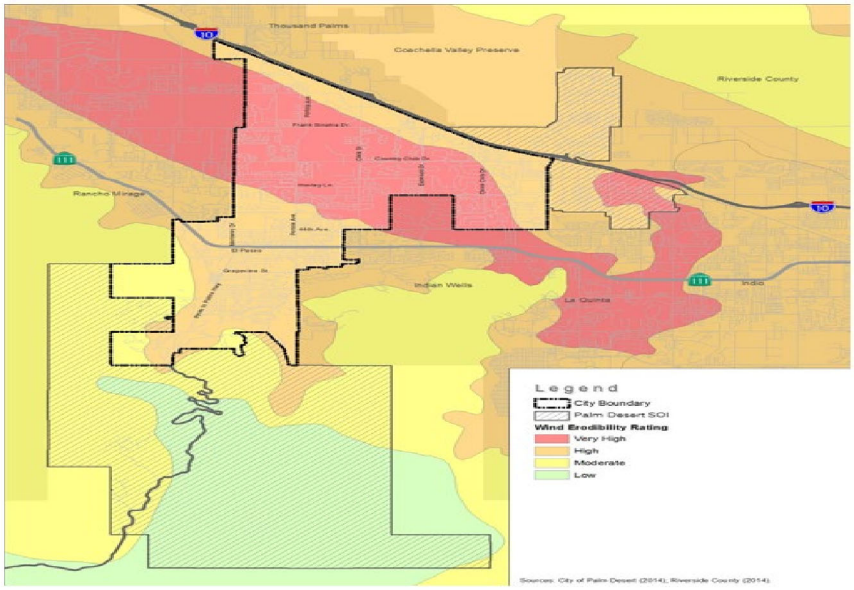
❖ **History**

The City of Palm Desert has experienced significant wind events.

Figure 3.8 - History of Max Wind Speed in the Coachella Valley

Maximum Wind Speed (mph)													
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2023	46	40	40	46	41*	---	---	---	---	---	---	---	46*
2022	39	40	40	53	51	48	39	35	38	41	40	31	53
2021	38	48	44	52	55	49	33	43	39	41	38	43	55
2020	31	37	37	43	41	48	39	37	32	43	41	36	48
2019	58	40	48	49	49	53	40	36	40	47	28	38	58
2018	26	36	38	49	52	43	35	38	35	40	41	30	52
2017	39	44	49	47	52	47	37	39	46	49	41	43	52
2016	43	41	48	44	49	45	41	35	48	46	53	43	53
2015	30	38	43	41	40	40	43	43	37	37	43	44	44
2014	43	44	48	51	49	47	43	36	38	35	39	32	51
2013	31	43	39	54	43	41	39	35	36	43	33	33	54
2012	54	40	45	44	47	45	37	29	45	36	37	35	54
2011	40	45	47	52	56	47	41	38	35	44	36	37	56
2010	39	45	46	55	48	56	45	43	43	39	43	41	56
2009	33	48	53	53	52	47	45	46	41	46	35	53	53
2008	43	49	51	54	53	59	35	37	37	46	41	44	59
2007	40	46	46	54	49	47	40	40	41	49	38	37	54
2006	43	54	40	46	49	40	45	44	47	48	40	43	54
2005	35	26	39	41	49	48	39	41	45	49	43	43	49
2004	33	33	40	49	51	41	40	38	40	38	32	26	51
Max	58	54	53	55	56	59	45	46	48	49	53	53	59

Figure 3.9 - Wind Erosion Hazard Map



❖ Vulnerability

According to the Environmental Protection Agency (EPA), some people are more vulnerable to the negative effects of extreme wind or heat events. These include individuals who have physical or mobility constraints, cognitive impairments, economic difficulties, and social isolation. Examples of such people are the elderly, young children, low-income individuals, people with life-threatening illnesses, and those who are overweight. Power outages can be life-threatening for those who rely on electricity for life support. Furthermore, outdoor recreational users could also be at risk during severe wind events.

All property is vulnerable to adverse weather, but structures in poor condition or vulnerable locations may risk the most damage. Homes near mature trees or overhead power lines may be more susceptible to wind damage and blackouts.

Palm Desert takes pride in its parks and constantly works to improve its recreational facilities. The Parks and Recreation Department's highest priority is to meet the City's goal of advancing the quality of life in Palm Desert's neighborhoods by delivering consistent services, maintaining the safety and appearance of city parks and recreation facilities, and inspiring community pride. During severe wind events, we have seen the disruption and damage caused to facilities and park closure.

The Family YMCA of the Desert and Desert Recreation District each works with the City of Palm Desert to provide a wide variety of programs to the community. The Community Gardens are open to all Palm Desert residents and business owners, whether they are novices or master gardeners. Palm Desert's Community Gardens provide residents with an opportunity to learn the joys and benefits of gardening. They are a place to share gardening experiences, make new friends, gather advice, and learn. The severe weather causes disruptions to programs due to park closure, damaged facilities, and the need to conduct repairs. For more than 70 years, Desert Recreation District (the district) has played a key role in enriching the quality of life for residents and visitors through the recreational services offered in the Greater Coachella Valley. They cover 1,800 square miles and provide recreational services to approximately 300,000 residents, in part by working with municipalities in a collective effort to assure equitable service delivery to every community. The Family YMCA of the Desert is the largest provider of licensed childcare in the Coachella Valley in addition to providing many opportunities in youth and family programming. The community relies on these services to continue as normal and we have seen the impact when weather has a disruption to services.

Incapacity and loss of roads are the primary transportation failures resulting from adverse weather, mostly associated with secondary impacts. High winds can cause significant damage to trees and power lines, blocking roads with debris, incapacitating transportation, and disrupting ingress and egress.

The vulnerability of the environment to adverse weather is the same as the exposure.

6. **Wildfire**

Probability – Medium

Impact – High

Wildfire 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 a record of any reported fire incidents, the Riverside County MJHMP indicates that from 2001 to 2011, more than 60 large fires (300 acres or greater in size) were reported in the county.

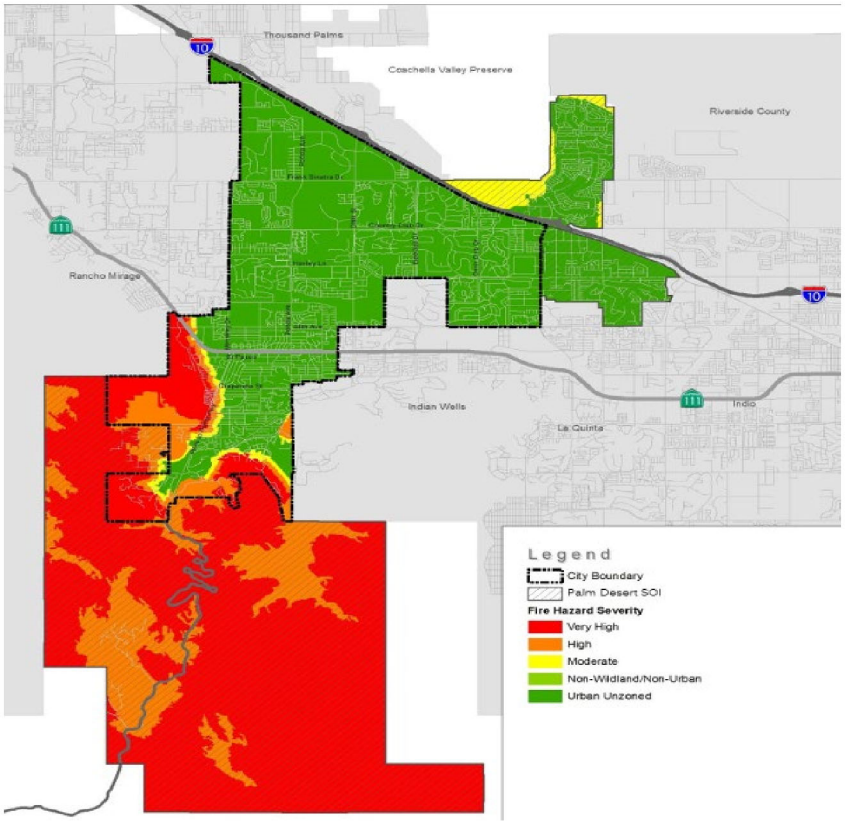
The Wildfire Hazard Severity Figure Zone presents the three fire hazard severity zones in Palm Desert. The Very High Wildfire Hazard Severity Zone (VHFHSZ) was identified by the California Department of Forestry and Fire Protection (Cal Fire) based on fuel load, slope, fire weather, and other relevant factors. The High (HFHSZ) and Moderate Fire Hazard Severity Zones (MFHSZ) were identified 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.

The City of Palm Desert has incorporated state requirements with the adoption of the 2013 edition of the California Building Standards Code and the 2013 edition of the California Fire Code by reference in Municipal Code Title 15, Building and Construction. The state's fire hazard severity zones shown in Figure 8.6 are incorporated and established in Palm Desert Municipal Code Section 15.26.040, supporting the City's ability to enforce state standards applicable to areas of higher risk.

Likelihood of occurrence: Likely

Between a 10 and 100 percent chance of happening in the next year. Three (3) weather conditions that may cause ignition and/or impact the behavior of wildfires are as follows; Thunderstorms and the associated lightning are a significant source of fire starts and usually occur mid to late summer. High winds can become steady up to 20 mph and gust up to 30-40 mph throughout the year but are most likely to exacerbate fires during the months of August through October when dry vegetation conditions are generally present. Hot, dry conditions most commonly occur in August and September. Fires can have a quick speed of onset, especially during periods of drought. Fires can burn for a short period of time or may have durations lasting for a week or more. Unlike earthquakes and wind, the extent of a wildfire is dependent on fuels, weather, and topography.

Figure 3.9.1 - Wildfire Hazard Severity Zone (2023)



❖ **Vulnerability**

Fires can have a negative impact on public health by reducing air quality due to smoke. Smoke inhalation and increased particulate matter in the air can cause lung irritation and respiratory

problems in vulnerable populations, such as young children, the elderly, and individuals with asthma, emphysema, or other underlying respiratory issues. Fires can be especially challenging for vulnerable populations who have difficulty evacuating due to disability, age, or mobility challenges. According to the U.S. Fire Administration, older adults are more than twice as likely as the general population to die in fires. In 2018, the Camp Fire in Paradise, California claimed the lives of 86 people, and of those positively identified, 77% were over the age of 65. Evacuation can also be challenging for those living in crowded or high-density housing situations, particularly in multi-story buildings. Those living in areas with low road density may have fewer options for evacuation. Populations with limited access to information may not receive critical warning information in time to reach safety.

Fires can have a significant impact on the economy by destroying or damaging structures, utilities, roads, and other essential assets. They can also cause business disruptions, school closures, and flight cancellations, thus affecting the tourism industry.

Buildings, critical facilities, utility lines, roads, and bridges are vulnerable to fire damage. When fire damages utility lines, it can lead to a loss of functionality in water, sewer, gas, and electricity systems. Buildings that do not meet the California State Building Code requirements may be more susceptible to fire damage. The materials used in buildings and landscaping around them can also affect their vulnerability. For instance, wood shakes can ignite quickly due to embers. The vegetation around a structure can also impact its risk level. Maintaining a buffer area (defensible space) between the vegetation and the structure can reduce the risk of fire damage. Furthermore, proactive landscaping schemes can be used in fire-prone areas, such as avoiding pine straw and mulch.

7. Terrorism

Terrorism, as defined by the FBI, is "the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population or any segment thereof, in the furtherance of political or social objectives". The act of terrorism could involve biological agents, nuclear technology, incendiary devices, chemicals, or explosives.

All City businesses and facilities are perceived as soft targets; however, due to the intended purpose of terrorism, it would most likely happen in more populous urban areas where more devastation (and fear) will ensue.

Likelihood of occurrence: Likely

Between a 10 and 100 percent chance of happening in the next year. Palm Desert is recognized as a world-class vacation and shopping destination. The city boasts a variety of renowned special events, including Fourth of July at the Park, Fashion Week, Film Festival, Concerts in the Park, McCallum Theatre, Tour de Palm Springs, and The Living Desert Zoo. The city has multiple luxury resort destinations and golf resorts that draw visitors from around the world.

The City of Palm Desert has identified high-profile targets for potential attacks**:**

Figure 3.9.2- Palm Desert Civic Center Park

The Palm Desert Independence Day Celebration concert and fireworks at Civic Center can have up to 15,000 people in attendance.

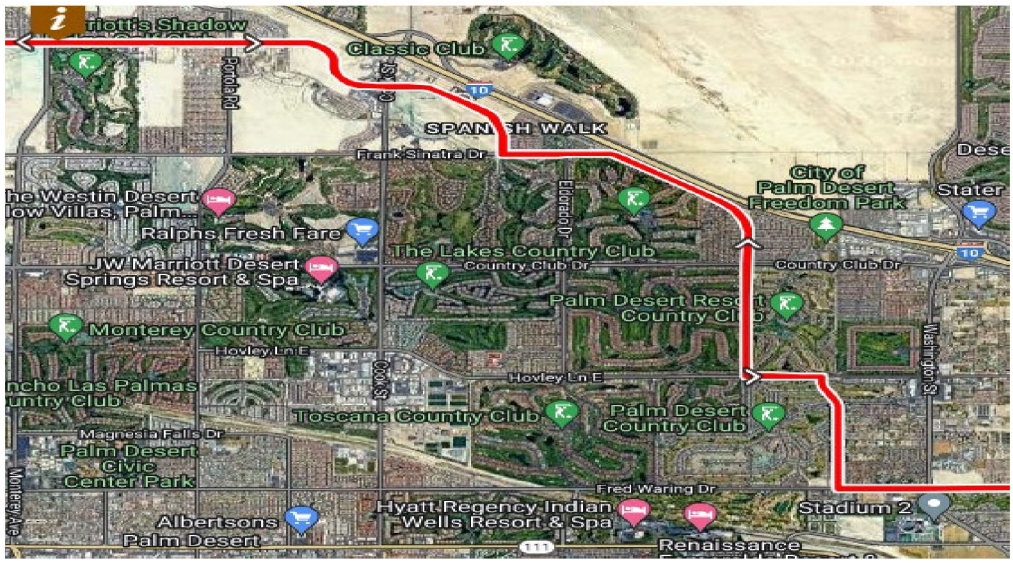
Figure 3.9.3 - Fashion Week on El Paseo

Fashion Week on El Paseo is a nine-day event that attracts more than 14,000 people.

Figure 3.9.4 - Golf Cart Parade

The City of Palm Desert's annual Golf Cart Parade on El Paseo can see anywhere from 15,000 attendees.

Figure 3.9.5 - Tour De Palm Springs



The Tour de Palm Springs passes through the City of Palm Desert and can see up to 6,000 bicyclists traveling through city limits.

❖ **History**

There are no significant historical events that have occurred to date.

8. **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 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.

Likelihood of occurrence: Likely

Between 10 and 100 percent chance of happening in the next year. The city has 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 the 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 the identification of types of waste and programs to manage them.

Airport Operations Hazard: Hazards from airports can result from accidents during takeoff and landing. Airports can also pose issues associated with land use incompatibilities.

Likelihood of occurrence: Likely

Bermuda Dunes Airport is the closest airport to the city and is located within the sphere of influence. This privately owned public-use airport encompasses over 90 acres. For the 12 months ending April 30, 2014, the airport had approximately 27,000 aircraft flights at an average of 74 per day.

Hazards Overview

The most prominent hazards faced by residents, businesses, and visitors of Palm Desert are a major earthquake on the southern section of the San Andreas Earthquake Fault line, localized flash flooding in winter months, dust storms, high windstorms, and drought. A long-term power outage in summer months could produce life-threatening extreme heat conditions for residents without access to air conditioning. Palm Desert could also be impacted by terrorism that initially targets the Los Angeles Metropolitan Area, and then spreads the impacts through initial or cascading hazards to all neighboring communities. The City of Palm Desert has experienced the following emergency activations where significant damage was incurred.

- September 9-12, 1976 & August 13-18, 1977- As a result of two Pacific hurricane systems, Kathleen, and Doreen, which became significant tropical storms, Palm Desert suffered considerable flood damage. The City's flood control system was deemed inadequate and was later addressed through significant infrastructure improvements, to mitigate future flood damage.

- December 26, 2006- City Hall was closed for three days and the EOC was activated and served as the Military/Federal Government/Local Government Command Center in response to the death of President Gerald R. Ford.

- July 30, 2015- The Palm Desert Country Club neighborhood experienced an isolated high wind/storm event that caused temporary flooding, loss of power for 24 hours, numerous trees being uprooted, and damaged homes from falling trees and high winds.

- January 30, 2020 – Palm Desert city staff and the community are following guidance by Federal, State, and county health officials to be prepared for the potential spread of the Covid 19 virus. Over the next 2 years, the changes to the community because of the virus caused financial instability, tremendous drawdown on the health care system, and the reduction of the workforce.

These hazards have been thoroughly assessed and addressed in the Local Hazard Mitigation Plan to ensure effective mitigation, preparedness, and response strategies are in place to protect the community of Palm Desert.

3.3 VULNERABLE POPULATIONS

Factors such as age, physical and/or mental condition, socioeconomic status, access to key services, and many other factors affect the ability of people to prepare for and protect themselves and their property from a hazardous event. Even though some hazard events may impact all or parts of Palm Desert, different populations may experience the impacts differently. Higher-income households, for instance, are more likely to afford the cost of retrofitting their homes to resist flooding or move to a location that is less prone to flooding than a lower-income household. As a result, the higher-income household is less likely to experience significant damage during a flood event than the lower-income household, even if the same amount of rain falls on both.

There are situational and physical characteristics that help identify vulnerable populations or populations at risk, that may not comfortably or safely access and use disaster/emergency resources. Specifically, when discussing emergency preparedness, the following groups could be considered vulnerable or at a greater risk during an emergency:

- Infants and small children under age three (3)
- Women who are pregnant
- Elderly people (age 65 and older)
- Homeless
- Obese and bedridden
- Mentally ill
- Those with cognitive disabilities
- Those with medical conditions (e.g., heart disease, diabetes high blood pressure)
- Those requiring life-saving medications (e.g., high blood pressure, depression, dementia)
- Individuals with drug or alcohol addiction
- Mobility constraints
- Those who are non-ambulatory
- The poor
- Non-English speakers who may not have access to information

A social threat analysis examines the ways hazard events are likely to impact different demographic populations in Palm Desert and where these different demographic populations live within the City. This includes assessing whether the people in an area of an elevated hazard risk are more likely than the average person to be considered a threatened population. The social threat analysis uses the following criteria to assess the threat to vulnerable populations:

• Disability status: Persons with disabilities may often have reduced mobility and experience difficulties living independently. As a result, they may have little or no ability to prepare for and mitigate hazard conditions without assistance from others.

• Income levels: Lower-income households are less likely to have the financial resources to implement mitigation activities on their residences. They may also struggle with having the necessary time to find and access educational resources discussing hazard mitigation strategies. Furthermore, lower-income households are less likely to be able to afford to move to areas that are safer or less at risk of being impacted by a hazard.

• Seniors (individuals at least 65 years of age): Seniors are more likely to have reduced mobility, physical and/or mental disabilities, and lower income levels, all of which may decrease their ability to prepare for and mitigate a hazard event. The social threat analysis also shows the threat other populations may encounter, such as persons experiencing homelessness or persons without access to lifelines (vehicles or communication networks). Since data for these groups are not readily available, there is no definitive way to determine the amount of these persons in areas of elevated risk, so this assessment will discuss how these other threatened groups may also be affected on a general level.

Figure 3.4.1 - The City of Palm Desert Threatened – Population Metrics (2023)

Threatened Population Metric	Community-Wide Data
Population	***51,163***
Households	***24,129***
Median Household Income	***$75,691***
Percentage of households with at least one person living with a disability over the age of 65 years	***28.4%***
Percentage of households with at least one person living with a disability under the age of 65 years	***10%***
Percentage of households living under the poverty limit	***12.9%***
Percentage of households with one-member aged 65+	***36.1%***
Percentage of households with a language other than English spoken at home (ages 5 years +)	***23.6%***
***** Population estimates rely on US Census ACS data. Any differences from other population estimates in this document may be related to how the data is analyzed.**	

3.4 MITIGATION PROJECT UPDATES

- Completion of Parkview Bridge Maintenance (Bridge Maintenance Program)
- Completion of the White Stone Lane Drainage Improvement Project.
- Completion of the Cook Street Rehabilitation Project.
- Completion of the Installation of the North Shere Wind Fence Project

Figure 3.5.1 - Park View Bridge (Bridge Maintenance Program)

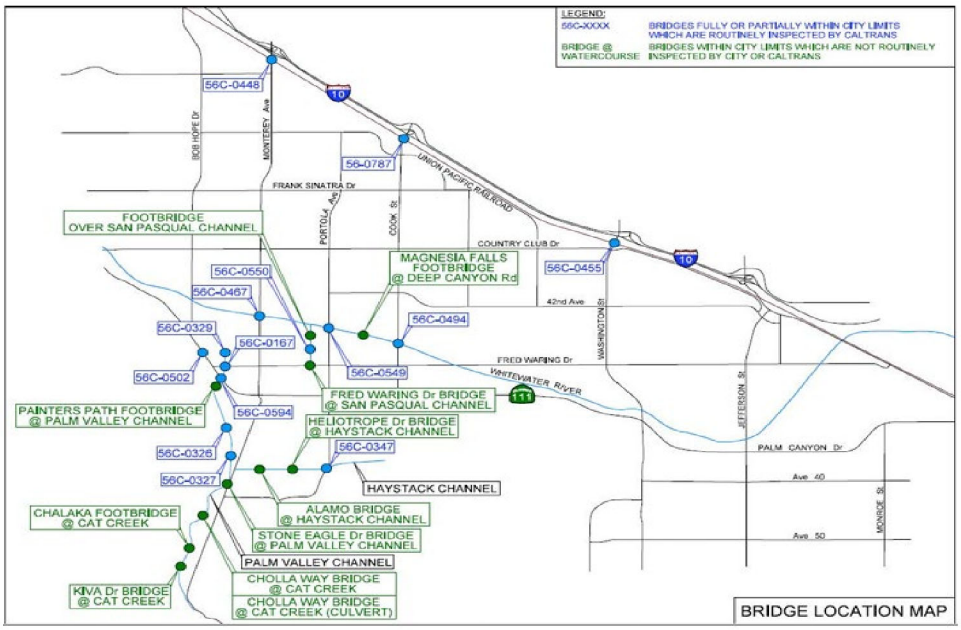
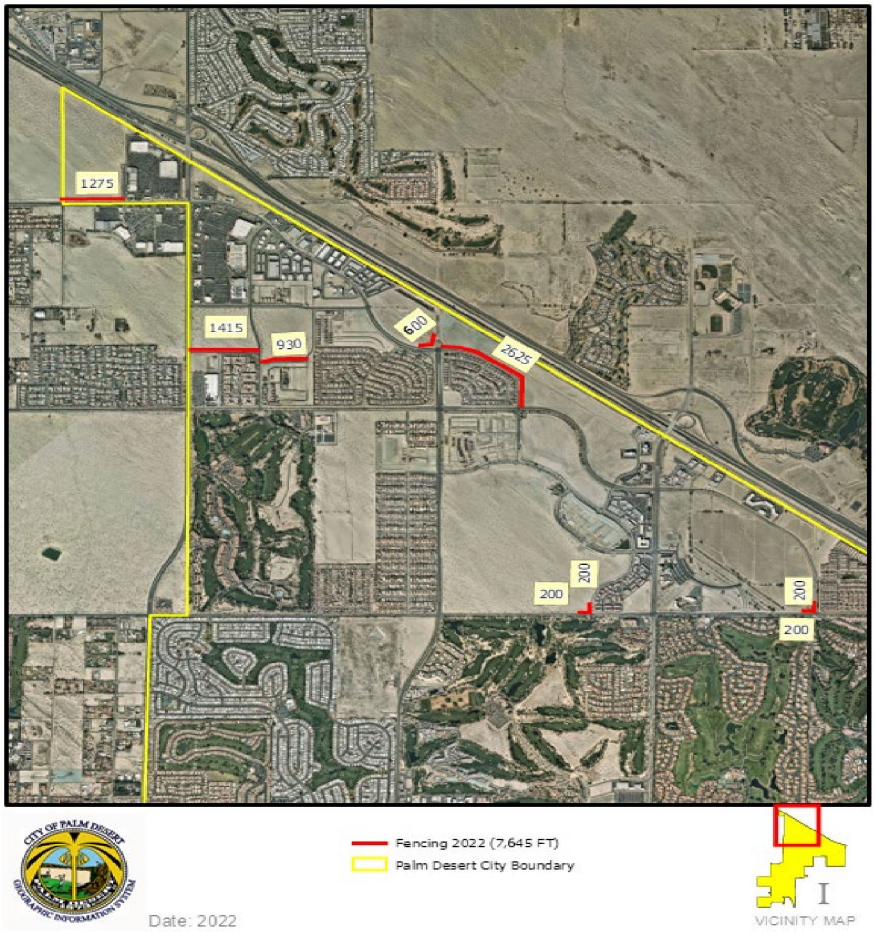


Figure 3.5.2- White Stone Lane Drainage Improvements

Figure 3.5.3- North Sphere Wind Fence Project (2022)



Palm Desert is a city with a clear vision of its future. The city staff and elected officials welcome and encourage community organizations, the business community, other public agencies, neighborhood groups, and passionate individuals to help implement many of these actions.

These implementation actions are specific physical infrastructure necessary for achieving mitigation actions for each identified hazard as described in the General Plan.

Figure 3.5.4- Palm Desert 2023 Mitigation Actions

Hazard/ Priority	Mitigation Action	Departments	Funding	Grant	Completion Timeframe
Flood					
High	Purchase parcels within the city to be used as retention basins for excess water flow.	Public Works	Capital Improvement Fund	Hazard Mitigation Grant Program	2023-2028

High	Enforce the City's Floodplain Management Ordinance to mitigate flood hazards in development within the 100-year floodplain and flash flood areas through specific standards.	Code Enforcement	General Fund	BRIC	2023-2028
High	Maintain the major flood control channel that exists in Palm Desert which confines and directs stormwater runoff. The Mid Valley Channel runs west to east through the city from Monterrey Avenue to Washington Street. This channel carries stormwater runoff which originates in western Coachella Valley.	Public Works	Capital Improvement Fund	Flood Mitigation Assistance	2023-2028
High	Expansion of the Section 29 retention basin along the I-10 freeway. The basin's current physical capacity of 45.4 acre-feet, another 16.3 acre-feet of retention volume would reduce the risk of overflows and provide the storage necessary for a 100-year storm event	Public Works	Capital Improvement Fund	HMPG	2023-2028
Drought					
Medium	Encourage golf courses and other water-intensive land uses to use treated effluent for irrigation.	Planning	General Fund	SWEEP	2023-2028
High	Annually monitor citywide water usage with Coachella Valley Water District (CVWD) and recommend effective water conservation measures.	Public Works	General Fund	Water SMART Water & Energy Efficiency	2023-2028
Low	Cooperate with CVWD to develop education programs that encourage water conservation.	Management	General Fund	County-Wide Funding Programs CSWB	2023-2028
Medium	Residential Turf Conservation Project: City Council approved the partnership with Coachella Valley Water District (CVWD) as of October 6, 2022. CVWD rebate programs are designed to assist residential customers who want to reduce their water usage.	Planning/ Public Works	General Fund	Public Agency Turf Replacement	2022-2024
Earthquake					
High	Adopt and maintain high standards for the seismic performance of buildings through prompt adoption and careful enforcement of the most current seismic standards of the Uniform Building Code. IV A2.2 Develop a structural hazards reduction program (per Section 8875 of the Government Code) for the upgrading of seismically hazardous buildings.	Building and Safety	General Fund	NEHRP	2023-2028
Medium	Developments in or adjacent to hillsides require geological and soil engineering studies to ensure safety from potential landslides and/or rockfalls. Additionally, development adjacent to hillside areas must minimize the potential hazard of falling rocks through project design.	Engineering	General Fund	Engineering for Natural Hazards	2023-2028
Extreme Heat					
High	Enforce the City standard of inspection and management of hazardous trees. The City maintains and identifies high-risk trees annually. Trees are utilized as a shade barrier during extreme summer weather.	Public Works	General Fund	Extreme Heat & Community Resilience	2023-2028

Wind					
High	The City's Municipal Code (Chapter 24.12) requires that an applicant for a grading or demolition permit must first obtain an approved Fugitive Dust Mitigation Plan. This plan must include all reasonably available control measures so that fugitive dust emissions comply with South Coast Air Quality Management District Rule 403. Control measures at a construction or demolition site can include the use of soil stabilizers or watering. Erection of wind fences, covering soil stockpiles, and revegetation of disturbed surfaces'	Code Enforcement/ Public Works	General Fund		2023-2028
Wildfire					
Medium	Develop a comprehensive fire plan which forecasts future personnel and equipment needs and requires new development to pay its pro-rata share of costs for fire services.	Management	General Fund	California Fire Foundation	2024-2028

Section 4.0 – HAZARD IMPACT AND RISK ASSESSMENTS

4.1 ESTIMATING POTENTIAL LOSS

Table 4.2 shows the city's critical infrastructure and the number of buildings in that classification. Table 4.3 shows the City's exposure to hazards in terms of the number and value of structures. Riverside County's assessor's data can be used to calculate the improved value of parcels.

4.2 CRITICAL FACILITIES AND INFRASTRUCTURE

Critical Facilities Type	Number
Public Safety Dispatch	1
Emergency Operations Center	1
City Hall	1
Fire Stations	3
Wastewater Treatment Plants	1
Police Facility	1
Maintenance Yards	1
Senior Community Centers	1
Schools	9
Radio Repeaters	2

4.3 TABLE REPLACEMENT VALUES

Name of Asset	Replacement Value ($)
City Hall & EOC 73-510 Fred Waring Dr, Palm Desert, CA 92260	$29,000,000
Fire Department, Station 67 73200 Mesa View Dr, Palm Desert, CA 92260	$5,000,000
Fire Department, Station 33 44400 Town Center Way, Palm Desert, CA 92260	$6,000,000
Fire Department, Station 71 73995 Country Club Dr, Palm Desert, CA 92260	$5,000,000
Palm Desert Sheriff's Station 73705 Gerald Ford Dr, Palm Desert, CA 92211	$33,000,000
Palm Desert Corp. Yard 74705 42nd Ave, Palm Desert, CA 92260	$10,000,000
Palm Desert Library 73-300 Fred Waring Dr, Palm Desert, CA 92260	$10,000,000
The Joslyn Center 73750 Catalina Way, Palm Desert, CA 92260	$2,000,000

SECTION 5.0 – COMMUNITY RATING SYSTEM

5.1 REPETITIVE LOSS PROPERTIES

Palm Desert has no repetitive loss properties or severe repetitive loss properties relating to floods in the City of Palm Desert.

5.2 NATIONAL FLOOD INSURANCE PROPERTIES

A. ***Describe participation in NFIP, including any changes since the previously approved plan.***

As of October 13th, 2011, The City of Palm Desert is currently in compliance with the NFIP.

B. ***Date first joined NFIP.***

October 13th, 2011

D. ***Identify actions related to continued compliance with NFIP.***

The City of Palm Desert adopted an amended floodplain management ordinance on October 13, 2011, and there have been no changes.

E. ***CRS member***:

NO

F. ***Describe any data used to regulate flood hazard areas other than FEMA maps***. None

G. ***Have there been issues with community participation in the program*?**

Continued communication with the citizens on the importance of flood insurance.

H. ***What are the general hurdles for effective implementation of the NFIP?***

Community involvement and education

I. Summarize actions related to continued compliance with NFIP.

Compliance is verified through Community Assistance Visits (CAV) that are conducted by staff members from FEMA and/or the California Department of Water Resources

SECTION 6.0 - CAPABILITIES ASSESSMENT

6.1 REGULATORY MITIGATION CAPABILITIES

City of Palm Desert – Jurisdictions Regulatory Mitigation Capabilities Table

Regulatory Tool	Yes/No	Comments
General plan	Yes	The current plan was updated in 2016. City safety element.
Zoning ordinance	Yes	Title 25 Overlay Districts.
Subdivision ordinance	Yes	Title 26.

Site plan review requirements	Yes	2022 California Model Codes.
Floodplain ordinance	Yes	Title 24.
Other special purpose ordinance (storm water, water conservation, wildfire)	Yes	Water Conservation Ordinance, Multi-Species Habitat Conservation Plan.
Building code	Yes	2022 California Model Codes.
Fire department ISO rating	Yes	ISO rating 5.
Erosion or sediment control program	Yes	PM10 Regulations.
Storm water management program	Yes	Catch Basin & Storm Drain Cleaning Program.
Capital improvements plan	Yes	Capital Improvement Program
Economic development plan	Yes	
Local emergency operations plan	Yes	Continuous updates have been applied to the EOP.
Flood Insurance Study or other engineering study for streams	Yes	FEMA Flood Insurance Study, 2017 Whitewater River Flow

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. There are a multitude of methods and processes that a jurisdiction may use to improve upon current capabilities to mitigate emergencies or disasters. The City of Palm Desert has identified the below to support this thought process:

Personnel: Hiring of new staff in departments with identified deficiencies in capabilities or processes can and will make the staff stronger thereby increasing capabilities. However, the addition of employees is always a point of contention that does not always materialize. Through training and implementation of additional support resources as well as the creation of working groups to support the mitigation project planning process may prove to be successful in the absence of additional staffing.

Regulatory Mitigation Capabilities: Continue to ensure that necessary regulations are put in place relating to building codes, ordinances, and state and federal requirements.

Administrative: The administrative capabilities can be improved by developing a mitigation actions implementation plan that is reviewed and updated on a recurring basis. This process would be used to update the LHMP over the coming years providing updates to the status of projects and actions.

Technical: Incorporate the technical expertise of residents within the City staff into the emergency management planning process to include the development of mitigation projects.

Fiscal: Identify additional funding opportunities that can be expanded upon for mitigation. In previous years, hazard mitigation grants have not been utilized to complete any projects that have been identified by the hazard mitigation planning team.

Mitigation Outreach and Partnerships: Expand current capability through an increase in the number of events participated in, and presentations conducted to the community through integration with HOAs and civic organizations. Promote preparedness through increased use of social media and the creation of an emergency management section for the City application.

The 2016 General Plan update provided an opportunity to review and update the current capabilities to mitigate hazards. This also provided an opportunity to identify where capabilities could be improved or enhanced. Specific opportunities include:

Safety Element, As required by state law, this 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 and Human-caused Hazards.

Outreach: The City of Palm Desert sees an opportunity to increase collaboration within the region that sustains maximum resilience to emergencies and disasters. Efforts for improvements could include:

- 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.

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

- 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.

- Utility Reliability - Coordinate with providers and agencies including 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.

Training: Training opportunities should be provided to integrate hazard information for City staff and community members. Citizen-based disaster preparedness and emergency response should

continue to be promoted through Riverside County's Community Emergency Response Team (CERT) training and certifications.

Geologic hazards: A built environment that minimizes risks from seismic and geologic hazards, including hazards due to wind erosion. Efforts for improvement could include:

- 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.

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

- 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.

- 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.

Flood Hazards: A community where flooding and inundation hazards are contained within areas reserved for open space. Efforts for improvements could include:

- 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.

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

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

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

Wildfire hazards: Existing and future developments are protected from wildfire hazards, with decreased frequency and intensity of wildfire incidents despite increased density and urbanization within the community. Efforts for improvements could include:

- Fire Preparation- 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.

- 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.

- Brush Clearance - Require new development and homeowner's associations to maintain brush clearance criteria that meet 120% of the current state requirement for fire hazard severity zones in the city.

- 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.

- 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.

- Future Emergency Service Needs - Require new developments and homeowner's associations along the wildland-urban interface to house the proper equipment and infrastructure to respond to wildland fire incidents.

- 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.

The Jurisdiction General Plan reflects the City's long-range aspirations of physical form and amenity and guides developmental regulations. More than 100 interested residents, business owners, and policymakers worked together to develop a 20-year strategic plan for the City. The yearlong process and resulting document, the 2013-2033 Strategic Plan, "Envision Palm Desert-Forward Together," laid the groundwork and direction for the General Plan Update. Three of the plans' goals, in particular, support mitigation. These goals and their policies are included below.

Goal 1: Health & Wellness

A broad range of social, economic, and environmental factors all contribute to health including nutritious diets, active lifestyles, clean air and water, education, jobs, and medical care.

Avoid locating new air quality-sensitive uses (schools, childcare centers, senior centers, medical facilities, and residences) in proximity to sources of localized air pollution (e.g., Interstate 10, high-traffic roads, certain industrial facilities), and vice versa. Where such uses are located within 500 feet of each other, require preparation of a health impact assessment (HIA) or similarly effective health analysis as part of the CEQA environmental review process, to analyze the significance of the health impact on sensitive land uses and incorporate project-specific mitigation measures to reduce potential impacts.

Require new development to meet the State's Green Building Code standards for indoor air quality performance and promote green building practices that support "healthy buildings," such as low VOC materials, environmental tobacco smoke control, and indoor air quality construction pollution

prevention techniques. Sensitive receptors. Avoid the siting of new projects and land uses that would produce localized air pollution in a way that would adversely impact existing air quality-sensitive receptors including schools, childcare centers, senior housing, and subsidized affordable housing. The recommended minimum distance separating these uses should be 500 feet. When a minimum distance of 500 feet cannot be avoided, a health impact assessment (HIA) shall be completed in compliance with Policy 6.1.

Goal 2: Environmental Resources

The vision is to be a responsible steward of the city's natural resources. Priorities are to reduce per-capita consumption of energy and water, promote greater use of sustainable materials with an eye upon the needs of future generations, encourage all new construction to be net zero energy in design and exceed the Coachella Valley Water District's efficiency standards, and encourage property owners to reduce energy and water consumption.

Drought, climate change, and development pressure on environmental resources are key issues within the City of Palm Desert. The California Department of Finance estimated a growth of 9,262 residents between 2000 and 2014, or 22.5% growth in the City of Palm Desert. Significant population growth throughout Riverside County has led to increased development pressure in and around the city. Without proper planning, new developments can contribute to further depletion of limited water and energy resources, increased air and water pollution, and negative impacts on biological resources. Water resources are a basic and necessary component of inhabitance, and a community's survival may be endangered if water needs cannot be met.

The City's Water-Efficient Landscaping Ordinance, adopted as part of the California Water Conservation Landscaping Act of 1990, established minimum water-efficient landscaping requirements for all new and rehabilitated public and private landscape projects.

6.2 ADMINISTRATIVE/TECHNICAL MITIGATION CAPABILITIES

Personnel Resources	Yes/No	Department/Position
Planner with knowledge of land development/land management practices	Yes	Planning Depart. / Dir. of Community Development
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Public Works Director, City Engineer, and Building Official
Engineer with an understanding of natural hazards	Yes	Looking at options for educational options on expanding on engineering for natural hazards.
Personnel skilled in GIS	Yes	Human Resource/GIS Technician
Full time building official	Yes	Building Department/ Official
Floodplain manager	Yes	Public Works Director
Emergency manager	Yes	Human Resources/ Risk Manager
Grant writer	No	
GIS Data—Land use	Yes	Human Resource/GIS Technician

GIS Datalinks to Assessor's data	Yes	Human Resource/GIS Technician
Warning systems/services (Reverse 9-11, outdoor warning signals)	Yes	Riverside County Early Warning Notification System

6.3 FISCAL MITIGATION CAPABILITIES

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants	Yes	
Capital improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	With voter approval
Fees for water, sewer, gas, or electric services	No	Exploring options to reduce the impacts of hazards
Impact fees for new development	Yes	
Incur debt through general obligation bonds	Yes	With voter approval
Incur debt through special tax bonds.	Yes	With voter approval
Incur debt through private activities.	No	
Withhold spending in hazard-prone areas	N/A	
Other	N/A	

6.4 MITIGATION OUTREACH AND PARTNERSHIPS

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.

Palm Desert CERT

The City of Palm Desert has been training residents in the FEMA Community Emergency Response Team (CERT) training program. The City of Palm Desert offered two CERT Course in 2018, and 2022. The city is planning to have two CERT training courses in 2023 and 2024. The city has a fully equipped Mass Shelter Response Trailer to assist with community response and recovery following a major earthquake, flood, or other disaster.

The City of Palm Desert participates with the Riverside County Emergency Management Department to provide training and support to CERT volunteers. The use of CERT-trained volunteers helps mitigate the effects of a major earthquake, flood, fire, public health emergency, terrorism-related event, or other community emergencies.

The Economic Development Program promotes economic growth in Palm Desert to support the City's economy and improve opportunities for community members. It also conducts marketing and promotion activities for Palm Desert. The program can assist with mitigation measures related to business growth and other improvements to the local economy and act as a liaison between the City and local businesses.

The Community Development Department is responsible for planning- and building-related activities in Palm Desert, including issuing permits, conducting environmental reviews, preparing planning documents, and addressing housing issues. Mitigation activities related to planning and building can be implemented by this department.

The Building Code specifies how new structures can be built. It includes the California Building Code and any amendments made by the City. Mitigation actions may involve amending the Building Code to improve a building's safety or structural stability.

The City's General Plan outlines long-term direction for development and policy in the City. There are opportunities to coordinate local hazard mitigation actions with policies within the boundaries of the City as governed by the General Plan.

City staff have been trained in CPR/AED, First Aid, and Stop the Bleed. Staff have also been trained in the proper use of fire extinguishers and response to active shooter events. In the training, staff learned to:

- Control severe bleeding.
- Manage airways.
- Care for patients going into shock.
- Use an automatic external deflator (AED)
- Extinguish small fires.
- Steps for safety during an active shooter event
- Evacuation and safety techniques

HOA MEETINGS/BUSINESS AND HOTEL ROUNDTABLE/RADIO COMMUNICATION

The City of Palm Desert has held numerous emergency preparedness trainings for local HOA, and disaster preparedness groups (i.e., CVDPN), and may emulate a neighboring jurisdiction's family and neighborhood emergency planning program called PREP (People Responding with Emergency Preparedness) to complement existing CERT training. The PREP Program teaches residents how to meet and develop their own neighborhood emergency response plan to implement before a large earthquake, flood, or other community emergency. Having Palm Desert

neighborhoods prepared to respond in their own areas to take care of injuries and utility problems will greatly lessen the impacts of an earthquake or other community disaster. It will also take the load from our first responders who will be able to concentrate on the most serious city issues.

The city has also hosted roundtables on emergency preparedness with local hotel/businesses.

Palm Desert has developed a relationship with members from the Riverside County RACES and has radio equipment installed in its EOC for exclusive use by their liaison. In addition, the City has partnered with a local communication vendor, to make EOC communication possible between the City and various homeowner associations. Recent upgrades to the communications within the EOC have allowed for digital communications with the OA, neighboring jurisdictions, city staff, and the Amateur Radio Clubs active during a disaster.

The ability to obtain information on the condition of these neighborhoods will allow first responders and emergency responders to determine those areas in need of resources and support, as well as convey this information to the County Operational Area.

6.5 FUNDING OPPORTUNITIES

Table 6.1- The City of Palm Desert has grant opportunities for Mitigation

Grant Name	Agency	Purpose	Contact
Resilience Grant (BRIC)	U.S. Department of Homeland Security, Federal Emergency Management Agency	To support states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards.	FEMA 500 C. Street, SW Washington, DC 20472 Phone: (202) 646-4621 www.fema.gov
Hazard Mitigation Grant Program	U.S. Department of Homeland Security, Federal Emergency Management Agency	To prevent future losses of lives property due to disasters; to implement State of local hazard mitigation plans; to enable mitigation measures to be implemented during immediate recovery from a disaster; and to provide funding for previously identified mitigation measures to benefit the disaster area.	FEMA 500 C. Street, SW Washington, DC 20472 Phone: (202) 646-4621 www.fema.gov
Flood Mitigation Assistance (FMA)	U.S. Department of Homeland Security, Federal Emergency Management Agency	To help States and communities plan and carry out activities designed to reduce the risk of flood damage to structures insurable under the NFIP.	FEMA 500 C. Street, SW Washington, DC 20472 Phone: (202) 646-4621 www.fema.gov
Emergency Management Performance Grants (EMPG)	U. S. Department of Homeland Security; Federal Emergency Management Agency	To encourage the development of comprehensive emergency management at State and local levels and to improve emergency management planning, preparedness, mitigation, response, and recovery capabilities.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov
Community Development	U.S. Department of Housing and Urban Development	To develop viable urban communities by providing decent housing and a suitable living environment. Principally for low-to moderate income individuals.	HUD 451 7th Street, S. W. Washington, DC 204107000 Phone:

Grant Program (CDBG)			(202) 708-3587 www.hud.gov
Public Assistance Program (PA)	U.S. Department of Homeland Security, Federal Emergency Management Agency	To provide supplemental assistance to States, local governments, and certain private nonprofit organizations to alleviate suffering/hardship resulting from major disasters or emergencies declared by the President. Under Section 406, Public Assistance funds may be used to mitigate the impact of future disasters.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov
Emergency Watershed Protection	U.S. Department of Agriculture, Natural Resource Conservation Service	To provide emergency technical/financial assistance to install or repair structures that reduce runoff and prevent soil erosion to safeguard life and property.	NRCS PO BOX 2890 Washington, DC 20013 Phone: (202) 720-3527 www.nrcs.usda.gov
Land and Water Conservation Fund Grants	U. S. Department of the Interior, National Park Service	To acquire and develop outdoor recreation areas and facilities for the general public, to meet current and future needs.	NPS PO Box 37217 Washington DC 200137127 Phone: (202) 565-1200 www.nps.gov
Disaster Mitigation and Technical Assistance Grants	U.S. Department of Commerce, Economic Development Administration	To help States and localities to develop and /or implement a variety of disaster mitigation strategies.	EDA Herbert C. Hoover Building Washington, DC 20230 Phone: (800) 345-1222 www.eda.gov
Watershed Surveys and Planning	U.S. Department of Agriculture, Natural Resource Conservation Service	To provide planning assistance to Federal, State, and local agencies for the development of coordination water and related land resources programs in watersheds and river basins	NRCS PO Box 2890 Washington, DC 20013 Phone: (202) 720-3527 www.nrcs.usda.gov
National Earthquake Hazards Reduction Program (NEHRP)	U.S. Department of Homeland Security, Federal Emergency Management Agency	To mitigate earthquake losses that can occur in many parts of the nation providing earth science data and assessments essential for warning of imminent damaging earthquakes, land use planning, engineering design, and emergency preparedness decisions.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov
Assistance to Firefighters Grant	U. S. Department of Homeland Security, Federal Emergency Management Agency	Competitively awarded project grants to provide direct assistance, on a competitive basis, to fire departments to protect the health and safety of the public and firefighting personnel against fire and fire-related hazards.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov
Fire Management Assistance Grants	U. S. Department of Homeland Security, Federal Emergency Management Agency	To provide project grants and the provision of specialized services for the mitigation, management, and control of fires that would constitute a major disaster.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov
Engineering for Natural Hazards	National Science Foundation	Supports fundamental research that advances knowledge for understanding and mitigating the impact of natural hazards on constructed civil infrastructure.	National Science Foundation Phone: (703) 292-7024 https://www.nsf.gov

US Homeland Security Emergency Operations Center Funding (EOC)	U. S. Department of Homeland Security, Federal Emergency Management Agency	Improve emergency management and preparedness capabilities by supporting flexible, sustainable, secure, strategically located, and fully interoperable EOCs with a focus on addressing identified deficiencies and needs.	FEMA 500 C Street S.W. Washington, DC 20472 Phone (202) 646-4621 www.fema.gov

The City of Palm Desert has the same funding opportunities as Riverside County Operational Area.

SECTION 7.0 - MITIGATION STRATEGIES

The mitigation strategy for the City of Palm Desert is based on informed assumptions, recognizing both mitigation challenges and opportunities, with the ultimate mission of creating a disaster resistant and sustainable community for the future. The mitigation strategy is derived from an in-depth understanding of possible deficiencies between potential vulnerabilities and existing capabilities, with the mitigation objectives in mind. The mitigation strategy builds upon the previous mitigation actions identified by the City of Palm Desert 2017 LHMP and was expanded to consider current needs.

7.1 MITIGATION GOALS AND OBJECTIVES

In order to improve the process of identifying mitigation measures, the City has developed mitigation goals and objectives. These goals and objectives are in line with the City's mission to create a disaster-resilient, sustainable community, while also adhering to the Operational Area. The City of Palm Desert is located in an area that is prone to environmental hazards. The following goals and policies demonstrate the City's commitment to ensuring the safety of its citizens in the event of natural or man-made hazards.

Goal 1: Maximize the delivery of public safety services by proactively mitigating any potential risks to human life and property.

Objective 1.1 – Work with the fire and police departments to identify new public safety needs to account for population growth.

Objective 1.2 - Require new development to conform with the City's Particulate Matter (PM) Ordinance as a condition of issuance of grading permits. Evaluate the need for permanent control devices in particularly windy areas to be installed before project grading.

Objective 1.3 - Enforce the Floodplain Management Ordinance, which outlines specific standards for development in flood-prone areas, to mitigate flood hazards.

Objective 1.4 - Monitor and periodically update the Master Plan of Drainage to reflect changes in local and regional drainage and flood conditions.

Objective 1.5 - Monitor the Capital Improvement Plans for drainage management, and control shall be developed, updated, and maintained.

Objective 1.6 - Evaluate the need for an upgrade from a 25-year on-site retention to 100-year on-site retention in crucial northern portions of Zone 4.

Goal 2: Enhance community emergency preparedness through effective response and education to reduce loss of life and property damage from disasters and public safety emergencies.

Objective 2.1 – Ensure a viable Community Emergency Response Teams (CERT) program by hosting a minimum of three CERT classes per year.

Objective 2.2 – Expand cardiopulmonary resuscitation/automated external defibrillator (CPR/AED) and fire safety training available for residents and businesses as needed.

Objective 2.3 - Train the Emergency Operations Center and general City staff in the Emergency Operations Plan and the California Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the Incident Command System (ICS).

Objective 2.4 – Gather the support of Church, Civic, Business, and Community Groups, including Homeowners Associations, to support and promote CERT and individual preparedness in the city.

Goal 3: Prevent damage to life and property resulting from seismic and seismic-induced hazards to the greatest extent possible.

Objective 3.1 - Ensure seismic safety of buildings by promptly adopting and strictly enforcing California's latest building code standards.

Objective 3.2 - Develop a program for reducing structural hazards (per Section 8875 of the Government Code) in seismically unsafe buildings.

Objective 3.3 - Maintain a program by which all potentially hazardous structures that pose a threat due to inadequate seismic design, engineering, or construction are identified, inventoried, and strengthened.

*Note: This list of mitigation strategies is based on currently available funding. Identified mitigation projects are not guaranteed to be completed if funding is no longer available.

7.2 MITIGATION ACTIONS

The 2017 Palm Desert annex had a mitigation strategy based on “goals and objectives” instead of fully formed mitigation actions with the kind of detail that would truly make them actionable. Due to the lack of detailed information, we are listing the mitigation actions we know to have been completed over the past 5 years.

Below are the proposed mitigation actions in 2017 that have been completed.

Completed Mitigation Projects	Overview	Type of Mitigation
Emergency Operations Center and general city staff in our Emergency Operations Plan and the California Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the Incident Command System (ICS)	City staff are required to complete ICS Training 100, 200, and 700 during the probationary period.	Outreach
Enlist the support of Church, Civic, Business, and Community Groups including Homeowners Associations to support and promote CERT and individual preparedness in the city.	Ongoing promotion of citizen-based disaster preparedness and emergency response through Riverside County's Community Emergency Response Team (CERT) training and certifications.	Outreach
Backup Energy Sources	The City has backup generators for the following locations: Palm Desert City Hall, Palm Desert Corporation Yard, and The Joslyn Center.	Planning

The City of Palm Desert has identified its high-priority hazards and has listed mitigation actions accordingly. To better facilitate the process of identifying mitigation measures, mitigation goals and objectives have been established. These goals and objectives are aligned with the City's mitigation mission of creating a disaster-ready, disaster-resilient, and sustainable community while remaining in accordance with the Operational Area. Palm Desert is in a geographical area that is vulnerable to environmental hazards at times. The following goals and policies reflect the City's commitment to providing a safe environment for its citizens in the event of natural or man-made hazards.

Earthquake

Ensure that all those who live, work, and play in Palm Desert are safe by providing public safety through a community-based approach that focuses on preventing problems and timely response. A community better informed about safety preparedness will enable residents to be more self-reliant not only before emergency services are deployed but also following a disaster for up to 10 days.

- Ensure a viable Community Emergency Response Teams (CERT) program by hosting CERT classes and examining program needs annually based on population & community interest.

Flood

The City's Floodplain Management Ordinance specifies construction standards for all areas of flood hazards. All new construction and improvements must be constructed using methods and practices that minimize flood damage and provide adequate drainage.

Extreme Heat

To reduce the potential impacts of extreme weather, the City of Palm Desert encourages public participation and usage of the Nixle emergency notification system. This system notifies residents in advance of any hazards and impending severe weather events in their area (earthquake, flood, fire). The City also encourages the residents to visit the City's website to learn steps to reduce personal risk.

Reduce potential impacts of extreme temperatures by increasing public awareness of extreme temperatures, including shelter locations and cooling/warming stations.

Drought

Decrease water usage on public and private parcels through the existing Water Conservation Program implemented by the Coachella Valley Water District. Encourage residents to participate in CVWD programs that help conserve water; programs such as the Turf Rebate. Encourage contractors for residential and commercial developments to offer options promoting partnering agencies' programs.

General Plan Goals and Policies:

- Hazard Information: Establish and maintain a database containing maps and other information that identifies and describes community hazards.
- Local Hazard Mitigation Plan (LHMP): Maintain and regularly update the City's 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. Riverside County Emergency Management Department oversees this program.
- 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. No funding is available. Riverside County Emergency Management Department oversees this program.
- Seismic Retrofits to Existing Building Stock: Create a phased program for seismic retrofits to existing public and private unreinforced buildings to meet

current requirements. This would fall under the planning and building department. Currently, no funding is available. Looking at FEMA pre-disaster grants

- 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.
- Fire Preparation: Maintain optimal fire readiness and response service in coordination with Riverside County and other agencies.

7.3 ON-GOING MITIGATION STRATEGY PROGRAMS

Inventory Worksheet includes the CREWS system, Palm Desert CERT, and various drainage improvements. The City's LHMP review team will continue to review and prioritize mitigation tasks for the next five years and may likely see this list increase. This list will include an implementation process, a funding strategy, and a responsible agency.

The city procured the Matrix Consulting group in 2021 to assess the emergency services provided by CAL Fire. Their findings included a recommendation to plan and construct a fourth fire station at the intersection of Gerald Ford Drive, just north of Frank Sinatra Drive.
In October 2022, staff advertised an RFP for the design of fire station 102 (FS 102) and building assessment of fire stations 33 and 71. Staff requests approval of the design and building assessment contract at the end of January 2023. FS 102 still needs to be designed, but it is estimated to be 9,718 square feet and includes 3 Apparatus bays, dormitories, offices, living quarters, and a gym. Additionally, FS 102 is being designed to allow for future expansion. The goal of the building assessments of FS 33 and 71 is to inform city staff of the status of the fire stations and their assets and provide an in-depth analysis of renovations vs rebuild costs.

Current Mitigation Projects:

The Capital Projects Department is responsible for the delivery of some of the City's most complex, diverse, and large-scale Capital Improvement Projects (CIP). Many aspects included in the delivery of these CIPs include feasibility studies, site design, document preparation, construction management and inspection of various capital projects. Projects can include improvements to infrastructure such as roadways, traffic control devices, bridges, flood control facilities, and other such major city public infrastructure improvements.

Figure 7.1 – City of Palm Desert Budget / Projects

Funding Sources	Est. FY 22-23 Carryover	FY 23-24 Year 1	FY 24-25 Year 2	FY 25-26 Year 3	FY 26-27 Year 4	FY 27-28 Year 5
General Fund	-	865,000	1,406,000	862,000	799,000	799,000
Special Revenue Funds	8,758,168	26,457,238	20,089,135	10,825,135	8,369,135	8,199,135
Capital Project Funds	3,578,361	45,366,260	7,361,212	2,750,932	1,428,463	4,609,099
Debt Service Funds	-	1,585,336	349,344	-	-	-
Internal Service Funds	799,083	1,303,562	636,783	560,655	460,072	340,183
Enterprise Funds	1,749,551	3,302,583	969,692	1,029,428	773,568	1,756,098
Unfunded	-	-	10,000,000	24,000,000	15,000,000	-
Totals	**14,885,163**	**78,879,979**	**40,812,166**	**40,028,150**	**26,830,238**	**15,703,515**

Figure 7.2 – City of Palm Desert Capitol Improvements Projects

Project Name	Account No.	2022/23 Carryover*	2023/24 Year 1	2024/25 Year 2	2025/26 Year 3	2026/27 Year 4	2027/28 Year 5	Total
Catch Basin &Inlet Modifications	2114311-4332000		105,000	105,000	105,000	105,000	105,000	525,000
Clubhouse Equipment Various	4414195-4809200	85,000	75,000	-	135,000	-	-	295,000
Golf Cart Paths	4414195-4809200	16,500	50,000	10,000	20,600	71,218	21,854	190,172
Corporation Yard Building Improv	4004330-4400100		350,000	100,000	100,000	75,000	75,000	700,000
Historical Society Building Improv	4504164-4400100		125,000	100,000	100,000	100,000	100,000	525,000
Clubhouse Improve-Roofing &Others	4414195-4809200	70,000	192,000	105,000	55,000	120,000	150,000	692,000
Golf Course Pump & Motor Upgrades	4414195-4809200	30,000	33,000	-	300,000	40,000	-	403,000
Perimeter Landscaping	4414195-4332000	250,000	260,000	270,400	281,216	292,465	292,465	1,646,546
Parks & Medians Cal Sense /Smart Controller Irrigation Upgrades	4004388-4400100		50,000	50,000	50,000	-	-	150,000
Walk n Roll PD	2134633-5000103		2,150,000	500,000	500,000	500,000	500,000	4,150,000
Neighborhood Traffic Calming Program	2134565-5000903		150,000	150,000	150,000	150,000	150,000	750,000
Sidewalk Replacement Program	2134310-5000205		275,000	100,000	100,000	100,000	100,000	675,000
Motorcycle Replacement	2294210-4391400		34,000	35,000	36,000	-	-	105,000
Public Buildings Furnishings	4504161-4400100		75,000	75,000	75,000	75,000	75,000	375,000
Vehicle Leases Maintenance	1104331-4334000		40,000	-	-	-	-	40,000
AD Annual R/M	3034311-4332000			24,511	-			24,511
AD Annual R/M	3044311-4332000		188,669	-	-			188,669
AD Annual R/M	3064311-4332000		121,231	-	-	-	-	121,231
AD Annual R/M	3074311-4332000		-	324,833	-			324,833
AD Annual R/M	3084311-4332000		101,978	-	-			101,978
AD Annual R/M	3514311-4332000		1,173,458	-	-	-	-	1,173,458
Parking Lot Rehab&Maint	1104313-4332000		200,000	150,000	150,000	150,000	150,000	800,000
Citywide Pavement Condition Evaluation	2114311-4391505		100,000	250,000	105,000	110,000	110,000	675,000
Bridge Inspection & Repair Program	2134359-4400100	320,000	1,000,000	700,000	2,000,000	300,000	300,000	4,620,000
Civic Center Complex Improve	4504161-4400100		350,000	350,000	250,000	250,000	250,000	1,450,000
iHUB Rent & Operating Cost	1104199-4501000		-	31,000	387,000	324,000	324,000	1,066,000
iHUB Rent & Operating Cost	4254430-4345000		207,484	213,709	104,116	104,780	104,780	734,869
iHUB Rent & Operating Cost	4254430-4395000		260,468	232,103	-	-	-	492,571
Fire Station 33 Building Improv	2304220-4400100		165,000	290,000	150,000	150,000	150,000	905,000
Fire Station 67 Building Improv	2304220-4400100		465,000	75,000	75,000	-	-	615,000
Fire Station 71 Building Improv	2304220-4400100		130,000	195,000	150,000	150,000	150,000	775,000
Median Landscape Rehabilitation	1104614-4337001		150,000	150,000	150,000	150,000	150,000	750,000
Park Playground Improv	1104618-4400100		75,000	75,000	75,000	75,000	75,000	375,000
Pickleball, Tennis, &Basketball Court Resurfacing	1104618-4400100		45,000	75,000	75,000	75,000	75,000	345,000
Pickleball, Tennis, &Basketball Court Resurfacing	1104674-4400100		30,000	-	-	-	-	30,000
Citywide Street Striping &Lane Improv	2134315-4332000		300,000	200,000	200,000	200,000	200,000	1,100,000
Bike Lane Striping	2134633-5000204		-	150,000	-	150,000	150,000	450,000
Street Resurfacing Program	2114311-4332000		1,000,000	2,000,000	2,000,000	2,000,000	2,000,000	9,000,000
Street Resurfacing Program	2114311-4391505		1,000,000	-	-	-	-	1,000,000
Street Resurfacing Program	2134311-4332000		1,900,000	1,750,000	1,895,000	1,890,000	1,890,000	9,325,000
ADA Curb Ramp Modifications	1104312-4332000		25,000	25,000	25,000	25,000	25,000	125,000
ADA Curb Ramp Modifications	2134312-4400100		50,000	50,000	50,000	50,000	50,000	250,000
Traffic Operations &Capacity Improv	2134250-5000907		750,000	750,000	750,000	750,000	750,000	3,750,000
Traffic Signal & Interconnect Equipment Upgrade &Replacement	2134250-5000906		750,000	1,120,000	560,000	560,000	560,000	3,550,000
Traffic Signal & Interconnect Equipment Upgrade &Replacement	2344250-4400100		-	-	-	75,000	75,000	150,000
Desktop-Laptops	5304190-4404000	81,578	318,562	286,783	325,655	460,072	340,183	1,812,833
Eisenhower Health Child Care Center Contribution	4514800-4388300		500,000	1,000,000	1,000,000	-	-	2,500,000
Homebuyer Subsidies - BEGIN Program	2144494-4390102	95,000	154,500	159,135	159,135	159,135	159,135	886,040
Housing Mitigation	2144490-4390101	-	250,000	250,000	250,000	250,000	250,000	1,250,000
Vehicle Leases	5304331-4344000	92,505	96,000	-	-	-	-	188,505
Catch Basin &Inlet Modifications	4204314-4332000	80,000	-	-	-	-	-	80,000
Catch Basin &Inlet Modifications	4204370-4400100	25,000	-	-	-	-	-	25,000
Golf Cart Leases - Principal Only	5200000-2341001	112,568	470,392	482,287	494,483	251,911	-	1,811,641
Fire Station 71 Tenant Improve	2304220-4400100	300,000	300,000	300,000	300,000	300,000	300,000	1,800,000
Course & Ground Leases - Principal Only	5200000-2341001	74,859	396,691	406,722	417,008	427,553	144,907	1,867,740
TOTALS		1,633,010	16,988,433	13,666,483	14,105,213	11,016,134	10,302,324	67,711,597

Project Name	Account No.	2022-23 Carryover*	2023-24 Year 1	2024-25 Year 2	2025-26 Year 3	2026-27 Year 4	2027-28 Year 5	Total
Haystack Channel Rehab	4204370-5000454		3,200,000	-	-	-	-	3,200,000
Section 29 &Gerald Ford Drive Improv on Detention Basins & Storm Dra	2324370-5000455	236,862	263,138	-	-	-	-	500,000
Section 29 &Gerald Ford Drive Improv on Detention Basins & Storm Dra	2894374-5000455		2,200,000	-	-	-	-	2,200,000
Civic Center Irrigation Pump Replacement	4004674-4400100			750,000				750,000
Clubhouse Equipment Various	5204195-4809200	94,000	128,500	80,683	117,937	94,104	111,191	626,415
Artwork for New Visitor Center (Discover Palm Desert)	4364650-4400100		25,000	-	-	-	-	25,000
New Visitor Center - Discover Palm Desert	4004419-4400100							-
New Visitor Center - Discover Palm Desert	4514419-4400100	1,071,300	-	-	-	-	-	1,071,300
Civic Center Photovoltaic	4504161-4400100		250,000					250,000
Fire Station 102	2304220-4400100		3,400,000					3,400,000
Fire Station 102	2354270-4400100	1,151,512	645,600	-	-	-	-	1,797,112
Fire Station 102 PA2	4514270-4400100		3,000,000					3,000,000
Fire Station 102 PA4	4514270-4400100		15,677,730					15,677,730
Civic Center Park Dog Park Improv	4004674-4400100		450,000					450,000
Desert Recreation District Building Improv	4514164-4400100		12,500,000	-	-	-	-	12,500,000
Artists Center at Galen Improv	4504164-4388500		450,000	75,000	-	-	-	525,000
DS Office Space Improv- Phase 1	4504164-4400100		-	-	-	-	-	-
DS Office Space Improv- Phase 2	N/A			5,000,000	-	-	-	5,000,000
DSOffice Space Improv- Phase 3	N/A				4,000,000			4,000,000
Facilities Maint Master Plan	4504164-4309000		100,000	-	-	-	-	100,000
City Childcare Facility	2284800-4400100	684,000	-	-	-	-	-	684,000
Henderson Building improv	4504164-4400100		250,000	270,000	-	-	-	520,000
Golf Course Pump & Motor Upgrades	5204195-4809200		37,000					37,000
DW Perimeter Landscape &Lighting Rehabilitation	4414195-4809200	300,000	1,200,000	-	-	-	-	1,500,000
Community Gardens Box Renovation	4004618-4400100		100,000	-	-	-	-	100,000
North Sphere Community Park - Future Improv	4514618-5000913		150,000					150,000
North Sphere Community Park - Future Improv	N/A			5,000,000	5,000,000	-	-	10,000,000
Hovley Soccer Park Improv	4004618-4400100		450,000					450,000
Homme Adams Park New Prefabricated Restroom	4004618-4400100		150,000	-	-	-	-	150,000
University Dog Park Fence Replacement	4004618-4400100		200,000	-	-	-	-	200,000
North Sphere Regional Park - Future Improv	N/A				15,000,000	15,000,000		30,000,000
Market Place Drive &Cook Street Traffic Signal improv	2134385-5000911	150,000	364,925	-	-	-	-	514,925
Market Place Drive &Cook Street Traffic Signal improv	2344250-4400100	225,000	235,075	-	-	-	-	460,075
Artwork for Phase 2 of the PD Link Project	4364650-4400100		50,000	50,000	50,000	-	-	150,000
PD Link	2134670-5000202		4,050,000	3,460,000	250,000	250,000	250,000	8,260,000
Artwork for Phase 2 of the Haystack Road Traffic Calming Project	4364650-4400100		50,000	-	-	-	-	50,000
Haystack Road Traffic Calming Improve	2134565-5000909	1,000,000	-	-	-	-	-	1,000,000
CV Link Hovley Connector	2314670-5000202		-	3,500,000	-	-	-	3,500,000
President's Plaza East & West Parking Lot Rehabilitation	4004692-4400100		150,423	-	-	-	-	150,423
El Paseo Mid-Block Crossing	2134311-4332000		750,000	1,000,000	-	-	-	1,750,000
El Paseo Mid-Block Crossing	4514679-5000102	250,000	250,000	-	-	-	-	500,000
Lupine Plaza	4004430-5000912		3,000,000					3,000,000
Geodetic Survey Control Network	4004300-4309000		-	-	80,000	-	-	80,000
Safe Routes to Schools Plan	2134300-5000910	250,000	670,000	-	-	-	-	920,000
Technology Drive Extension to Gerald Ford Drive	1104311-4332000		300,000	-	-	-	-	300,000
Artwork for Phase 1 of the San Pablo Corridor Project	4364650-4400100	266,714	-	-	-			266,714
Artwork for Phase 2 of the San Pablo Corridor Project	4364650-4400100		200,000	-	-	-	-	200,000
CV Link Enhancements	2314670-5000202		500,000	-	-	-	-	500,000
Vitalia Way &Gerald Ford Drive Traffic Signal improv	2134385-5000911		750,000	-	-	-	-	750,000
Undergrounding Utilities	4004256-4400100		75,155	-	-	-	-	75,155
Undergrounding Utilities	4514256-4400100		-	750,000	-	-	-	750,000
Course &Ground Equipment	5204195-4809200	79,500	-	-	-	-	-	79,500
City Hall Roof Improve	4504161-4400100		250,000	150,000	150,000			550,000
Parkview Office Complex - Facility Improve	5104361-4400100	1,388,624	2,250,000	-	-	-	1,500,000	5,138,624

Project Name	Account No.	2022-23 Carryover*	2023-24 Year 1	2024-25 Year 2	2025-26 Year 3	2026-27 Year 4	2027-28 Year 5	Total
Parking Lot rehab&Maintenance	5104195-4332000		20,000	-	-	-	-	20,000
Portola Community Center Renovations	4004439-4391503		-	50,000	-	-	-	50,000
Portola Community Center Renovations	4504439-4400100		100,000	-	-	-	-	100,000
Mountain View - Golf Course Improve	4414195-4809200	20,000	-	-	-	250,000	3,500,000	3,770,000
Palm Desert Aquatic Center	2424549-4400100		1,250,000	2,750,000	1,040,000	170,000	-	5,210,000
Fire Cliff - Golf Course Improve	4414195-4809200	20,000		2,760,000	-	50,000	40,000	2,870,000
Fire Station 33 Fuel Tank Shade Structure	2304220-4400100	100,000	-	-	-	-	-	100,000
Freedom Park Sculpture Repairs	4364650-4400100	188,390	-	-	-	-	-	188,390
Freedom Park Shade Replacements	4004618-4400100		100,000					100,000
Cahuilla Hills Park Shade Structure	1104618-4400100		-	900,000	-	-	-	900,000
Bump n Grind Trailhead New Prefabricated Restroom	4004618-4400100	223,982	-	-	-	-	-	223,982
Palma Village Park Improve	2204649-4400100	212,000	100,000	-	-	-	-	312,000
Palma Village Park Improve	4004618-4400100		220,000					220,000
Citywide Wayfinding Signage	2134300-5000910	-	250,000	250,000				500,000
Roadway Safety Improve	2134317-5000908	1,180,954	-	-	-	-	-	1,180,954
Ambulance Purchase/Remounts	5304220-4403000		208,000	-	235,000	-	-	443,000
City Hall Charging Stations	5304310-4404500		75,000	350,000				425,000
Concrete Truck	5304310-4403000		100,000					100,000
Corporate Yard Generator	5304310-4404500	125,000	-	-	-	-	-	125,000
Desert Surf	4514430-5000203	-	-	-	-			-
Dump Trailer	5304310-4403000		20,000					20,000
EV Carpools	5304310-4403000		150,000					150,000
Graffiti Truck	5304310-4403000		110,000					110,000
Ladder Truck 33 Equipment	5304220-4403000	500,000	-	-	-	-	-	500,000
Living Desert Program Contribution	4004800-4389800		-	-	-			-
McCallum Theater Program Contribution	4004800-4389800		200,000	-	-	-	-	200,000
Mini Excavator	5304310-4403000		60,000					60,000
Paramedic Squad	5304220-4403000		-	-	-	-	-	-
Stryker Gurneys	5304220-4403000		126,000	-	-	-	-	126,000
Utility Golf Cart	5304310-4403000		40,000					40,000
Economic Development Business Enhancements	4254430-4387500	650,000	-	-	-	-	-	650,000
Invest- Palm Desert	4254430-4393000	31,475	-	-	-	-	-	31,475
PDHA Replacement Expenditures	8714195-4331100	2,852,840	-	-	-			2,852,840
	TOTALS	13,252,153	61,891,546	27,145,683	25,922,937	15,814,104	5,401,191	149,427,614

7.4 FUTURE MITIGATION

- Continue to pursue securing funding to complete the projects identified in the Capital Improvement Plan.
- Actively pursue mitigation items listed in the General Plan.
- Incorporate the 2023 Updated LHMP into the General Plan during the next update.
- Ensure civic engagement and public participation through effective communication and continue implementing City services as prescribed by the City Council.

The City of Palm Desert's mitigation strategies include:

- Contact and establish working relationships and strategies with Coachella Valley Water District, Southern California Edison, Imperial Irrigation District, Southern California Gas Company, Verizon, and other appropriate agencies to strengthen or relocate utility facilities and take other appropriate measures to safeguard major utility distribution systems to the greatest extent practical.

- Continue to train and educate the public and business community in Palm Desert CERT and initiate other education programs, including pet owners and those with special physical or functional needs (with neighbors/business associate support).

SECTION 8.0 - PLAN IMPLEMENTATION AND MAINTENANCE PROCESS

The requirement 201.6(c) (4) (i) states “The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the plan in a 5-year cycle.

The City of Palm Desert plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing plan revision every five years. The City of Palm Desert government may incorporate the mitigation strategies outlined in this Plan, in existing planning mechanisms such as the City’s General Plan and Capital Improvement Plan.

The City’s Risk Manager will be responsible for coordinating the implementation of plan action items and undertaking the formal review process. The City Manager will assign representatives from City departments, including, but not limited to, the Public Safety, Building, Planning, Public Works, Finance, and the Public Safety Commission to a LHMP Review Team Committee. These committee meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the mitigation plan.

The City Council will adopt the LHMP, and the City Manager (or designee) will serve as convener to facilitate the Committee meetings. Plan implementation and evaluation will be a shared responsibility among all the Committee members. While the implementation of the plan lies with the City Manager. The City Manager will assign specific mitigation strategies to appropriate departments to lead. This will ensure effective implementation occurs.

The goals and action items in the mitigation plan may be achieved through activities recommended in the City’s Capital Improvement Plans (CIP). Various City departments participate in the development of the CIP plan, which is reviewed on an annual basis. Upon annual review of the CIP, the review team will work with the City departments to identify action items in the Natural Hazards Mitigation Plan consistent with CIP planning goals and integrate them where appropriate.

Upon presentation of the LHMP for formal adoption, the recommendations listed above will be recommended for incorporation into the process of existing planning mechanisms at the City level.

The City Municipal Code takes cues from state and federal regulations as well as historical events in the City in promulgating regulations and guidance. As new regulations are passed at the state and federal level, Department staff are aware of the new requirements draft updates to the Palm Desert Municipal Code for City Council approval. Changes and ordinances are presented before the City Council by way of a public hearing during which comments are sought and considered and recommendations made. The City of Palm Desert City Manager's Office will oversee the LHMP. In coordination with other City Departments, we will monitor and evaluate our LHMP on an ongoing and annual basis for the 5-year cycle as required.

On an ongoing basis, the following will be considered:

- Funding source opportunities to include grants.
- New development entitlement and construction that provide opportunities for improvements to infrastructure and communication.
- Jurisdiction trends including population growth, demographics, and build-out patterns.
- Opportunities for hazard mitigation through interagency cooperative agreements.
- The annual review will assess whether:
- The goals and objectives are relevant to current and expected conditions.
- Risks identified have changed or new types have been identified.
- The current resources are appropriate for implementing the plan.
- There are implementation problems, such as technical, political, legal, or coordination issues with other agencies.
- The outcomes occurred as expected (a demonstration of progress).
- The agencies and other partners participated as originally proposed.

SECTION 9.0 - INCORPORATION INTO EXISTING PLANNING MECHANISMS

The City of Palm Desert is aware of the hazards that face its community, as historic incidents prove that disasters continue to evolve as a common occurrence in this area. The City will continue to strive toward protecting the life, property, and economy of the City of Palm Desert. Palm Desert also supports an all-hazard approach, encouraging information sharing between City Departments to incorporate into other planning efforts. As other plans are developed, the LHMP information will be leveraged and incorporated when other plans could benefit from a better understanding of hazards and the potential mitigation measures that can be taken. Palm Desert has several planning mechanisms which the 2023 LHMP will be incorporated into, they are the:

- General Plan Emergency Preparedness Element
- Emergency Operations Plan
- Capital Improvements Plan

- Palm Desert Strategic Plan
- Environmental Sustainability Plan

The City of Palm Desert will be incorporating the LHMP into the City's update to the General Plan Safety Element. As opportunities present themselves, the City will make every effort to incorporate the new LHMP information into other plans where appropriate. In the meantime, the LHMP will be utilized to assess future developments in accordance with the General Plan. In addition to reviewing future development against relevant land use and zoning regulations, building codes and fire codes, and environmental and engineering standards, it will also be reviewed against the LHMP. Proposed development projects will be assessed to determine exposure (or risk) to community hazards. The LHMP will also serve as a reference for suggested mitigation measures to reduce and/or eliminate risk from those hazards.

The City of Palm Desert has a Safety Element in its General Plan that includes a discussion of earthquakes, wind erosion, flooding, fire, climate change, landslide hazards and human-caused hazards. The City also participates in the National Flood Insurance Program which aims to reduce losses through flood plain management.

SECTION 10.0 - CONTINUED PUBLIC INVOLVEMENT

The City is dedicated to involving the public directly in review and updates of the LHMP. The LHMP Review Team Committee members are responsible for the annual review and update of the plan. The public will also have the opportunity to provide feedback about the Plan, as a copy of the Plan will be available at the City Clerk's office. The existence and location of available copies will be publicized through one or more of these methods:

1. Notice on the City's social media with links to the website.
2. On the City's Website
3. At various emergency preparedness meetings with the community.

Any notice will also contain an email address and phone number to which people can direct their comments and concerns. In addition, the plan will be presented for review at a public meeting of the Public Safety Commission after each evaluation.

The City of Palm Desert will organize and/or participate in a variety of meetings/events to share and exchange information about mitigation with stakeholders and the public. The City will use its social media platforms and when appropriate, leverage stakeholder and community social media platforms to announce the meetings/events. This City will also continue to provide public forums which gives the public and local emergency managers the opportunity to collaborate and coordinate prior to an emergency occurring.

APPENDIX A – PUBLIC NOTICES AND MAPS

PALM DESERT

Local Hazards

Directions: Please circle one that best describes which you believe would most likely happen in an event of a local hazard.

EQ: Earthquake, WF: Wildfire, FL: Flood, TE: Terrorist Attack, OTHER: Please describe

Name: Dennis Thill	(EQ) WF, FL, (TE) OTHER:
Name: Horace Silver	(EQ) WF, FL, TE, OTHER:
Name: Robin McAfee	(EQ) WF, FL, TE, OTHER:
Name: GREG HOMME	(EQ) WF, FL, TE, OTHER:
Name: Shea New	(EQ) WF, FL, TE, OTHER: water
Name: Horace Cazares	EQ, WF, FL, TE, OTHER: Water
Name: Ron Silver	(EQ) WF, FL, TE, OTHER:
Name: Jennifer Wilson	(EQ) WF, FL, TE, OTHER:
Name: Brigit Phillips	(EQ) WF, FL (TE) OTHER: water
Name: Joseph A. Betts	(EQ) (WF), FL, TE, OTHER:
Name: Scarlett Ginger	EQ, (WF), FL, TE, (OTHER): wildfire. Homeless encampments.
Name: Nicole Melendez	EQ, WF, FL (TE) OTHER:
Name: Shari + Ron Bloch	(EQ) WF, (FL) TE, OTHER:
Name: Jeanne Romine	(EQ) WF, FL, TE, OTHER: Need safe house!
Name:	EQ, WF, FL, TE, OTHER:
Name:	EQ, WF, FL, TE, OTHER:

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Figure A - Survey on City Services, City of Palm Desert Website

Figure B: Wind Erodibility Rating (2014)

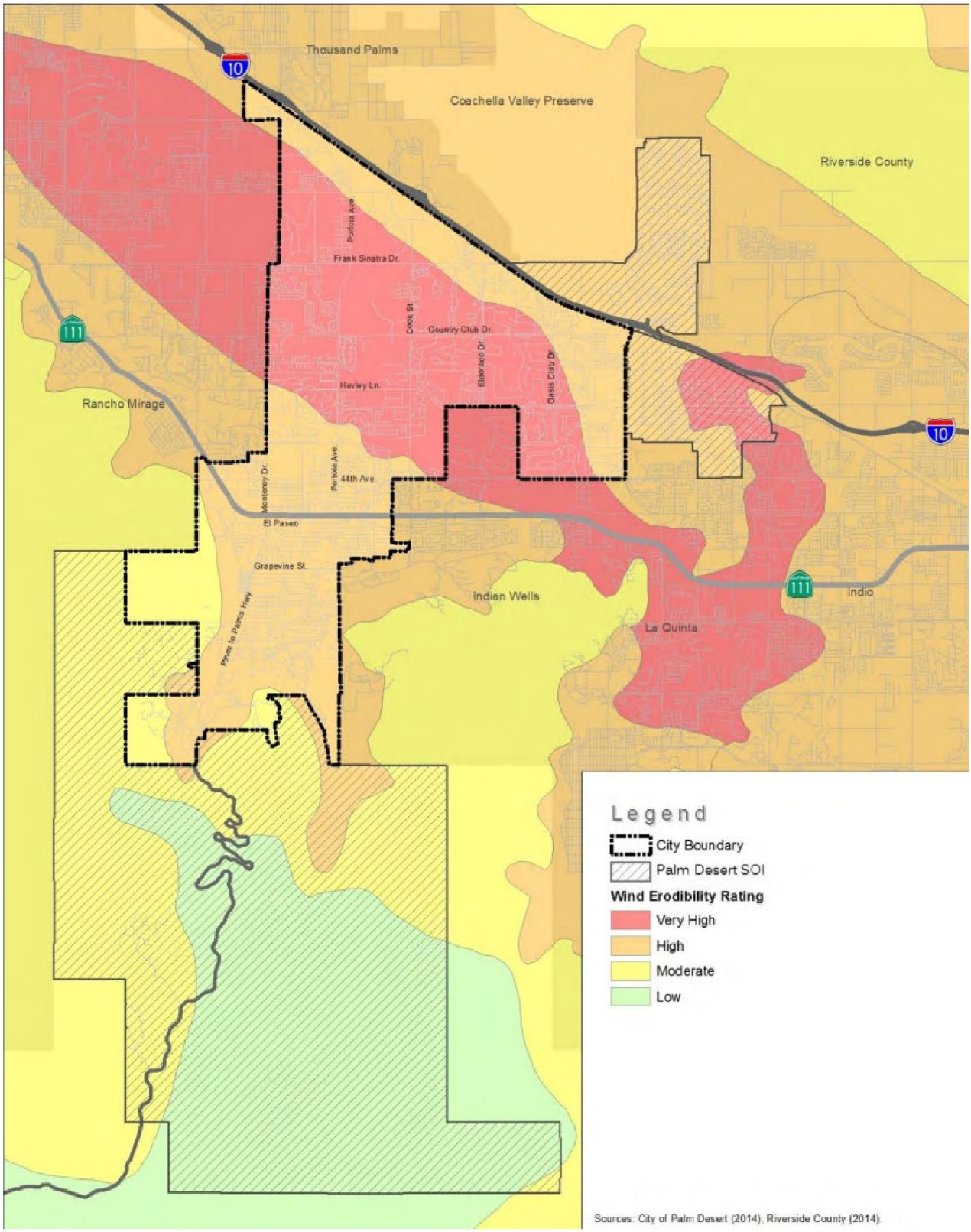

Figure C: Fire Hazard Severity (2014)

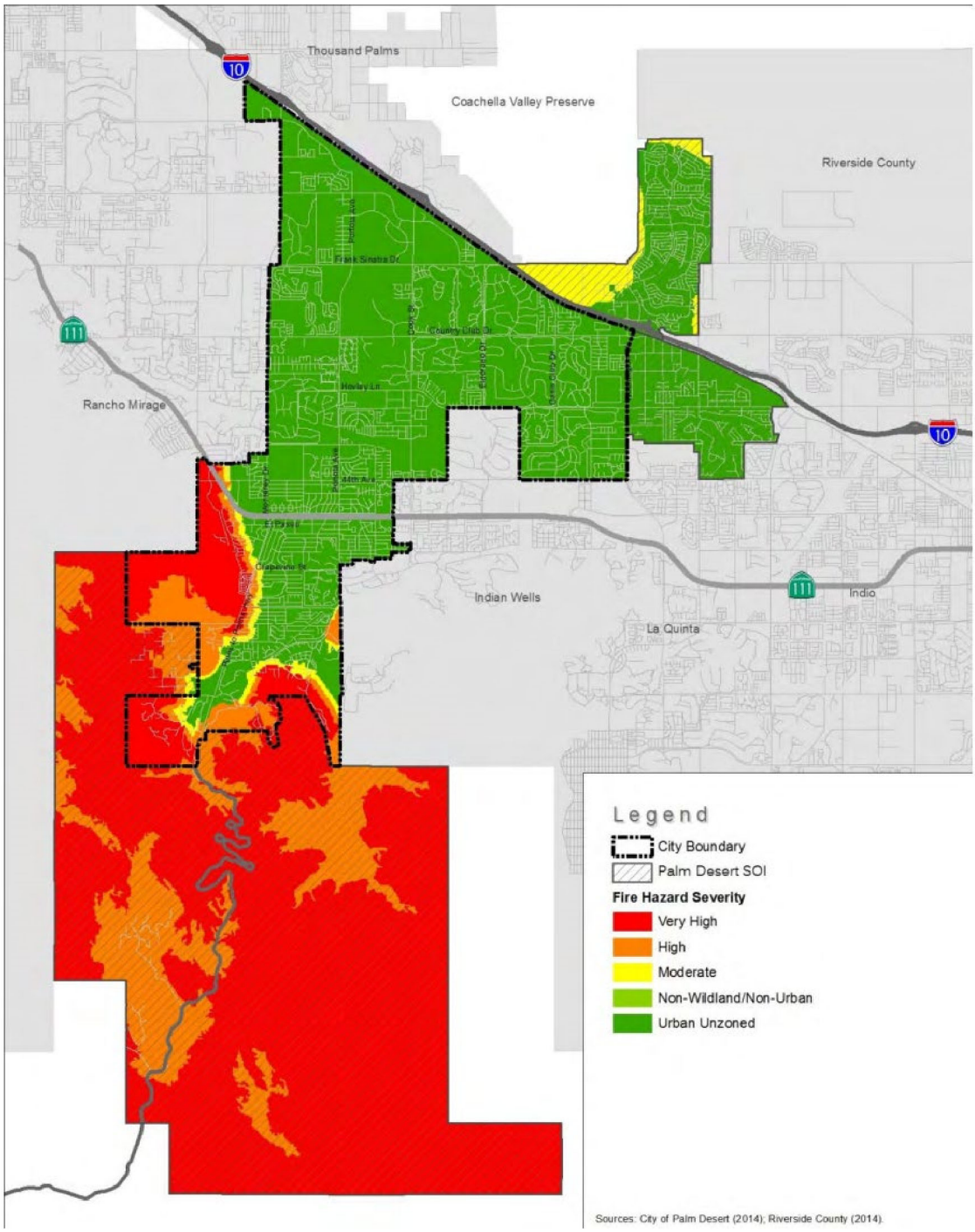

Figure D: Fault Type (2014)

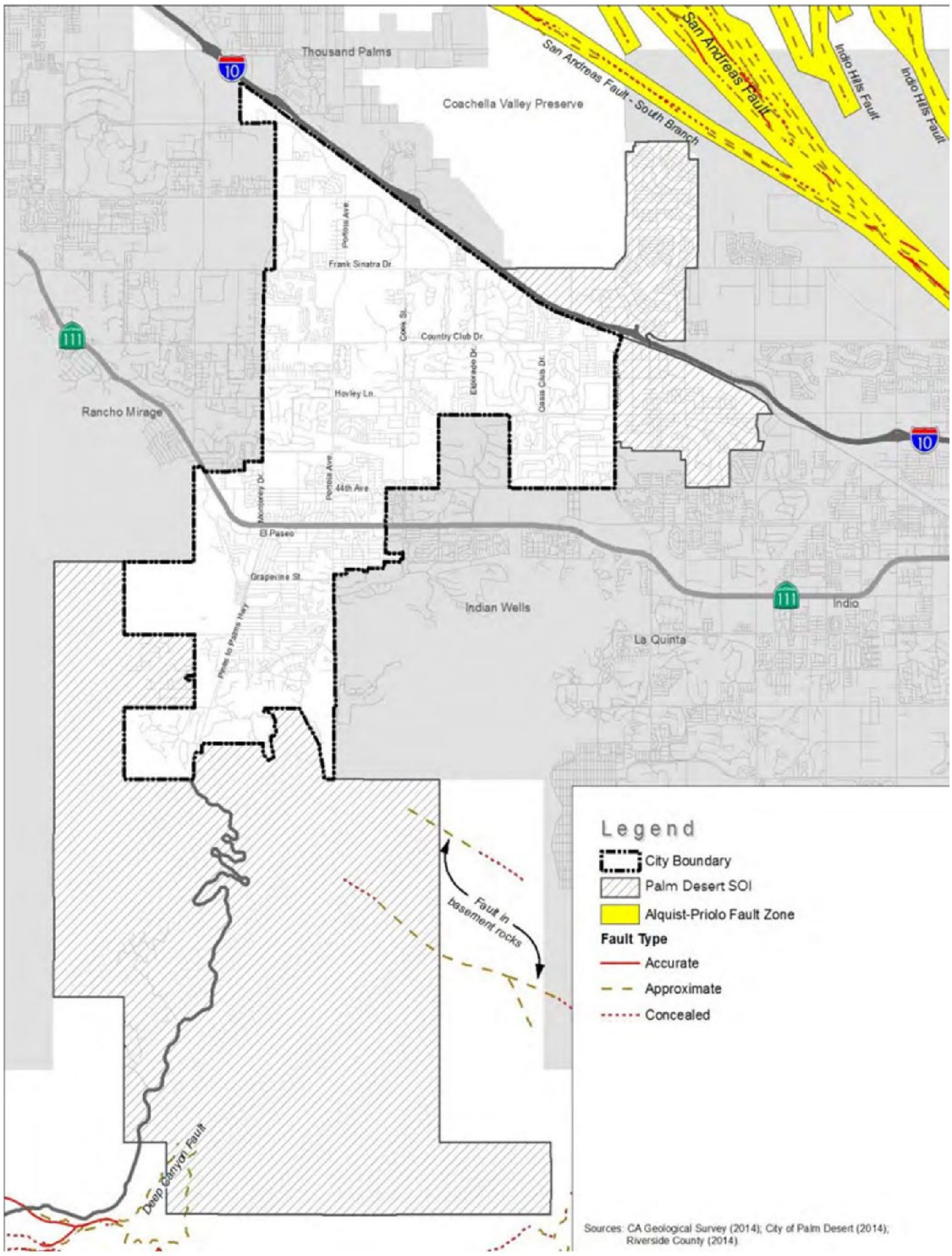

Figure E : FEMA Flood Zones (2014)