
CITY OF
FIRE STATIO
NO 3
City of Indio
FIRE
88

chapter ten

SAFETY

The purpose of the Safety Element is to establish a policy framework for maintaining and improving the safety of Indio's residents. This Element seeks to strengthen links between quality community design and safety issues. It also identifies known seismic, flooding, and geological hazards, as well as methods to reduce the potential risk of illness, injury, death, or property damage that can occur as a result of these hazards. Crime prevention, police and fire protection, and emergency preparedness and response are also addressed within this Element.

Key Considerations and Strategies

Indio is at risk to a number of natural and man-made hazards. The City adopted a Local Hazard Mitigation Plan (LHMP) in 2018. Under Assembly Bill 2140 cities may adopt their LHMP into their Safety Elements in order to receive reimbursement of post-disaster public assistance. Mitigation strategies included in the LHMP will serve as the implementation plan for the Safety Element.

The LHMP explores the severity, probability, and ranking of all hazards in the City, and identifies risks and vulnerabilities from hazards, such earthquakes, floods, transportation failures (including airports), agricultural hazards, technological hazards, and extreme weather. Table 10-1 shows the ranking of hazards in Indio and Riverside County as listed in the City's LHMP.

Table 10-1: Hazard Ranking in Indio

	COUNTY			LOCAL JURISDICTION		
HAZARDS/THREATS	SEVERITY 0 - 4	PROBABILITY 0 - 4	RANKING 1-23	SEVERITY 0 - 4	PROBABILITY 0 - 4	RANKING 1-20
1. Earthquake	4	2	1	4	4	**1/1**
2. Wildland Fire	3	4	3	2	1	**15/16**
3. Flood	3	3	9	3	3	**7/8**
4. Drought	3	3	11	4	3	**5/9**
5. Landslide	3	3	21	1	1	**17/22**
6. Insect Infestation	2	3	18	3	3	**6/17**
7. Tornado	2	1	17	3	1	**--/20**
8. Extreme Weather	3	2	13	4	4	**2/2**
9. Pipeline Disruption	3	2	20	3	3	**13/19**
10. Aqueduct Event	3	2	16	3	3	**14/15**
11. Transportation Failure	3	2	14	3	3	**9/11**
12. Electrical Failure	4	4	4	3	4	**4/4**
13. Hazardous Materials Incident	3	4	22	3	3	**10/5**
14. Nuclear/Radiological Incident	4	1	12	4	1	**11/21**
15. Terrorist Event	3	1	7	4	3	**12/6**
16. Civil Disorder	3	2	10	1	1	**18/12**
17. Jail/Prison Event	2	1	19	2	1	**19/13**
18. Communications Failure	3	2	8	4	2	**---/3**
19. Cyber-Attack	2	4	6	4	3	**--/7**
20. Water Supply Disruption/Contamination	2	3	23	3	2	**--/10**
21. Emergent Disease/ Contamination	3	3	5	2	1	**3/14**
22. Pandemic Flu	4	2	2	3	2	**4/18**
23. Dam Failure	3	1	15	--	--	**--/--**

2012 City Ranking /2017 City Ranking

Source: The information reflects estimations made in 2017 (City of Indio 2017 Local Hazard Mitigation Plan).

Climate change is anticipated to be a risk amplifier for many of these natural hazards. For example, warmer temperatures and changes in precipitation patterns may increases the length, intensity, and frequency of drought. Similarly, the City is projected to experience more frequent, more intense, and longer heat waves.[1] These extreme weather events will place more people, particularly seniors, children, and outdoor workers at increased risk of illness and death. Pursuant to Senate Bill 379 (SB 379), updates to the Safety Element must also address climate adaptation and resiliency strategies.

Context

Police Services and Crime Prevention

The Indio Police Department is located at 46800 Jackson Street and currently has a staff of approximately 80 employees. The Department is composed of the Field Services Division and the Support Services Division. These two Divisions fall under the Office of the Chief, which is charged with communicating the overall direction, mission, and goals to all areas of the Police Department. The Field Services Division is responsible for controlling crime and public safety issues throughout Indio, investigating traffic collisions, enforcing traffic violations, participating in community outreach efforts, operating the K-9 Teams, Code Enforcement, and the School Resource Officer (SOR) program. The support Services Division is responsible for supporting the Department's policing activities and initiatives. The Division consists of Police Investigations, the Communications Unit, Information Technology (IT), and Property and Evidence Unit.

The Indio Police Department uses a variety of strategies to address crime. The Department has a long-standing and successful tradition of maintaining positive relationships with members of the community through effective community outreach and public engagement strategies. The Department embraces a community-oriented policing philosophy that supports the systematic use of partnerships and innovative techniques to proactively address the conditions that give rise to public safety issues.

Fire and Emergency Medical Services

Indio's Fire Department is committed to protecting all lives and property within the City from the adverse effects of fire, medical emergencies, and hazardous conditions. A full range of cost-effective fire services are provided in the City as part of the regional fire protection system through a cooperative agreement with the Riverside County Fire Department. The City provides a full-service Fire Department currently equipped with approximately 56 full-time staff. Fire services are delivered from four stations

Indio fire station

[1] This information was gathered from the internet based Cal-Adapt planning tool, which was developed to assist local jurisdictions in identifying the risks that climate change pose to specific geographic areas. Go to http://cal-adapt.org for additional information.

strategically located throughout the City to provide timely response and services.

The Indio Fire Department offers a Fire Explorer program, a volunteer program, and a Prevention Office.

Emergency Preparedness

The City of Indio's public safety personnel plan and train for all types of emergency and disaster situations that could affect the health and safety of Indio's residents, visitors, business owners, and pass-through commuters. The Community Emergency Response Team (CERT) Program, managed through the County of Riverside Emergency Management Department, educates the public about disaster preparedness. CERT also trains citizens in basic emergency skills, including team management, fire safety, light search and rescue, and basic medical practices. California Government Code Section 3100-3101 states that all public employees are declared to be disaster service workers in the event of a natural or human-made disaster.

The City of Indio's Emergency Operations Center is located at 45222 Towne Street and there is an alternate Center located at 83101 Avenue 45. Emergency Services volunteers provide support to the City's Emergency Operations Center, support community presentations and public safety events, serve as emergency amateur radio operators, and support emergency management field activities. Indio is also home to the Riverside County East County Emergency Operations Center, which is located at 82695 Dr. Carreon Boulevard. This high-tech facility is where regional operations are coordinated in the event of a natural, technological, intentional human-made and unintentional human-made disaster.

Hazardous Materials/Brownfields

As cities age, land uses associated with hazardous materials are often abandoned. These uses include former industrial properties, gasoline stations, and military sites. Uses such as this may have soils and groundwater that are contaminated and are often referred to as "brownfields."

Indio has few brownfield or hazardous material sites. One active voluntary cleanup site is located at a metal manufacturer. Indio High School has completed a cleanup and is now certified. Five schools within the City have been investigated and no additional remediation is necessary, and two other sites are waiting for investigation.

Hazardous materials facilities are regulated by the Environmental Protection Act of 1970 and various others with oversight from the Riverside County Department of Environmental Health Hazardous Materials Branch.

Geologic and Seismic Hazards

There are three major, known faults located in Riverside County: the San Andreas, San Jacinto, and Elsinore faults. The San Andreas and San Jacinto are two of California's most active faults. Several properties within Indio and its sphere of influence are directly impacted by the southernmost section of the San Andreas fault and/or secondary faults and fractures, as shown on Figure 10-1. These faults pose geologic and seismic hazards in the form of earthquakes, fault rupture, liquefaction, and landslides. The most recent earthquake along this stretch of the fault occurred more than 300 years ago leading scientists

to suggest that it has accumulated a substantial amount of tectonic stress and is likely to produce a large (7 to 8 magnitude) earthquake in the near future.[2]

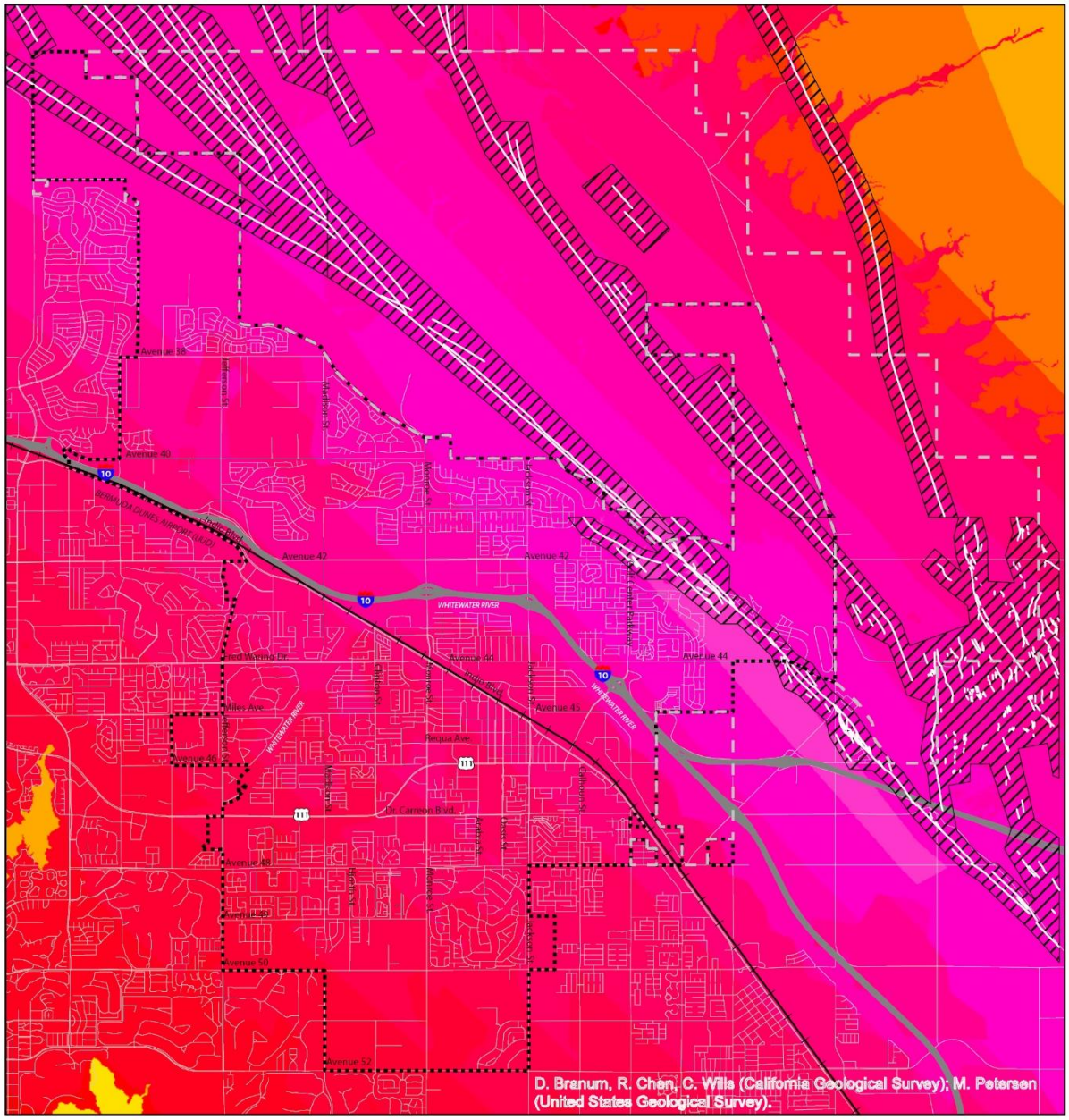
An earthquake involves the rapid shaking of the ground, which alters the position of the earth's tectonic plates. Earthquakes can also result in fault rupture, which occurs when movement on a fault deep within the earth breaks through to the surface creating an offset in the ground as the two sides of the fault slip past each other. The intense shaking of an earthquake can cause damage and lead to the collapse of buildings and structures. A structure's ability to withstand the magnitude of an earthquake is often dependent on when and where it was built, and whether it was built to seismic codes.

Liquefaction, most often caused by earthquakes, describes a phenomenon where a soil's strength and stiffness is substantially reduced. Liquefaction causes the soil's composition to liquefy, which destabilizes buildings that are supported by the ground. Indio could experience seismic shaking levels that have the potential for liquefaction in areas where groundwater is generally shallower than 30 feet. These areas are shown on Figure 10-1.

Landslides occur when masses of rock, earth, or other material move rapidly down a slope. Landslides and surficial slope failure are most likely to occur in areas with a slope greater than 25 percent (hillside areas) and along steep bluffs. Since Indio is relatively flat with undeveloped hillsides along the northern boundary, the City is at low risk for landslides.

[2] Philibosian, B., Fumal, T., and Weldon, R. (2011). San Andreas Fault Earthquake Chronology and Lake Cahuilla History at Coachella, California. Bulletin of the Seismological Society of America, Vol. 101, No. 1.

Figure 10-1: Seismic Hazards Map



Flood Hazards

The LHMP identified flooding as having above average severity and above average probability. Portions of the City are located within the 100-year floodplain, including the northwest portion of the City, north of the I-10 Freeway, and within the Whitewater River. Some isolated areas within the northwestern and southwestern portion of the City fall within the 500-year floodplain.[3] Figure 10-2 illustrates the area within the 100-year and 500-year floodplain.

Flooding in Indio

Flash flooding is another form of hazardous flooding. Flash floods occur when excessive water fills normally dry creeks or river beds along with currently flowing creeks and rivers, and typically combines the destructive power of a flood with speed and unpredictability.[4] Populations most at risk during flash flooding may include hikers, homeless, and children.

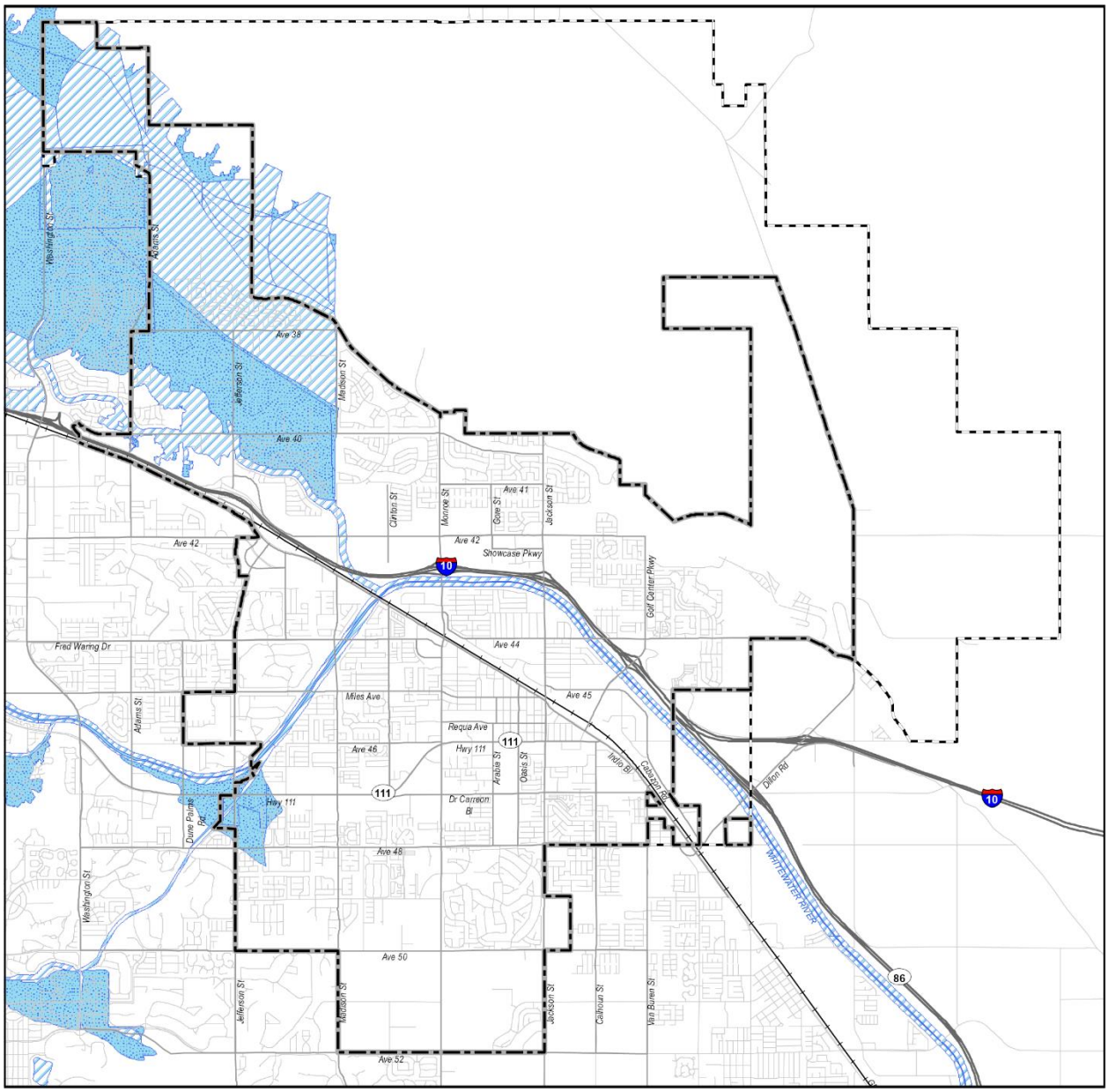
The Coachella Valley Water District (CVWD) recently approved a regional flood project that will provide protection for northeast Indio and the surrounding area. This North Indio Regional Flood Control System (NIFCS) will collect flood flows from the outlets of the Sun City Palm Desert Whitewater River/stormwater channels and convey them to the Sun City Shadow Hills channels, which will ultimately connect to the Coachella Valley Storm Channel. The second phase of this project includes obtaining levee accreditation from FEMA for the existing East Side Dike. This will reduce the likelihood of the hazard.

Additionally, the City is currently replacing an existing at grade low-water crossing where Avenue 44 crosses the Coachella Valley Storm Channel with a permanent, elevated all-weather bridge. The bridge will reduce the possibility of overtopping of the roadway during flood events, enhance emergency response, and improve overall road safety.

Indio does not have the risk of dam failure because no true dams exist; however, levees and dikes are types of dams. Indio also has earthen retention basins on the north side of the City, which pose a threat for failure and subsequent flooding. In addition, Riverside County does contain several local dams and reservoirs, dam failure inundation zones are limited to the western region of Riverside County.

[3] The Federal Emergency Management Agency (FEMA) defines a 100-year flood zone as having a 1% chance of flooding each year, while areas in a 500-year floodplain have a 0.2% chance of flooding in any given year.
[4] The National Severe Storms Laboratory (NSSL) Flood Basics: https://www.nssl.noaa.gov/education/svrwx101/floods/

Figure 10-2: Flood Hazards



Flood Hazards

City Boundary

Sphere of Influence

Roads

Railroads

Highways

FEMA FIRM 100-Year Floodplain

FEMA FIRM 500-Year Floodplain

0 0.5 1 2
Miles

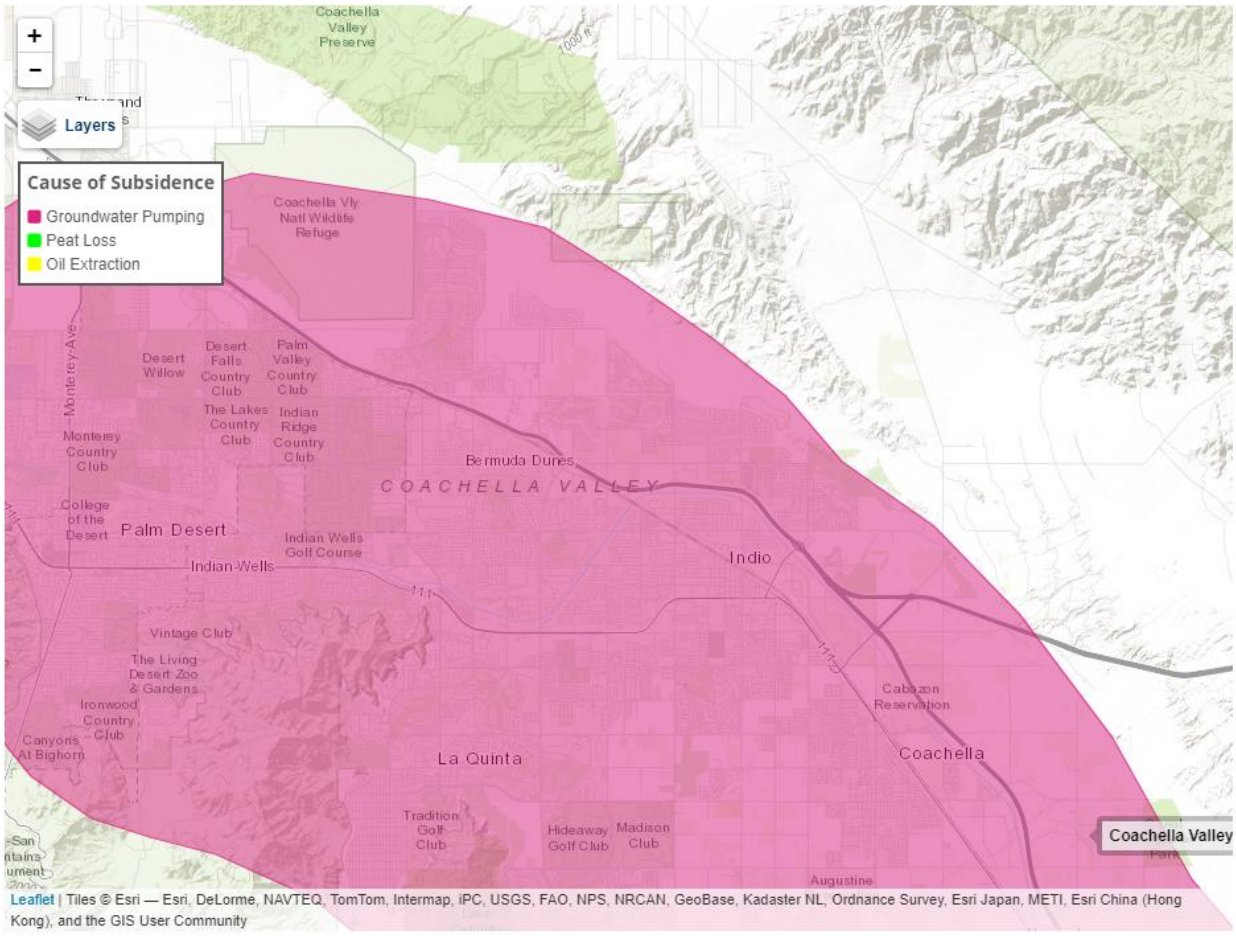
Source: Riverside County/LAFCO (City Boundary,2012; SOI,2012) Riverside County/TLMA (Roads,Railroads,Highways) Riverside County (River)

The information on this map was derived from various digital databases, sourced above. Care was taken in the creation of this map but it is provided "as is". PDC cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties which accompany this product. Users are cautioned to field verify information on this product before making any decisions.

Land Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface. The principal causes of land subsidence include groundwater extraction, oil extraction, and peat loss. Indio is in an area of historic subsidence. The demand for water has exceeded the deliveries of imported surface water, and groundwater levels have been declining as a result of increased pumping. A network of continuous GPS stations has been set up in the valley to monitor this subsidence.

Figure 10-3: Areas of Land Subsidence



Climate Change

Climate change presents Indio with a series of challenges. Climate change impacts pose an immediate and growing threat to the economy, environment, and public health. Cities like Indio will continue to experience the effects of climate change, including the increased likelihood of droughts, worsening air quality, increased flooding, and heatwaves.[5]

These climatic changes may result in significant social, economic, and environmental issues and opportunities for residents and businesses in Indio in the long term, including:

- **Public health impacts**: Indio will experience longer, more frequent, and more severe heat waves, increasing the risk of heat-related morbidity in vulnerable populations. An increase in regional wildfires will further worsen air quality.
- **Flood impacts**: Stormwater infrastructure may require costly upgrades and increased maintenance costs in order to accommodate more intense rain storms.
- **Drought**: Changes to the amount and timing of rainfall and regional groundwater levels may threaten already limited regional water supply. Changes in precipitation can impact the production of staple crops, impacting the quantity and quality that is available, potentially increasing price.

The following section summarizes key information about climate changes in the region.

Temperature and Extreme Heat

During the last century, temperatures in California rose steadily. Between 1918 and 2006, the average minimum temperature increased by 0.3°F per decade, and the average maximum temperature increased by 0.13°F per decade. The rate of warming intensified from 1970 to 2006, with average minimum temperatures increasing 0.56°F per decade and average maximum temperatures rising 0.49°F per decade. Average minimum and maximum temperatures in Southern California rose faster than the State as a whole. Between 1970 and 2006, the average minimum temperature rose by 0.67°F per decade and the average maximum temperature increased by 0.74°F per decade across the region.[6]

Models indicate that temperatures will continue to rise in the Indio. Annual maximum temperatures are projected to increase between 4.7°F and 5.8°F by mid-century (2040-2060) and 5.6°F and 9.1°F by end of century (2080-2100).[7] By the end of the century, average temperatures are anticipated to fall outside of the annual variability range seen in the historic record, particularly in the summer and fall. More simply put, the average future temperature in the climate scenario with the least warming is greater than the very warmest year of the historic record.[8] Figure 10-4 shows the projected change in average annual minimum and maximum temperatures.

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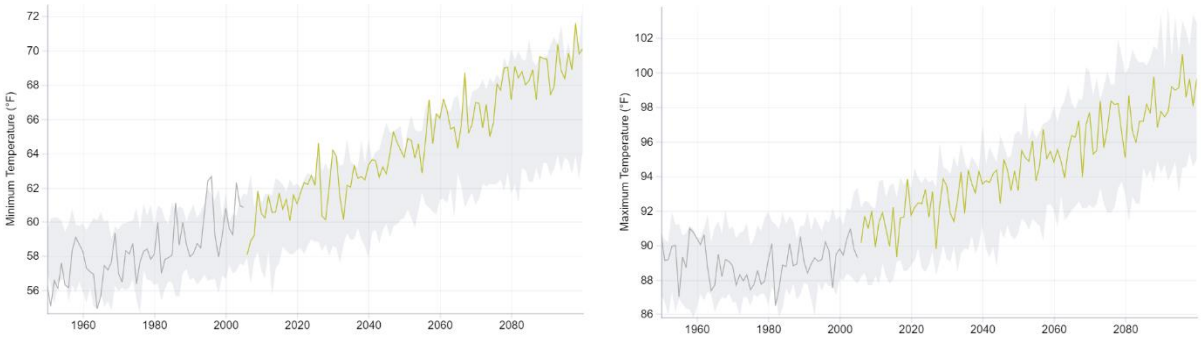
[5] California Natural Resources Agency (2017). Safeguarding California. http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-2017-Update.pdf

[6] Cordero, E. C., W. Kessomkiat, J. Abatzoglou, and S. A. Mauget. (2011). the identification of distinct patterns in California temperature trends. Climatic change 108:357– 382.

[7] California Energy Commission. (2017). Cal-Adapt. Available at http://cal-adapt.org/.

[8] Fengpeng S, et al. (2015). A Hybrid Dynamical–Statistical Downscaling Technique. Part II: End-of-Century Warming Projections Predict a New Climate State in the Los Angeles Region. Journal of Climate. 28:4618-4636.

Figure 10-4: Projected Change in Average Annual Minimum and Maximum Temperatures in Indio



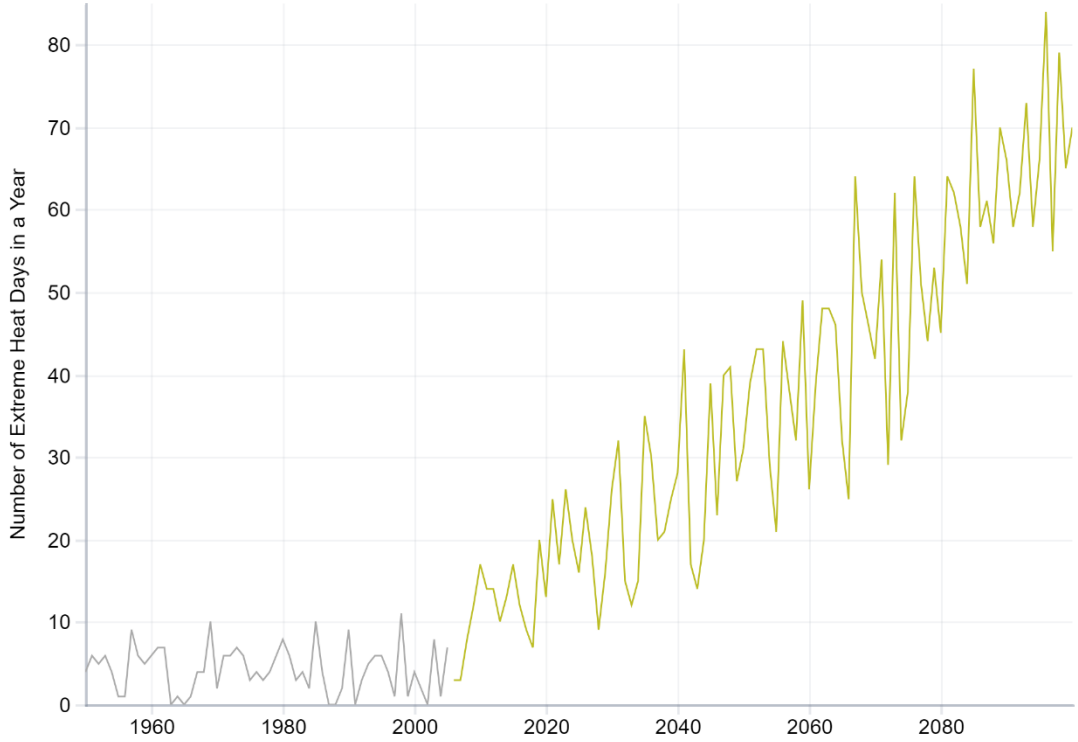
Note: Business as Usual Scenario (High Emissions), CanESM2 Model (Average)
Source: CalAdapt

With climate change, extreme heat events in California and Indio are becoming more frequent, more intense, and longer lasting. An extreme heat day is defined as a day between April and October when the maximum temperature exceeds a heat threshold. This threshold is often calculated as the 98th percentile of historical maximum temperatures between April 1 and October 31 based on observed daily temperature data. For Indio, this threshold is 104°F.

Between 1950 and 2005, Indio experienced, on average, about four extreme heat days per year. The number of extreme heat days is anticipated to increase significantly across the Coachella Valley region during the next century. Under a business-as-usual scenario, by mid-century Indio is expected to have 25 extreme heat days. By end of century, Indio is projected to experience 51 extreme heat days. Figure 10-5 shows the projected number of extreme heat days in Indio. More extreme heat days can pose a serious threat to human health, resulting in an increase in emergency department visits and hospitalizations[9] and deaths.[10]

[9] Knowlton, K., et. al. 2009. The 2006 California Heat Wave: Impacts on Hospitalizations and Emergency Department Visits. Environmental Health Perspectives, 117(1): pp. 61-67.
[10] Basu, R., Feng, W., and Ostro B. 2008. Characterizing temperature and mortality in nine California counties. Epidemiology, 19(1): pp. 138-45.

Figure 10-5: Projected Number of Extreme Heat Days



Note: Business as Usual Scenario (High Emissions), CanESM2 Model (Average)
Source: CalAdapt

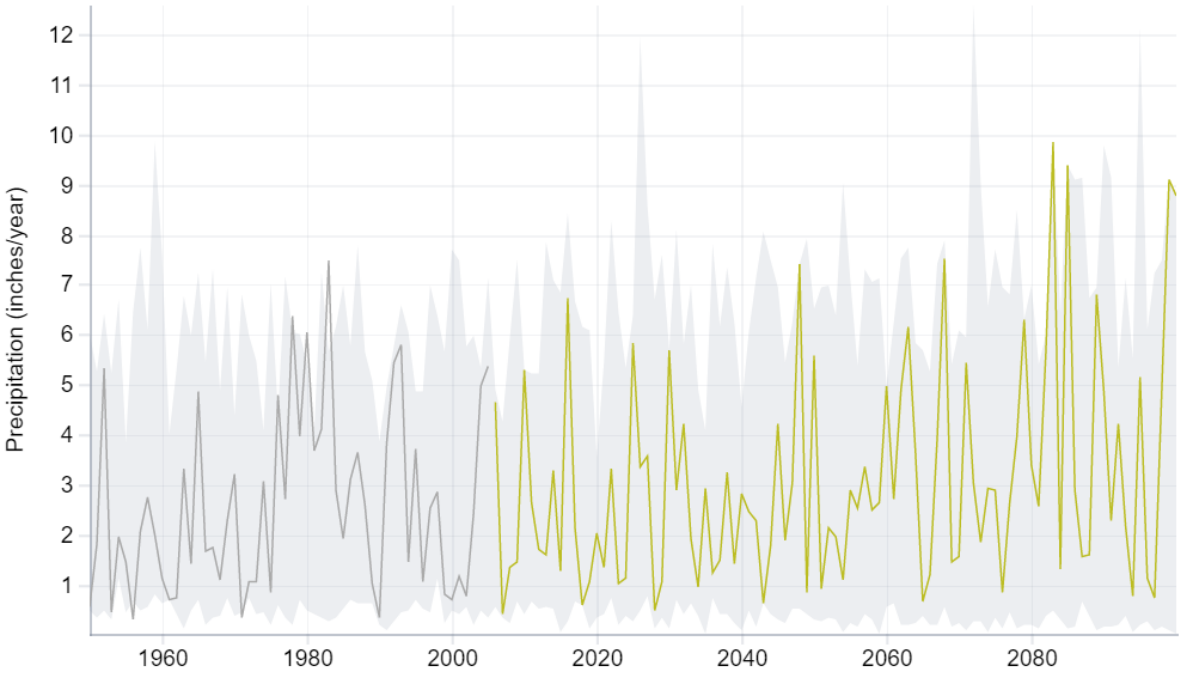
Heat waves, defined as three or more days with temperatures above 90°F, are also projected to occur more frequently by the end of the century. These events are predicated to impact larger areas, last longer, and have higher temperatures.[11]

Precipitation

Between 1961 and 2005, the historic annual precipitation mean in the Indio region was approximately 2.8 inches.[12] Annual precipitation, however, varies significantly between years. Overall changes in future precipitation and runoff are highly variable among climate models and relatively uncertain. Some precipitation projections for the region show a slight increase in annual rainfall, others show a slight decrease, and others show no change at all.[13] During the next century, Indio can expect approximately the same amount of total annual precipitation as it received in the last few decades of the 20th century. Figure 10-6 shows historic and future precipitation levels in Indio, which has fluctuated over time.

[11] Gershunov, A., and Guirguis, K. (2012). California heat waves in the present and future. Geophysical Research Letters, 39(18), 7.
[12] California Energy Commission. 2017. Cal-Adapt. Available at http://beta.cal-adapt.org/.
[13] Berg, N, et al. 2015. Twenty-Frist Century Precipitation Changes over the Los Angeles Region. Journal of Climate. 28: 401 – 421.

Figure 10-6: Average Annual Precipitation



Note: Business as Usual Scenario (High Emissions), CanESM2 Model (Average)
Source: CalAdapt

In the present-day climate, the region experiences wide swings in precipitation from year-to-year, and this variability is expected to continue under climate change with fluctuations between wet years and dry years.[14] Southern California's annual variability originates primarily from fluctuations of the biggest storms, with approximately 90% of variability coming from the wettest days.[15] Therefore, drought happens during years missing a few large storms and wet years occur when there are large storms. Figure 10-6 shows the projected annual variability in precipitation, which is relatively consistent with historic observations.[16]

Due to anticipated warmer temperatures, more intense periods of rain may lead to an increase in winter runoff, which may impact flood risk. Annual stormwater runoff volume and peak runoff may increase. Increased runoff volume and higher peak flow rates are anticipated to increase flood risk.

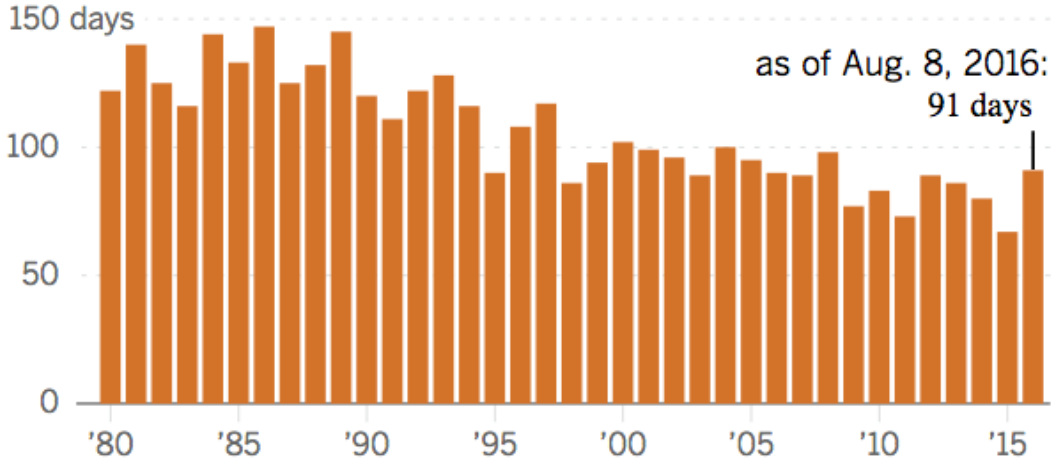
[14] Berg, N, et al. (2015). Twenty-Frist Century Precipitation Changes over the Los Angeles Region. Journal of Climate. 28: 401 – 421.
[15] Dettinger, M.D., and Cayan, D.R. (2014) Drought and the California Delta—A matter of extremes: San Francisco Estuary and Watershed Science, 12(2).
[16] California Energy Commission. (2017). Cal-Adapt. Available at http://beta.cal-adapt.org/.

Air Quality and Wildfires

Air quality is expected to worsen with increasing climate change. Air quality is strongly dependent on weather, and climate change is expected to impact air quality through warming temperatures and more frequent episodes of stagnant air. Many strategies that are used to reduce greenhouse gases will also reduce emissions of air pollutants, such as ozone and particulate matter.

Overall, Southern California has the nation's worst smog and consistently fails to meet federal ozone standards since 1979.[17] The number of days above the ozone standard, however, has been steadily declining since the 1980's in the South Coast Air Basin, as shown in Figure 10-7. However, in the summer of 2016, Southern California experienced its worst smog since 2008. By August 2016, ozone had exceeded federal standards on 91 days since the beginning of the year, compared to 67 days over the same period the previous year.[18]

Figure 10-7: Days above Ozone Standard – South Coast Air Basin

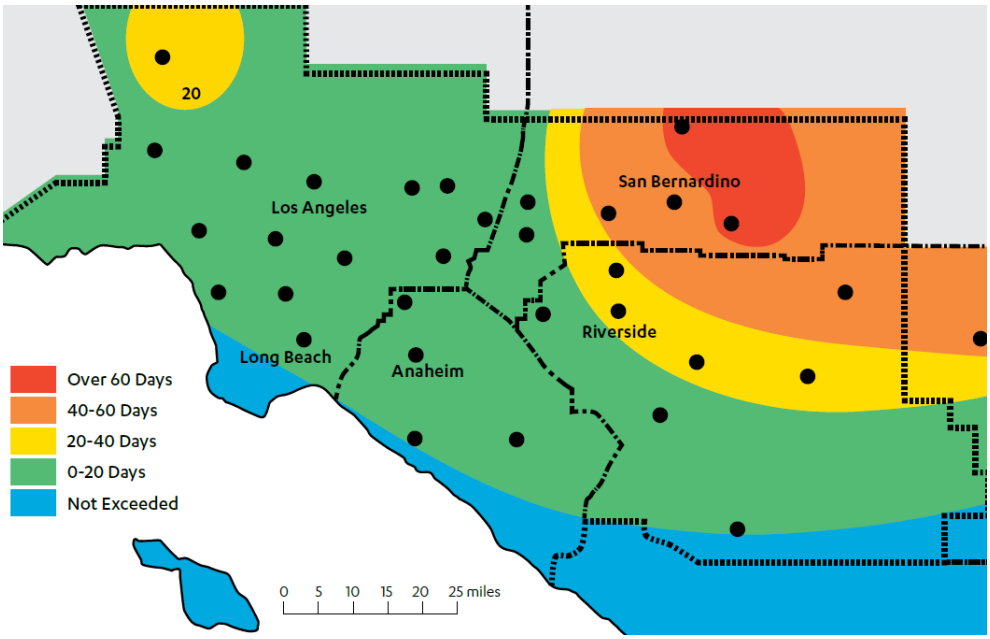


Source: Los Angeles Times

Figure 10-8 shows the number of days exceeding the federal ozone standard in the Los Angeles region and Coachella Valley. It illustrates the significant differences among non-attainment days across the entire region, including more days in Riverside County and the Coachella Valley.[19]

[17] CalEPA. 2017. Air Quality and Meteorological Information (AQMIS2). Available at https://www.arb.ca.gov/aqmis2/display.php?year=2017&report=AREAMYR&o3pa8=SC&param=OZONE&ptype=aqd.
[18] Barboza, T. Aug. 11, 2016. SoCal Hit with Worst Smog in Years as Hot, Stagnant Weather Brings Surge in Hospital Visits. Los Angeles Times. Available at http://www.latimes.com/local/lanow/la-me-ln-summer-smog-20160805-snap-story.html.
[19] UCLA Institute of the Environment and Sustainability. 2016. 2015 Environmental Report Card for Los Angeles County.

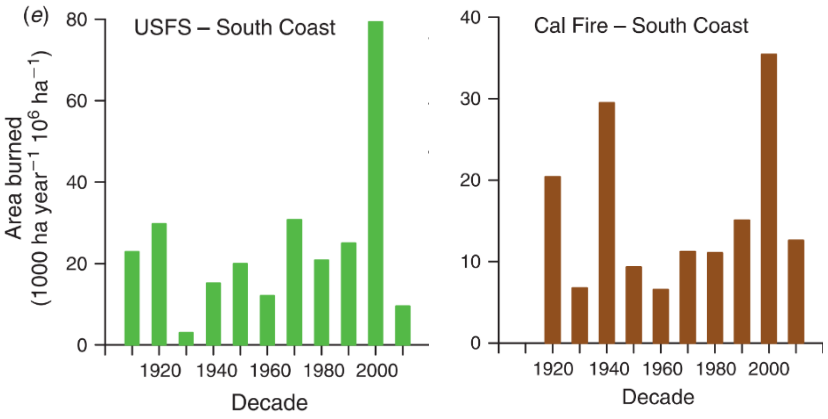
Figure 10-8: Number of Days Exceeding Federal Ozone Standard in 2013



Source: UCLA Institute of the Environment and Sustainability

Wildfires have increased over the Western US and Southern California in recent decades. These changes in wildfire pattern are often attributed to climate change and fire suppression techniques. As shown in Figure 10-9 the South Coast region, which includes Indio, had significant peaks in the area burned in the 1920s, 1940s, 1970s, and 2000s. The South Coast region was among the few areas within the State that had an increase in burned area in recent decades.[20]

Figure 10-9: Decadal Burning on US Forest Service and Cal Fire Managed Lands in California Climate Divisions



[20] Keeley, JE, AD Syphard. (2017). Different historical fire–climate patterns in California. International Journal of Wildland Fire 26(4): 253-268.

While the direct impacts of wildfire may be less of a concern for Indio, wildfires can be a significant source of air quality pollution. Wildfires burning within 50 to 100 miles of a city routinely cause air quality to be 5 to 15 times worse than normal, and often two to three times worse than the worst non-fire day of the year.[21] Emissions from wildlife can lead to excessive levels of particulate matter, ozone, and volatile organic compounds.[22]

Unequal Impacts

While climate change affects everyone in a community, not all people are impacted equally. People of color, immigrants, and lower-income populations experience increased exposure and sensitivity to climate hazards and a reduced capacity to adapt. Cities that begin planning now will have the best options for adapting to climate change. The City of Indio encourages residents to know the risks in their communities and be informed with information about severe heat warnings and other climate related hazards.

The impacts of climate change are already being felt in some places, but they are relatively small at this time. However, the longer cities wait, the greater the costs of these impacts. As Indio begins to plan for and implement their response to climate change, an opportunity exists to create stronger, more equitable communities for everyone. Many of the actions needed to reduce the impacts of climate change will provide additional benefits to the community, including individual climate preparedness, increased public safety, reduced greenhouse gas emissions, and greater economic stability.[23]

Other Hazards

The General Plan area is not within an inundation zone in the event of a dam or levee failure, a wildfire severity zone, or at risk to a tsunami or seiche.

[21] Kenward, A, et al. 2013. Wildfires and Air Pollution: The Hidden Health Hazards of Climate Change. Climate Central. Available at http://assets.climatecentral.org/pdfs/WildfiresAndAirPollution.pdf.
[22] Phuleria, HC, et al. 2005. Air Quality Impacts of the October 2003 Southern California Wildfires. Journal of Geophysical Research. 110(D7).
[23] California Emergency Management Agency and Natural Resource Agency (2012). California Adaptation Planning Guide. http://resources.ca.gov/docs/climate/01APG_Planning_for_Adaptive_Communities.pdf

Goals and Policies

Emergency Response

The City will continue to implement best practices to maintain high quality emergency services and response.

Goal SE-1: Police Services. Excellent law enforcement and a reduction in criminal activities and focus on community policing.

SE-1 Policies

SE-1.1 **Service levels**. Maintain adequate police protection capabilities by retaining the current peace officer staffing positions, forecasting future demand, and providing additional staff, law enforcement equipment and technology acquisition, and facilities when fiscally appropriate and needed.

SE-1.2 **Proactive policing strategies**. Collaborate with the Bureau of Justice Assistance (BJA), the SNA Research Corporation, and academic researchers to address crime and quality of life issues through the implementation of best practices in policing.

SE-1.3 **Community engagement.** Continue to implement community-oriented policing strategies that emphasize community engagement and collaboration.

SE-1.4 **Crime Prevention Through Environmental Design.** Promote Crime Prevention Through Environmental Design (CPTED) concepts, including, but not limited to:

- Controlling access by creating real and perceptual barriers to entry and movement through the use of fences or landscaping to define site boundaries, clearly defined pathways to guide movement, gates or doors to limit access, and signs to define appropriate activities.
- Maximizing opportunities to see and be seen through the use of lighting, windows, building orientation and location, proper selection of landscaping materials and regular maintenance, furniture arrangements, surveillance equipment, or other security or design measures.
- Clearly defining ownership and encouraging maintenance of properties through measures such as landscaping, front porches, fencing, variations in paving materials, or other elements to distinguish between private and public spaces. Display signs to establish ownership and keep buildings, yards, gardens, sidewalks, and other features well maintained, clean, and in working order.

SE-1.5 **Neighborhood watch.** Continue to support the formation of neighborhood watch groups.

SE-1.6 **Effective programs for at-risk youth**. Continue to support programs for at-risk youth and parents of at-risk youth, such as the nationally recognized “The Parent Project” which seeks to prevent and intervene in destructive adolescent behavior, in addition to facilitating youth community outreach events and participation in Youth Court Program where juvenile offenders are tried in front of a jury comprised of their peers.

SE-1.7 **Volunteer and educational programs.** Continue to promote volunteer and educational programs to assist police personnel such as the police cadets, Citizens Helping Indio Police (CHIP), and the Police Chaplain Program.

SE-1.8 Graffiti abatement. Continue the robust graffiti prevention and removal efforts through the City of Indio's Graffiti Abatement Team which is managed by the Indio Police Department. The Team removes graffiti from public property (including parks, street signs, sidewalks, etc.) or property adjacent to public rights-of-way.

SE-1.9 Funding. Assess the adequacy of the current funding structure for police services and facilities and continue to monitor and assess the opportunities for additional funding sources such as special event reimbursement fees, research and application for state and federal grants, development impact fees, a public safety tax for facility construction, and general fund increases.

Community Emergency Preparedness

The City of Indio will work with local agencies and organizations to promote resilience and disaster preparedness.

Goal SE-2: Emergency Preparedness. Provide City leadership within the region by promoting a collaborative environment that sustains maximum resilience to emergencies and disasters.

SE-2 Policies

SE-2.1 Local Hazard Mitigation Plan. Maintain the City's Local Hazard Mitigation Plan (LHMP) as an integrated component of the General Plan, in coordination with Riverside County and other participating jurisdictions. After each regular LHMP update, update the City's Safety Element to ensure consistency. The 2018 Indio LHMP adopted by the City Council shall serve as the implementation program for the coordination of the hazard planning and disaster response efforts within the City and is incorporated by reference to this Element.

SE-2.2 Emergency Operations Plan. Ensure that the City's Emergency Operations Plan is compatible with Federal, State and local emergency requirements, review for possible updates every 2-3 years, as directed by FEMA Best Practices.

SE-2.3 Climate change. When updating hazard mitigation and emergency management plans, incorporate climate change hazards, vulnerabilities, and risks into the analysis.

SE-2.4 Hazard profile. Work to minimize the frequency, severity, and probability of future hazard events in the City by taking actions that prepare and mitigate those hazards before they occur.

SE-2.5 City ordinances: Ensure the effectiveness of the City's Ordinances in addressing requirements for emergency access and evacuation in new and existing development.

SE-2.6 CERT. Continue to promote citizen-based disaster preparedness and emergency response through Riverside County's Community Emergency Response Team (CERT) training and certifications to engage the community to be self-reliant and prepared to take care of themselves and others. Encourage members from IPD and FD to become certified CERT instructors, and also volunteer corps can be CERT instructors also.

SE-2.7 Public awareness. Promote public awareness of the City's emergency preparedness and response techniques by:

- Distributing the Emergency Operations Plan (EOP) to business associations, community groups, schools, hospitals, and other community groups each time an updated version is completed; and
- Maintaining a current version of the EOP on the City's website.

SE-2.8 Response times. Periodically update emergency response times and other indicator measurements, to monitor progress made in implementation of the General Plan and make adjustments to implementation measures/programs as necessary to improve the City's effectiveness.

SE-2.9 Interdepartmental coordination. Work with City applicable departments to:

- Conduct mock emergency drills to test the effectiveness of emergency response activities.
- Review and update designated evacuation routes as needed.
- Ensure that public facilities and services are targeted towards the most vulnerable populations and that critical facilities are not sited in geologic or flood hazard zones.
- Remain up-to-date on mandatory emergency management training for all departments, as necessary.

Fire

Goal SE-3: Fire Safety. A community safe from the risk of fire and with appropriate fire response standards.

SE-3 Policies

SE-3.1 Compliance. Comply with the National Fire Protection Association (NFPA) 1710 and Riverside County Fire response standard of arriving to fire and medical emergency incidents within a four (4) minute drive time.

SE-3.2 Water service and pressure. Ensure that sufficient water service and pressure is available throughout the City for firefighting purposes, including continuing to require new development to provide necessary water mains, fire hydrants, and access for emergency vehicles and personnel.

SE-3.3 Brush and weed control. Maintain and enforce standards for weed and brush abatement and establish clearances around structures to minimize fire hazard risk.

SE-3.4 Fire-resistant materials. Require the use of fire-resistant building construction materials to reduce the hazard of structure fires, within the developed areas of the City and at the urban-wildland interface.

SE-3.5 Fire retrofits. Encourage owners of non-sprinklered high-occupancy structures to retrofit their buildings to include internal sprinklers.

SE-3.6 New growth. Address Indio's existing and future fire service needs by planning and funding infrastructure to support the City's growth and continuing to develop and staff new fire stations when and where they are needed to meet NFPA and County Fire response time standards. Ensure new fire stations are not located in geologic or flood hazard zones.

SE-3.7 Response adequacy. Ensure, to the maximum extent possible, that fire services, such as firefighting equipment and personnel, infrastructure and response times, are adequate for all sections of the City. To that end, continue to regularly evaluate specific fire hazard areas, and adopt reasonable safety standards, such as adequacy of nearby water supplies, fire-retardant roofing materials, fire-equipment accessible routes, clarity of addresses, street signage and street maintenance, and fire-hydrant inspection and maintenance.

SE-3.8 Development applications. Continue to review development applications for consistency with applicable fire and building code regulations, including emergency access/evacuation routes.

SE-3.9 Partnerships. Continue to work with the Riverside County Fire Department to utilize the Cooperative Integrated Regional Fire Protection System to fulfill additional resource needs and increase service capabilities during major emergency events.

SE-3.10 Funding. Continue to assess the adequacy of the current funding structure for fire and emergency services and research and apply for additional funding sources.

SE-3.11 Public education. Inform the public about fire safety and fire prevention measures by:

- Holding public workshops or speaking engagements at schools, community centers, business associations, and other various groups;
- Posting information on the City's website and social media pages;
- Issuing press releases;
- Distributing emergency preparedness information and handouts at City Hall, community centers, the library, and at community events;
- Involving the public in mock fire response drills;
- Continuing to train volunteer firefighters; and
- Continuing to provide Community Emergency Response Training.

Seismic Hazards

Seismic Hazards have a high probability of occurrence in Indio with high severity of damage. This goal seeks to ensure better responsiveness, minimize risk of property damage and personal injury, and require seismically-compliant buildings and improvements.

Goal SE-4: Seismic Hazards. A community that is minimally affected and less vulnerable to earthquakes and seismic hazards.

SE-4 Policies

SE-4.1 Development plan review. Require all new structures to be designed in accordance with the most recent California Building Code adopted by City Council, including the provisions regarding seismic loads, lateral forces and grading and not built across the trace of an active fault.

SE-4.2 Technical reports. Require submittal of applicable geotechnical reports prepared by qualified professionals as part of the development review process.

SE-4.3 **Seismic setbacks.** Reduce the impact of future seismic hazards by incorporating seismic setback standards for new development into the zoning code. The City may designate these setback areas as open space.

SE-4.4 **Liquefaction.** Require liquefaction assessment studies be conducted for all projects proposed in areas identified as potentially susceptible to liquefaction. In areas where geotechnical testing shows the sediments are susceptible to liquefaction, require the implementation of mitigation measures as a condition of approval. Liquefaction mitigation measures shall be applied to all habitable structures, bridges, roadways, major utility lines, and park improvements to be built in these areas. Work with insurers to require additional insurance coverage in liquefaction areas.

SE-4.5 **Information and education.** Encourage earthquake preparedness within the community through early and clear information and education so the community avoids and/or is prepared for seismic and geologic hazards. Encourage participation in The Great ShakeOut, an annual earthquake drill in California that Indio residents are encouraged to participate in.

SE-4.6 **Critical facilities planning.** When planning for new fire stations or other critical facilities, review hazard maps to ensure that they are not sited in geologic or flood hazard zones and employ critical infrastructure design and building standards to enable City operations to continue after an earthquake.

SE-4.7 **Inventory of unreinforced structures.** Periodically review and update the City's inventory of unreinforced masonry buildings, existing multifamily housing constructed before 1971, and other structures that may result in unsafe conditions during seismic events. Any historic landmarks discovered through the inventory process shall be added to the City's inventory of historic places.

SE-4.8 **Seismic maps.** Maintain an updated Seismic Hazards Map, periodically consult with the California Geological Survey (CGS) Seismic Hazards Zonation Map and coordinate information with geotechnical reports filed at the City to ensure the latest information is available to the City.

Climate Change and Community Resilience

Climate change is anticipated to amplify existing natural hazards. This goal aims to establish a framework for Indio to begin addressing the impacts of climate change.

Goal SE-5: Community Resilience. A community that is prepared for the potential impacts of climate change.

SE-5 Policies

SE-5.1 **Regional partnerships**. Establish partnerships with State, Federal, regional, and local agencies to collaborate and better understand the regional impacts of climate change, and to develop multijurisdictional solutions.

SE-5.2 **Climate change research**. Integrate climate change research and adaptation planning into City operations, services, and public infrastructure development, including capital improvements.

SE-5.3 **Cooling centers**. Establish cooling centers to reduce Indio resident's vulnerability to extreme heat events and severe storms.

SE-5.4 **Backup power.** Support critical facilities, such as schools, hospitals, and cooling centers to operate on micro-grids, which use various redundant backup systems including generator power, solar, and wind turbine power sources.

SE-5.5 **Neighborhood and building cooling**. Encourage new development and redevelopment to take steps to reduce the impacts of extreme heat events, including:

- Protect the City's healthy trees and plant new ones to provide shade, increase carbon sequestration and purify the air.
- Shade public parks and open spaces, including bus shelters.
- Support residential energy efficiency and weatherization programs.
- Design buildings to use less cooling through passive heat and cooling techniques.

SE-5.6 **Reduced water supplies**. When reviewing development proposals, consider the possibility of constrained future water supplies and require enhanced water conservation measures.

- Ensure compliance with the landscape conservation ordinance.
- Encourage the use of water conservation measures in new development beyond current requirements.
- Encourage the use of sustainable landscaping techniques.
- Support recycled water use.

SE-5.7 **Communications and outreach**. Continue to work with the Riverside County Public Health Department and County of Riverside Emergency Management Department to establish social networks and website updates to distribute information on climate change impacts to vulnerable populations including actions they can take to reduce exposure to unhealthy conditions.

SE-5.8 **Equitable distribution of resources**. Prioritize programs that ensure the benefits of climate action programs are fairly distributed and prioritized to those most in need, particularly populations most likely to be impacted by climate change.

SE-5.9 **Funding opportunities.** Pursue climate change grant funding opportunities when appropriate.

Flooding

This goal aims to minimize community risk from stormwater runoff, flooding or inundation hazards, and minimize community expenditure of funds, and emergency personnel resources.

Goal SE-6: Flood Hazards. A community that is minimally disrupted by flooding and inundation hazards.

SE-6 Policies

SE-6.1 **Flood hazard enforcement.** Restrict development in Special Flood Hazard Areas. Require mitigation measures which may include (but are not limited to) the design of onsite drainage systems connected to the Coachella Valley Stormwater Channel, keeping surface waters within the project area, grading of the sites so that runoff does not affect adjacent properties, and building structures so they are elevated above the anticipated flood levels.

SE-6.2 **Flood mitigation in repetitive-flooding areas with existing development.** Prioritize hydrological studies of areas that flood repeatedly during storms and require feasible engineering solutions to mitigate these sites. Prohibit any additions or reconstruction of structures damaged by flooding, unless the structure is relocated to a safer area or can be demonstrated that the proposed project and its occupants can be protected from future, recurrent flood damage by implementing mitigation measures not present in the original, damaged structure.

SE-6.3 **Hydrological studies in new development.** Require new development proposals to include as a condition of approval, hydrological and hydraulic studies prepared by a state-certified engineer with expertise in these kinds of studies, that assess the impact the new development will have on the flooding potential of existing development down-gradient. The studies shall provide mitigation measures to reduce this impact to an acceptable level.

SE-6.4 **New critical facilities.** Limit the future development of critical facilities including, but not limited to, hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities within the boundaries of the 100-year flood plain.

SE-6.5 **Existing critical facilities**. Encourage critical facilities to implement feasible mitigation measures that ensure the building will not flood during a 100-year flood event to greatest extend practical. Also encourage ingress/egress of facility also follows mitigation measures.

SE-6.6 **Storm drainage facilities and stormwater runoff.** Maintain, develop and improve where needed, the storm drain facilities (including bridges and other stormwater channel crossings) with an emphasis on those areas in the City that flood repeatedly. Promote the use of bio-swales, tree wells, green roofs, and other infiltration mechanisms to reduce the volume and velocity of stormwater runoff.

SE-6.7 **Hazardous waste in stormwater.** Support Indio residents and businesses to properly dispose of hazardous waste by continuing to host bi-annual collection events.

SE-6.8 **Floodplain development.** Promote the use of floodplains as parks, nature trails, equestrian parks, golf courses or other types of recreational facilities that can withstand periodic inundation. In the planned build-out of the City, create an atmosphere of working with nature and the natural processes characteristic of the arid environment.

SE-6.9 **Flood barriers.** Minimize construction of flood barriers within the 100-year flood plain which would divert flood water or increase flooding in other areas.

SE-6.10 **Coordination.** Work with the Coachella Valley Water District (CVWD), the Regional Floodplain Administrator, the Indio Water Authority (IWA), and federal agencies, where applicable, to limit the potential for inundation by levee or water tank failure, or seismically induced inundation.

SE-6.11 **Disaster Response Plan**. Require all essential and critical facilities, including but not limited to essential City offices and buildings, medical facilities, schools, childcare centers and nursing homes in or within 200 feet of Flood Zones A and X, to develop disaster response and evacuation plans that address the actions to be taken in the event of storm flooding or inundation due to catastrophic failure of a water reservoir or other water retention facilities such as the All

American Canal, the Eastside Dike and levees of the Coachella Valley Stormwater Channel. Encourage the use of technology to identify flood-prone areas and to warn residents and motorists of impending flood hazards.

SE-6.12 **Residential Response Plan**. Require new residential associations over one hundred homes to establish a response plan and practice the plan regularly.

SE-6.13 **Flood insurance.** Encourage property owners and residents to purchase flood insurance for areas outside of the FEMA-mapped 100-year flood zones, especially in those areas that have experienced flooding in the past.

SE-6.14 **Land use and flood hazard maps.** In coordination with the Public Works Department, annually review the City's Land Use and Flood Hazard Maps to ensure that they accurately reflect areas recognized by the Federal Emergency Management Agency (FEMA) as being subject to flooding.

SE-6.15 **Designing for changing precipitation patterns**. Periodically evaluate stormwater control strategies and systems for sensitivity to changes in precipitation regimes and consider adjusting those strategies to accommodate future precipitation regimes.

Hazardous Material

The City will work to protect the community from hazardous material contamination.

Goal SE-7: Hazardous Materials Management. A healthier and safer community with reduced potential for hazardous materials contamination

SE-7 Policies

SE-7.1 **Enforcement actions.** Require all users, generators, and transporters of hazardous materials and wastes to identify the materials they store, use or transport, in accordance with disclosure laws, to have adequate spill clean up kits while transporting, and to have a clean up response plan with contact phone numbers.

SE-7.2 **Hazardous materials transport routes.** Require submittal of a transportation of hazardous materials plan to address possible impacted facilities along these routes and identify emergency response actions that can be implemented in case of an accident. Limit transportation routes to areas away from critical facilities and infrastructure and not over bridges if possible.

SE-7.3 **Hazardous materials siting.** Prohibit the placement of proposed new facilities that will be involved in the production, use, storage, transport or disposal of hazardous materials near existing land uses that may be adversely affected by such activities. Conversely, prohibit the development of new sensitive facilities (like schools, child-care centers, nursing homes, senior housing, etc.) near existing sites that use, store or generate hazardous materials.

SE-7.4 **Site remediation.** Encourage and facilitate the adequate and timely cleanup of existing and future contaminated sites and the compatibility of future land uses.

SE-7.5 **Agency coordination.** Coordinate with the Riverside County Environmental Health Department to maintain and periodically update an inventory of permitted hazardous materials and clean-up sites within the City and monitor future uses at those locations. Work with other City

departments to promote programs to reduce hazardous materials and promote non-toxic, non-hazardous alternatives in City operations.

SE-7.6 **Hazardous mitigation training.** Establish clear policies and protocol for action in the event of a hazardous contamination. Recommend and offer trainings to private sector companies.

Implementation Actions

The table below identifies programs, policy updates, planning efforts, coordination efforts, and other actions that will help implement the General Plan's Safety policies. Programs are consistent with this chapter's goals and policies.

Table 10-2: Safety Programs

	DESCRIPTION	PRIORITY	TIME FRAME	RESPONSIBILITY
1	**Plan consistency.** Following adoption of the General Plan, review the existing hazard mitigation and emergency operations plans and make changes to ensure consistency with the General Plan.	High	Ongoing	Emergency Services Coordinator
2	**California building codes.** As new versions of the California Building Standards Code (CCR Title 24, published triennially) are released, adopt and enforce the most recent codes. Specifically, to minimize damage from earthquakes and other geologic activity, implement the most recent State and seismic requirements for structural design of new development and redevelopment.	Medium	Ongoing	Planning, Public Works
3	**Develop city standards and guidelines.** The City shall develop standards and guidelines and require their use in new construction to provide the greatest possible protection for human life and property in areas where there is a high risk of seismic or geologic hazard occurrence. This could include requirements for geotechnical reports and seismic safety plans and setbacks for new construction, among others.	Medium	Short	Planning
4	**Maintain GIS database.** Maintain the City's Geographic Information System (GIS) database to assist hazard planning, including: • Critical facilities • Vuleranble populations • Infrastructure	High	Ongoing	Planning, Public Works
5	**Critical facility insurance coverage.** Document current City insurance coverage on critical City facilities. Collect all costs associated with mitigation from a disaster and operating costs as required by Federal funding eligibility.	High	Short	Emergency Services Coordinator
6	**Residential Disaster Response Plans.** Establish a program that requires all residential associations over 100 homes to establish a disaster response plan and practice the plan regularly. Establish a disaster response drill/exercise schedule requirement and practice annually.	Low	Ongoing	Emergency Services Coordinator, Planning

7	**Emergency management.** Establish an ordinance for anti-price gouging, on call debris management contractors, and pre-identified mass care shelter locations.	Low	Short	Emergency Services Coordinator
8	**CERT newsletter.** Regularly publish a CERT newsletter.	Low	Short	Emergency Services Coordinator
9	**Reduce fire hazards.** Amend the Municipal Code to include weed abatement/brush management regulations to reduce fire hazards and ensure adequate coordination between planning and fire issues.	Medium	Short	Planning, Emergency Services Coordinator
10	**Hazard Impact Assessment.** Hire a consultant to conduct an Hazards Impact Assessment for City of Indio that will identify losses to revenue, and recovery time objectives for businesses and the City.	Medium	Medium	Emergency Services Coordinator
11	**Disaster mitigation funding.** Consider applying for Mitigation grant funding opportunities before a disaster (Stafford Act Section 404) and prepare as much as possible for mitigation projects after a disaster (Stafford Act Section 406). Typically private property is not eligible, but there may be other funding opportunities for HOAs, etc.	Medium	Ongoing	Emergency Services Coordinator
12	**Hazardous mitigation training course**. Implement an 8-hour hazardous mitigation basic training course requirement for new hires of the City of Indio.	Low	Short	Emergency Services Coordinator
13	**Climate vulnerability assessment.** Complete a climate vulnerability assessment consistent with the requirements of SB 379 at the time of the next Housing Element update.	High	Short	Planning, Emergency Services Coordinator